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## EFFICIENCY IMPROVEMENT OF SELF-REGULATING WIND POWER PLANTS

**Abstract.** The wind power plant with high coefficients of use in time and rated power has been Developed. It operates in the range of wind speeds from 2-3 to 50 m/s. The rated power is achieved depending on the design at speeds from 5-8 m/s to 50 m/s.

**Key words:** self-regulating wind power plant, coefficient of use in time, coefficient of use of nominal power.

**Introduction.** The WSEC-2017 Congress of Scientists and Engineers “Energy of the Future: Innovative Scenarios and methods for their implementation” within the framework of the international exhibition EXPO-2017 on June 19-20 in Astana confirmed the relevance of using wind power plants (WPP), solar battery and recognized this direction as very promising [1, 6 - 16]. However, the use factors of the nominal power and the use of WPPs in time are not at a sufficiently high level, which does not allow to reduce the cost of generated electricity to the cost of energy from grid networks. In addition, there are environmental problems.

At the same time, there are already a number of technical solutions [2], providing a significant reduction in energy costs due to the fact that the WPP nominal power is achieved at lower wind speeds compared to traditional installations, and the operating time during the year increases significantly, environmental problems are also excluded.

This is achieved by increasing or decreasing the swept area by changing the blades position [3].



Figure 1 – “Torus” Wind Power Plant

In Figure 1, one of the variants of WPP [3] is shown. It allows to change the swept area depending on the wind speed.

The installation works as follows. Wind flow enters the blades, which leads to their rotation on the shaft. With increasing wind speed due to wind pressure, the blades begin to interlock. In case of hurricane gusts of wind, the blades close completely and take the form of a torus.

It should be noted that when the blades close, as field tests showed, the WPP continues to work and in practice successfully operated at a wind speed of 50 m/s.

The reasons for operation at high wind speeds are as follows. When the blades close, the wind resistance decreases, the blades begin to open, but because of the strong wind, the blades again close and continue to rotate.

By increasing the wind speed the swept area decreases due to the closing of the blades, a rational number of blades can be justified by the need to increase the swept area with the same torus diameter.

A smaller number of blades causes a larger diameter in the open position, i.e. at a low wind speed. The maximum diameter is obtained with two blades, when the diameter of the torus is divided in half. But in this case, as shown by experiments with WPP built in accordance with the patent [4] (Figure 2), WPP works in spurts with a diameter of more than 50 cm and uncontrolled locking of the blades takes place.

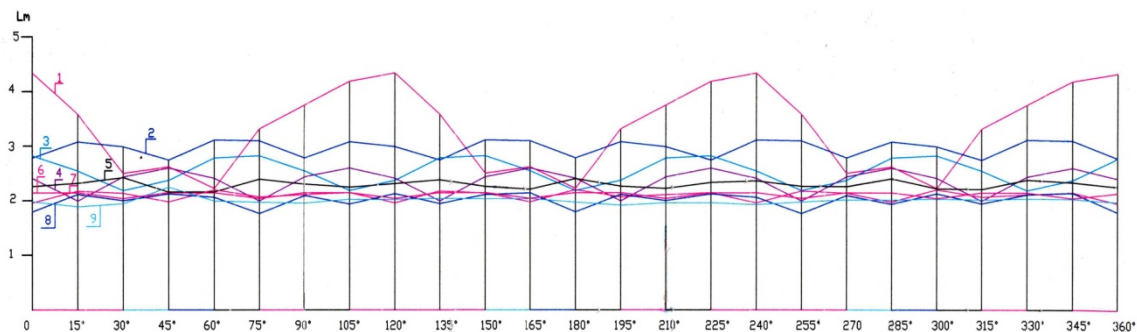


Figure 2 – M.M. Mailybayev Wind Power Plant

By increasing the number of blades [3] from 3 or more, there is a change in the swept area depending on the rotation to the wind direction as shown in Figure 3. As can be seen, a smoother change in swept area begins with 4 blades and more.

The amount of labor for the manufacture of blades and the number of bearings for the blades rotation is directly proportional to their number.

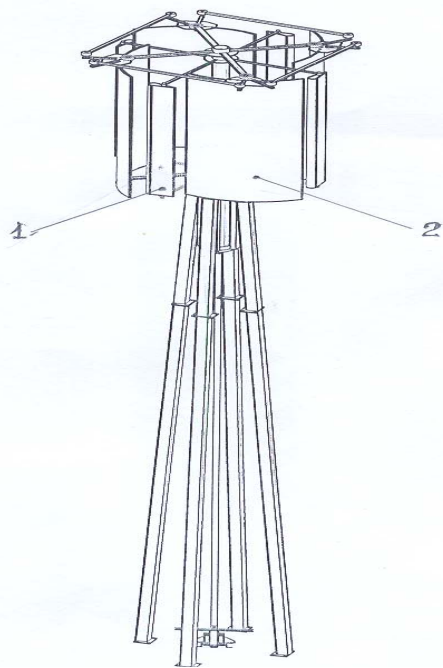
In addition, a smaller number of blades accounts for a large area of the swept area with the same diameter of the closed position of the WPP blades. In this regard, 4-blade WPP is considered.



1 – three blades; 2 – four blades; 3 – five blades; 4 – six blades; 5 – seven blades; 6 – eight blades; 7 – nine blades; 8 – ten blades; 9 – eleven blades

Figure 3- Swept Area Change Graph depending on the rotation angle of the blades for their different amount

Known methods for determining the reaction forces of articulated joints can be used to engineer wind power stations, therefore it is possible to develop design documentation for wind power stations of various capacities [17]. It should be noted that sailing blades are most effective at low wind speeds and inferior to aerodynamic ones at wind speeds of more than 10-12 m/s. At the same time, traditional WPPs with aerodynamic blades do not operate at wind speeds of more than 25 m/s in order to avoid the destruction of WPPs. Considering the above-given, an increase in the utilization rate of nominal power and the use factor of WPP in time with maximum efficiency is possible by combining self-regulating sailing and aerodynamic blades [5] (Figure 4).



1 - aerodynamic blades, 2 – sailing blades.

Figure 4 – Wind Power Plant with combined sailing and aerodynamic blades

With a wind speed of up to 10 m/s, mainly sailing blades work, and aerodynamic ones do not have a significant effect on WPP operation. With an increase in wind speed, sailing blades shelter themselves behind, aerodynamic blades begin to work more intensively. With a wind speed of more than 20-25 m/s, sailing blades close completely, but continue to rotate the generator, and the aerodynamic blades go into braking mode by way of turning.

In order to reduce the resistance to the wind pressure of sailing blades during their movement against the wind, they are made in the form of segments of the hollow torus, similar to Figure 1.

It should be noted that in any design, the wind entering the working part of the sailing blade, having given up part of the energy, enters the working part of the blades, which move against the wind direction, thereby continuing to perform useful work. Comparative characteristics and parameters of well-known wind power plants, as well as the developed options are shown in Table 1 [2].

As can be seen, for various WPP options, the rated power is achieved at low wind speeds, and the WPP use factor is significantly increased in time.

In general, the main parameters affecting the cost of energy are the use ratio of the nominal power, the use ratio in time and the efficiency ratio (ER).

Practically, the efficiency ratio for each particular design of the blades is constant, and the use ratio in time and nominal power are variable and depend on many factors. For example, for vertically axial WPPs, the use ratio in time is significantly higher than for horizontally axial ones, since the latter require turning to the wind, and the turn occurs after the WPP stops operating. At the same time, in the wind corridors, the indicated ratio of vertically axial and horizontally axial wind power plants becomes very close.

Table 1 - The main parameters of traditional and proposed wind power plants

Indicators	Parameters	
	Traditional wind power plants	Proposed wind power plants
Working range of wind speeds, m/s	from 3-4 to 25	from 3 to 50
Rated power at wind speed, m/s	from 10-12 to 25	from 8 to 50 from 5 to 50
Minimum efficiency at wind speed, m/s	to 10-12	to 5
Maximum efficiency at wind speed, m/s	from 10-12 to 25	from 8 to 50 from 5 to 50*
Amount of working time per year, hour	2500 – 3000, 10% to 5000	to 6000-7000
Time use factor	0,28 – 0,34 and 10% to 0,57	0,68-0,8
Efficiency factor	Theoretical 0,45 Actual $\leq$ 0,38	0,24** 0,4-0,45
Average annual utilization rate of rated power	Depending on region $\leq$ 0,3	Non-depending on region 0,6
Maximum speed of rotation of the wind wheel, revolutions per minute	To 500	15-20
Electricity cost, €/kW·hour	0,15	0,04
Ecological aspect	The presence of infrasound, as well as in the acoustic range	There is no infrasound, vibration and noise; not dangerous in the way of bird migration, environmentally friendly

\* Increasing the parameters of the blades to achieve the rated power at a wind speed of 5 m/s is possible without compromising the reliability of the electromechanical part and the wind power plant as a whole, due to the fact that the blades interlock with increasing wind speed, reducing the swept area. The wind at a speed of 5 m/s per year is much more frequent than at a speed of 10-12 m/s.

\*\* Efficiency ratio is not that important, because there is no charge for the wind, but it requires an increase in the swept area due to changes in the blades parameters.

The power factor for known WPP designs functionally depends on wind speed. Typically, the rated power is achieved at wind speeds of 10-13 m/s and up to 25 m/s. Achieving the rated power at low wind speeds causes an increase in the parameters of the blades, which can lead to emergency situations with an increase in speed, namely: failure of electrical equipment or failure of the blades. In this regard, the increase in the parameters of the blades of traditional WPPs is not practiced.

Conclusions: Unlike traditional WPP, the proposed design allows to increase the parameters of the blades, since as the wind speed increases, the blades interlock under its pressure, reducing the swept area. Consequently, the nominal power achieved at low wind speeds is preserved, as practice has shown, even at wind speeds of up to 50 m/s. In addition, one can use confusers, which increases the wind speed to achieve the nominal power at a lower speed, and with increasing speed the WPP destruction does not occur due to the interlock of the blades.

The ability to change the swept area also has a positive effect on the WPP use ratio over time, namely, the number of working hours per year with the rated power increases, since the design of the proposed WPP allows working from 2-3 m/s to 50 m/s.

The combination of sailing and aerodynamic blades maximizes efficiency ratio, while taking advantage of sailing blades to work effectively at low wind speeds, and at medium speeds - the advantages of aerodynamic blades. As noted above, when hurricane speeds the sailing blades interlock, and the aerodynamic enter the braking mode, while the WPP continues to generate electricity up to a wind speed of 50 m/s.

Thus, due to the given competitive advantages, as shown by the calculation, the proposed design of WPPs allows to reduce the cost of energy to the level of energy cost on electric grid networks.



**Н.С. Буктуков, Б.Ж. Буктуков, Г.Ж. Молдабаева**

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### ӨЗДІГІНЕН РЕТТЕЛЕТІН ЖЕЛ ЭЛЕКТР СТАНЦИЯЛАРЫНЫҢ ТИІМДІЛІГІН АРТТЫРУ

**Аннотация.** Жел қондырғысы уақыт пен номиналды қуаттың жоғары пайдаланылуымен дамыды. Желдің жылдамдығы 2-3-тен 50 м/с-ға дейін жұмыс істейді. Бұл жағдайда номиналды қуат дизайнға байланысты 5-8 м/с-тан және 50 м/с-ға дейінгі жылдамдықта қол жеткізіледі.

**Түйін сөздер:** өздігінен реттелетін жел электр станциясы, уақыт бойынша пайдалану нормасы, номиналды қуатты пайдалану деңгейі.

УДК 621.311.24

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Институт горного дела им. Д.А.Кунаева, г. Алматы, Казахстан

### ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ САМОРЕГУЛИРУЮЩЕЙСЯ ВЕТРОЭЛЕКТРОСТАНЦИИ

**Аннотация.** Разработана ветроэлектростанция с высокими коэффициентами использования во времени и номинальной мощности. Работает в диапазоне скоростей ветра от 2-3 и до 50 м/с. При этом номинальная мощность достигается при скоростях от 5-8 м/с и до 50 м/с в зависимости от конструкции.

**Ключевые слова:** саморегулирующаяся ветроэлектростанция, коэффициент использования во времени, коэффициент использования номинальной мощности.

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## THE ENERGY CAPACITY OF AN AQUEOUS SOLUTION OF THE DRUG-STIMULATOR OF PLANT GROWTH

**Abstract.** Object of research is technology of formulation of physiologically active humic products, methods of aqueous solutions preparation and effectiveness of their impacts on seeds and sprouts of grain and vegetable crops, testing the product in rough soil and climatic conditions of the arid zone of Kazakhstan. Therefore, the purpose of paper is development of technology for formulation of preparation and agromethods of its use in order to increase agricultural crop yields in extreme soil and climatic conditions based on laboratory and field tests, biophysical monitoring, and main technological parameters adjustments.

The results of testing experimental sample of the product formulated according to the developed technology and agromethods on various types of low-productive soils of arid zones of the republic are presented. Optimal concentrations of aqueous solutions of humic product for agricultural crops seeds treatment, optimal technological parameters to prepare seeds for sowing (duration of treatment with humic product, tempering, etc.) have been determined by the method of biotesting: optimal conditions for sowing seeds into soil (substrate moisture content, temperature, salinity) have been determined. Research has been carried out in laboratory conditions in winter and on experimental sites in several farms.

As a result of executed work effectiveness of the product formulated according to the developed technology on low-productive soils with a salinity level of 0.8–2.2% was established. Increase in the yield of grain crops reaches 24.2–42.1%, rice 76.2–78.6% and soybean – 34.8%.

**Key words:** Ecology, brown coal, sodium humate, stimulant, biotesting, energy capacity.

**Introduction.** Extensive irrigation soil development in the desert and foothill desert-steppe zones of Kazakhstan without sufficient scientific substantiation led to the Aral tragedy, the Ili-Balkhash problem, the rational use of water resources, their almost complete depletion, degradation of the soil cover, in particular, progressive secondary salinization, swamping and deserts, landscapes, soil pollution and drainage-waste water toxic chemicals and heavy metals, reducing the profitability of agricultural production.

There was a problem of “waste” lands and unpromising auls (villages). As a result of intensive secondary salinization only in Kyzylorda and Almaty regions, more than 30 thousand hectares of rice lands turned into salt deserts, covering rare shrubs of salt-tolerant halophytes. Lands saturated with destructive salt turn into poor pastures and a source of bitter-salty aerosol dust, which is carried by air masses for thousands of kilometers, poisoning all living things.

Due to the current situation, in front of ecologists, soil scientists, land-reclamation and other specialists of the republic faced a difficult task for the development of environmentally friendly, water- and resource-saving agricultural technologies that would do without pre-washing of saline soils with appropriate cost-scarce irrigation water and combine the reclamation period performance.

To solve these complex problems, fundamentally new scientific and theoretical developments and methodological approaches are required [1-6].

In the laboratory of Kunaev Institute of Mining. "Physical and chemical methods of mineral processing" is developing a technology for producing physiologically active sodium humate from brown coal, enriched with macro-microelements and wormwood extract, which increases the ecological stability of crops to extreme environmental factors.

**Based on this, the following tasks were solved:**

- the technological regimes of pre-sowing treatment of seeds of rice, wheat, barley, soybean with aqueous solutions of sodium humate on non-saline and highly saline soils of desert and piedmont desert-steppe zones of Almaty region against the background of optimal moisture supply of plants were determined; determined the effectiveness of the developed agromeliorative methods for crop yields with varying degrees and chemistry of soil salinization in combination with other methods of differentiated agricultural techniques.

**The method of** determining the energy capacity of water and aqueous solutions has been developed for these zones for the first time. Modern high-precision devices for measuring electrical capacitance were used. Platinum electrodes of special design were used as sensors. The electrodes were placed on and attached to a special circuit-board at a certain distance from each other. It was important to make them as thin as possible to reduce their response delay and intensify measurements.

Currently, a prototype model that allows us to remove to obtain the characteristics of the energy capacity of aqueous solutions of humic substances. Already the first data allowed us to discover interesting patterns in the behavior of aqueous solutions of humates.

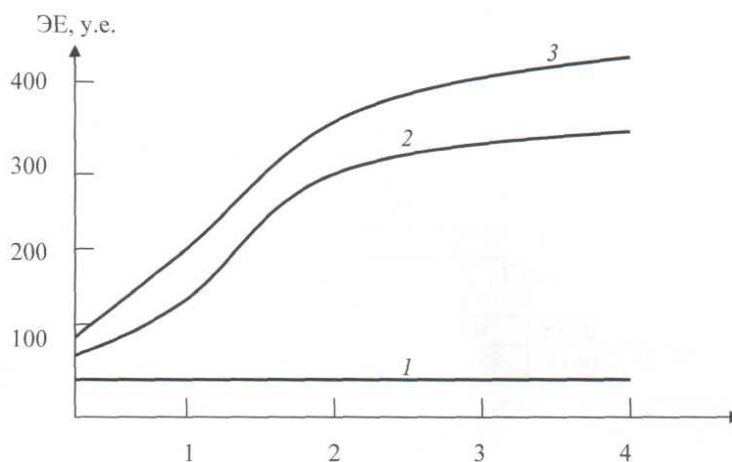
To solve the problem of efficient use of low-productive land and increase the profitability of agricultural production, non-standard methodological approaches have been developed, based on a fundamentally new scientific and theoretical concept of energy-information farming. Rational use on the fields of physiologically active humic preparations-adaptogens with multifunctional properties that increase bioenergy and ecological stability of agricultural crops to extreme environmental factors will provide agricultural producers with a reliable means to increase the yield of marketable products with minimal dependence on adverse soil and climatic conditions.

Due to its low price, environmental friendliness, availability and efficiency the product produced by the developed technology will be competitive in the domestic and foreign markets. In addition, cheap local raw materials and available reagents are used in the preparation of the humic preparation; its production is based on the use of standard equipment.

**EXPERIMENTAL PART**

Figure 1 shows that an aqueous solution of humic preparation has higher energy capacity (curve 2) than water (curve 1). At the beginning, the capacity of humic preparation increases slowly to the level of 100 CU (conventional units), then quickly increases to 300 CU, the peak of activity is at the level of 2.5%, after which the capacity decreases, despite the increased concentration of the solution [7-11].

In simplistic terms, this may be explained by the fact that, as stated earlier, plants of certain species (or their seeds) have certain unique energy capacity. Evidently, the energy-informational interaction between the seeds and the humic preparation will yield the best effect only when both interacting objects come into resonance, which is only possible in a limited range of concentrations of the humic preparation working solution, or, in other words, at its certain energy capacity.



1 - tap-water (reference); 2 - aqueous solution of humic preparation, %;  
3 - aqueous solution with surfactant (liquid soap) addition

Figure 1 - Energy capacity of humic preparation working solutions

Adding surface-active substances (surfactants) into water at the rate of 50 g per 1,000 l of water, and consequent increase in the concentration of the solutions of humic preparation from 0.01 to 4% result in further increase in their energy capacity. Therefore, adding surfactants and humic preparation into the solutions allows obtaining solutions with higher energy density, which will more efficiently influence plants' growth and development [12-17].

Subsequent measurement of the energy capacity of the water in which the preparation had been dissolved showed that its capacity increased when surfactants were added, obeying the same pattern that was observed before (curve 3). Therefore, a conclusion may be drawn that the mechanism of increasing the energy capacity of humic preparation is in neutralization of water hardness, after which the aqueous solution of humic preparation becomes efficient - it does not coagulate and better shows its qualities.

To identify the degree of influence of humic preparations on the main physiological processes in plants, it is necessary to determine the content of the most important groups of compounds associated with the energy metabolism of the cell. Humic compounds isolated from brown coal from the Kiyakty deposit were studied by gel chromatography [18–20].

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The results of the quantitative analysis are shown in Table 1. From the above data, it is clear that humic compounds contain aromatic condensed structures and oxygen in ether, lactone, heterocyclic and other structures, and also contain CH<sub>2</sub> - CH<sub>3</sub> - and COOH groups.

To identify the structural features of humic compounds, thermol thermography is used to evaluate their thermal stability, the ratio of the central and peripheral parts.

Table 1 - The number of fragments of the structure of desalinated humic acids

Humic acid	The carbon content in the fragments of the structure,% of C							The oxygen content in the fragments of the structure,% of O			
	CHap	CH <sub>3</sub>	CH <sub>2</sub>	COH	COOH	Сарконд	C=O	O <sub>сон</sub>	Oco-он	Oc-o	Oнф
Free, (1-step) *	2,0	3,1	27,2	8,2	4,0	51,5	4,0	7,3	6,9	5,3	8,8
Free	1,6	2,5	29,4	8,1	3,6	48,9	5,9	7,2	6,5	7,7	6,6
(II stage) *	3,7	5,2	25,7	7,9	3,6	47,7	6,2	7,0	6,3	3,1	5,5
Free, (stage III) *	2,0	6,0	32,7	6,6	6,9	36,6	9,2	5,4	10,8	12,3	5,9

\* For a more detailed study of the fractional composition of humic compounds from brown coal, a stepwise separation of fractions was carried out.

As can be seen from the results of the analyzes given in Table 2, the presence of 3 groups of thermo effects (endothermic, low-temperature and high-temperature, exothermic) suggests 3-member structure of the isolated humic compounds, namely: a hardly hydrolyzed part of the benzoid structure and the peripheral aliphatic part of the molecule

The first exothermic effect on thermograms of the humic preparation, manifests itself in the range of 340-390 ° C and is due to the destruction of aliphatic chains and their oxidation. The second group of exoeffects is in the temperature range of 400-600 ° C and higher. In the range of these temperatures, the destruction of more stable aliphatic chains occurs, the destruction of the peripheral part of the molecules, the cleavage of individual cycles and benzoid rings. Intensive destruction of benzoid structures begins, carbon evolution and its oxidation begin above 6000 ° C

Based on the results of the analysis, it can be concluded that the preparation contains humic compounds, which are a group of high-molecular dark-colored substances united by a common principle of construction. According to the chemical formula, these are aromatic hydroxycarboxylic acids, in which the aromatic cores of a low degree of condensation are combined with non-aromatic sites. The general structure of humic acids is represented as aromatic compounds with mobile P-electrons and various

functional groups at the core and side chains. The presence of paramagnetic centers determines the ability to ion exchange, the formation of complexes, tautomerism, redox reactions, and ultimately determines the universality of these compounds.

The study of the structural construction of the compounds of the drug showed the presence of humic acids, as well as quinoid and aliphatic groups, determining the biological and physiological activity of the drug.

In addition to the above data on the structural construction of humate, we conducted studies to determine the chemical properties of the resulting humic preparation for the following indicators:

content, ash content, solubility in water and alkali. The analysis showed that the drug has: pH -7.4-7.6, C% per sample -24.67-29.73, ash content% to sample 11.13-44.97, solubility: in H<sub>2</sub>O - good (solution transparent); 0.1 and NaOH in the cold is good; 0.1 and NaOH hot-good.

Table 2 - According to Thermal Analysis Peak Temperatures (DTV Curves) and Mass Loss

Sample Number	Peak Name (by DTV curves)	Peak Temperature (by DTV curves), 0C	Temperature range, 0C											
			20-100		100-200		200-300		300-400		400-500		500-600	
			Weight loss				Weight loss							
			mg	%, from loss	mg	%, from loss	mg	%, from loss	mg	%, from loss	mg	%, from loss	mg	%, from loss
1	Endo	85												
	/-/	132	4,5	13,5	5,0	15,1	1,6	4,8	5,9	17,8	7,0	21,1	2,1	6,3
	/-/	390												
	/-/	480												
2	/-/	80												
	/-/	390	5,5	27,5	3,1	15,5	1,4	7,0	3,4	17,0	5,7	28,5	0,9	4,5
	/-/	485												
3	/-/	90												
	/-/	330	3,0	23,8	3,2	25,4	1,5	11,9	1,9	15,1	2,4	19,0	0,6	4,8
	/-/	520												

The experimental batch of the drug was analyzed for the content of lead, mercury, arsenic, toxic substances that cause skin irritation and the presence of radionuclides (Table 3)

Table 3 - The elemental composition of the humic drug

1 Sodium HUMATE	Content, sand,%				Atomic relations		
	C	H	N	O	C:H	C:N- C:O	
1.From brown coal	29,2	35,9	1,6	33,4	0,81	18,26	0,87
2.From bioprosley	27,8	27,9	1,9	42,3	0,99	14,5	0,6

Table 4- Results of toxicological analysis of an experimental batch of the drug

Test conditions: atmospheric pressure 685 mm Hg, t ° C air 220C, relative humidity - 65%					
№	The name of indicators	Unit rev.	Norm on ND Actual ND indicator on test methods	Unit rev. Norm on ND Actual ND indicator on test methods	Unit rev. Norm on ND Actual ND indicator on test methods
1. 2	Organoleptic: Appearance, color			Amorphous powder black odorless	MP №7.05.005-97
	Physico-chemical - lead - mercury - arsenic	mg/kg mg/kg mg/kg	32,0 2,1 2,0	absence	Analysis of soil samples by stripping voltammetry method № M-135
3.	Toxicological: Toxicity Hazard Class Skin Irritant Effect		lack of grade 4 the absence of	Grade 4 is missing (low hazard)	MR №7.05.005-97 GOST 12.1.007-76

As can be seen from the results of the analysis of the drug, it does not contain heavy metals lead and mercury, arsenic is absent. In addition, the drug is non-toxic and does not have a skin-irritating effect.

Table 5 - Hygienic characteristics of an experimental batch of the drug

Name of indicators Valid levels Actual level values	Name of indicators Valid levels Actual level values	Name of indicators Valid levels Actual level values
The specific activity of natural radionuclides (average)	4000 Bq / kg	511.2 Bq / kg
The specific activity of natural radionuclides of radium-226 and thorium-232 in the studied sample does not exceed the permissible levels established by the standards of radiation safety (NRB-99)		

From the results of the analysis, it follows that the activity of natural radionuclides of radium-226 and thorium-232, which are contained in the raw material, brown coal, does not exceed permissible levels.

Humic preparations and inseparable, because only in the aquatic environment manifest the unique qualities of this product. Each culture is unique and its yield depends on the dosage of the drug. One of the common methods of growing crop production is pre-sowing seed treatment.

The first studied the effectiveness of different concentrations of the experimental drug, on the salt content of the treated seeds. Were processed seeds of wheat varieties Saratovskaya 29. barley varieties Chernigovskaya 5, rice varieties Sunny and soybean varieties Eureka. Presowing seed treatment of wheat, barley and rice was carried out in 0.1; 0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0% aqueous solutions of sodium humate for 60 minutes.

Soybean seeds were soaked in 0.001; 0.005; 0.1; 0.02; 0.03; 0.04; 0.05; 0.1% solutions for 10 minutes. After the treatment, the seeds were extracted from the experimental working solutions of sodium humate, dried at 20-40°C to the conditional humidity, and sown without drainage into 0.5 l analytical glasses with meadow-gray strongly saline medium loam irrigated soil picked at LLC Panfilovsky of the Talgarsky district in the Almaty region, with the following chemical composition, %: dense residue 0.647; HCO<sub>3</sub> - 0.019; C<sub>11</sub> - 0,031; SO<sub>4</sub> 1.08; Ca<sup>2+</sup> - 0.31; Mg<sup>2+</sup> - 0.030; Na<sup>+</sup> - 0.147; pH - 7.55; and fluent boron constituting 8.51 mg/kg of soil.

The seeds were germinated in a thermostat in accordance with the requirements of GOST (GOST 10250980. GOST 12038-84). Each experiment was repeated 5 times. Rice crops were watered by weight with tap water until substrate saturation. Humidity of the substrate in vessels with the remaining crops was maintained at 65-70% of its total water-holding capacity. Duration of the experiment was 20 days.

The results have shown that the proposed method of presowing treatment of seeds of agricultural crops increases the germination energy, seed germination rate, and stimulates early plant development on strongly saline soil.

It is known that all cultivated glycophytic plants are most sensitive to the adverse effects of salts at a young age, especially during the period of seed germination and sprouting. Therefore, obtaining normal

seedlings and ensuring their growth and development in the early stages of ontogenesis is crucial for increasing the effective fertility of saline soils, and all agro-measures aimed at accelerating germination of the seedlings also contribute to their salt tolerance.

The response of tested crops to presowing seed treatment with aqueous solutions of sodium humate was ambiguous, and was determined by their biological characteristics. Thus, 1.0-2.5% solutions were most efficient for wheat, 0.5-3.0% solutions - for barley, 1.0-3.0% solutions - for rice, and 0.005-0.04% solutions - for soybeans.

It is known that good seeds are a guarantee of getting a full harvest. There is a germination laboratory and field. The gap between them can be noticeable and agriculture) bears significant losses from poor seed germination. What is the reason for this and what measures can be taken to get full-fledged seeds? It is known that the accumulation of substances in the seeds, for example in the grain of wheat, there is a certain sequence. The storage proteins are synthesized for the most part while loading. In such an immature grain, where the humidity reaches 80%, there is a lot of a sugar and proteins, but little starch. During the period of dairy and the onset of wax ripeness, starch accumulates rapidly, the process is so intense that it exceeds the intensity of protein synthesis. The mutual rate of accumulation of substances to a large extent depends on the temperature and humidity of the air, day and night. The combination of a variety of factors during wintering leads to the fact that by the time of sowing the seeds are not in the best energy form. Therefore, the task of the farmer is to make the seeds as viable as possible.

This problem can be solved with the help of aqueous solutions of humates, to a large extent. The role of water in the development of a plant from a seed is extremely important because it is the material substrate on which and with which nature places atoms and molecules of living matter in developing plants. The treatment of seeds with humates leads to the fact that, in addition to the hereditary DNA programs, the energy information programs of humic preparations are also involved in the development of a new organism.

Using electrography of seeds and vegetative plants [19], were able to establish that seeds of wheat, rice, soybean and barley treated with an aqueous solution of the humic preparation have an increased energy potential, which is manifested in their brighter glow in the high-frequency field (Kirlian effect). According to its level, the energy potential of the treated seeds and seedlings exceeds by 2-3 times the potential of the control seeds.

Table 6 - Energy capacity in the system of vertical soil zoning

Soil	Energy intensity, cu					Atmospheric air
	Soil					
	Depth, cm					
	0-10	10-20	20-30	30-40	40-50	
Mountain forest heavy loamy	81-82	82-87	83-91	90-91	84-85	20-23
Dark Gray Forest	75-82	79-97	95-96	90-91	90	19-21
Chernozem low humus carbonate medium loamy	80-87	85-91	90-99	93-97	92-95	18-20
Dark brown colored loamy	73-84	84-87	87-89	84-90	90-91	18-19
Light brown medium loamy	71-74	74-75	75	75	75	16-17
Meadow sazovyoraschaemy solonchakovye medium loamy	79-87	89-91	86-90	97-101	93-96	16-17
Serozems ordinary irrigated saline medium loamy	74-79	78-82	81-82	80-81	79-80	14-16
Meadow-gray terrestrial irrigated saline medium loamy	72-75	75-76	76-81	81-82	89-90	15-17
Light-loamy light gray soils	57-72	72	73	75	78	14-15
Takyr-like alkaline-saline heavy loamy	78-79	79-81	81	81-83	79	16-17
Barchan sands	25-63	74-75	64-73	63-70	61-68	13-15

While the energy potential of seeds can be relatively easily determined or measured using highly sensitive instruments by electrography that are commercially available to industry, defining the energy of water and aqueous solutions is much more difficult.

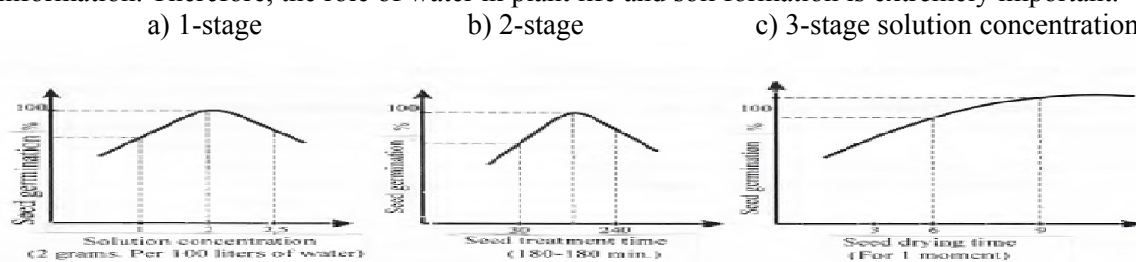
The authors have developed a method of determining energy capacity of water and aqueous solutions. Modern high-precision devices were used as the basis for measuring electrical capacitance. Platinum electrodes of special design were used as sensors.

Certain energy capacity is also characteristic of soils; it is one of the indicators that characterize the levels of natural or artificial fertility.

Studies have shown that humic preparations derived from lignite are carriers of energy programs that affect the DNA hereditary program in plant seeds, and participate in the development of a new organism of the relevant crop. Each crop is unique and has certain energy capacity.

With the help of a PRE 1 device, it has been found that energy intensity of soil in the 0-50 cm layer in the system of vertical soil zonality of the Trans-Ilyisk Alatau obeys the fundamental law of soil and climatic zonality.

As shown by the results in Table 6, energy intensity of soil depends on the moisture content, the granulometric composition, and the content of organic matter. For example, soils with low humus content have lower energy capacity. With the same fineness and density, more humid heavy loam soil with relatively high content of humus is characterized by greater energy content than dry soil. Most likely, this can be explained by properties (structural ordering) of the water. Since water molecules can form hydrogen bonds, i.e. create associates, there is an infinite variety of clusters that carry high density energy and information. Therefore, the role of water in plant life and soil formation is extremely important.



Picture 3 (a, b, c) - Processing of seed

Experimental work discussion: According to some provisions of the capillary and humic hypotheses, brown coal consists of liquid and solid phases. The solid phase of the coal mass consists of grinding colloidal humus particles with a particle size of 0.001 to 0.00004 mm. The cohesive forces of colloidal particles are different for different coals and depend on the degree of carbonization. The further this process goes, the more chemically older the coal and the smaller the capillaries. Using the provisions of these hypotheses from Kiyaktinsk brown coal, insufficient carbonation, by processing caustic soda (NaOH), plant growth stimulants were obtained, that is, a bioenergoinformation adaptogen that increases the environmental resistance of cultivated plants to extreme environmental factors (soil salinization, alkali-forming factors, pesticides, man-made environmental pollution, adverse climatic conditions in the form of dust emission, etc.).

The resulting drug - adaptogen increases seed germination, transplanting seedlings during transplantation, plant resistance to diseases (bacteriosis, fusarium, late blight, chlorosis, powdery mildew) and extreme environmental factors (drought, frost, salinization of soil, boric toxicosis, pathogenic microflora, etc.) promotes enhanced growth of the roots and above-ground parts of plants; improves mineral nutrition of plants by 25-30% by increasing the utilization of nutrients from the soil and fertilizers; reduces the nitrate content in agricultural products by 25-40%; helps to increase the size of the inflorescences and enhance the intensity of the color of flowers; accelerates the maturation of crops for 7-16 days; increases the yield of agricultural plants and fruit and berry crops on average by 30-80% improves product quality and prolongs its shelf life.

As the sample, we present the data (table 7) on the processing of 1 ton of wheat seeds with a consumption of -400 grams and barley -500 grams.



Table 7 - Treatment of wheat and barley seeds with an adaptogen

Culture	The concentration of the working solution for the drug, %	Processing time	(languor) of seeds, min Duration of extraction of dry treated seeds, days	Consumption of working solution, liters per 1 ton
Wheat (spring, winter)	2,0 (2 кг -100 l water)	30-240	2-9	15-20
Barley (spring, winter)	2,5 (2 кг -100 L water)	30-360	2-12	18-20

Presowing seed treatment is carried out in 2-3 days after their preliminary dressing. According to a special technological regime, presented in table 7.

Humic preparations from brown coal by the authors I.I. Lishtvan, Yu.G. Yanuta, A.M. Abramec and others (Institute of Environmental Management of the National Academy of Sciences of Belarus) have a different nature compared to brown coal from the Kiyaktinsky deposit, and their demineralization using traditional methods does not completely remove the ash components. These drugs are completely unsuitable in the conditions of the arid zone of Kazakhstan [14].

In the work of N.N. Bambalova “Precipitation of humics substances from a aqueous and alkaline solutions under the action of electrolytes: A review” (in the journal “Chemistry of solid fuels”, January 2016, Volume 50, Issue 1, pp 51–63) the coagulation thresholds of humic acids of solid fuel are very characteristic for different stages of metamorphism, and they adequately reflect the nature of the object is a natural feature of a natural feature, which is a natural feature. [15]. The Kiyakty deposit is represented by brown coals of the Jurassic period with a high degree of coalification. The formation of the coal-bearing stratum of the field is associated with continental-lagoon conditions, that is, it occurred in lakes and large swamps. The use of drugs from this coal-adaptogens showed good results in a sharply continental climate of the South-Northern part of Kazakhstan. You can add that these drugs are zoned for success can be used strongly saline soils.

As a result of the research, a conclusion has been drawn that energy of water, seeds, plants, soil is a key element in increasing crop yields, therefore, significant efforts should be made now to introduce highly sensitive instruments into the agricultural production to monitor energy-and-information transformations in the soil, water and in plants, not only at the laboratory, but also directly in the field.

Equipment had been installed and an experimental technological line assembled for the sodium humate production, where a representative batch of the tested preparation was produced in the amount of 550 kg in the period between 2004 and 2006. The obtained preparation was analyzed for chemical composition, tested for toxicity and presence of natural radionuclides at the Test Center of the Republican Sanitary-Epidemiological Station. It has been found that the preparation is not toxic, and the content of natural radionuclides is within the permissible limits.

Efficiency of humic preparation has been proven in course of laboratory and production tests at farms in the Almaty, Kyzylorda, Karaganda, and Akmola regions on various types of soil. Physiological activity of the preparation for the tested agricultural crops on low productivity soils was determined by the energy intensity of the working solutions used for presowing treatment of seeds and spraying vegetating plants in ontogenesis.

The developed agricultural method of presowing seed treatment with a solution of the preparation without additional irrigation of meadow-gray and light chestnut soils ensured stable increase in winter wheat yield by 24.2-36.4%, and increased the amount of raw gluten in the grains up to 29.4%. In the reference variant, the content of gluten in the grain was 25.4%. High efficiency of using agricultural practice of presowing treatment of seeds and spraying vegetating plants with the studied working solutions of the preparation was noted in cultivation of soybeans on light chestnut medium loamy and meadow-gray medium loamy irrigated soils. The yield of soybean grains increased by 34.8% due to presowing treatment of seeds and spraying vegetating plants with aqueous solution of the humic preparation.

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### **ӨСІМДІКТЕРДІҢ ӨСУІН ЫНТАЛАНДЫРУ ПРЕПАРАТЫНЫҢ СУ ЕРІТІНДІСІМЕН ЭНЕРГЕТИКАЛЫҚ СЫЙЫМДЫЛЫҒЫ**

**Аннотация.** Мақалада зерттеу объектісі-гумин препараттарының алу технологиясы және оларды Қазақстанның шөлді аймақтағы бүлінген топырақты қайта қалпына келтіру арқылы пайдалану тиімділігі. Сондықтан біздің мақсатымыз көмір майдасынан препарат алып оны толыққанды ауыл-шаруашылық мол алудың жолында далалық эксперимент және биофизикалық мониторинг арқылы бұл технологияға өзгерістер енгізіп тиімді параметрлерін анықтау. Эксперимент аясында алынған препаратты жылда өнімді аз беретін топырақ жағдайында тексеріп көру. Ол үшін гуминдік препаратты суда еритін және 1 га жерге оның қанша жұмсалатынын есептеп шығардық, оның ішінде бидайдың тұқымын су ерітіндіге бұқтырып, келтіріп содан кейін ғана топыраққа себудің режимін анықтадық. Осындай тәжірибеден кейін анықтағанымыз топырақтағы тұздың көлемі 0,8-2,2%-те болғанымен сол жағдайдың өзінде дәнді-дақылдан 24,2-42,1%-ке, күріш 76,2-78,6%-ке, соя 34,8%-ке өсім берді. Бұл тұзды топырақтың және құрғақшылығы жиі кездесетін жағдайда көңіл көншітетін көрсеткіш болып есептеледі.

**Түйін сөздер:** экология, қоңыр көмір, натрий гуматы, ынталандыру препараты, биотестілеу, энергетика сыйымдылығы.

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### **ЭНЕРГЕТИЧЕСКАЯ ЕМКОСТЬ ВОДНОГО РАСТВОРА ПРЕПАРАТА-СТИМУЛЯТОРА РОСТА РАСТЕНИЙ**

**Аннотация.** Объектом исследования является технология получения гуминовых препаратов и эффективность их использования в низкопродуктивных почвах пустынной зоны.

Цель работы - исследование, разработка и испытание технология получения гуминовых препаратов и агромелиоративных приемов повышения урожайности культурных растений на низко-продуктивных почвах, а также рационального применения физиологически активного гумата натрия, получаемого из бурого угля в совокупности с другими приемами комплексной и дифференцированной агротехники.

На основе данных исследований энергетической емкости водных растворов гуминовых препаратов, биофизического мониторинга и корректировки основных технологических параметров предложена технология обработки семян различных культур.

Представлены результаты испытаний экспериментального образца препарата и агроприемов на различных типах низкопродуктивных почв засушливых зон республики. Методом биотестирования определены оптимальные концентрации водных растворов гуминового препарата для обработки семян сельскохозяйственных культур, оптимальные технологические параметры подготовки семян к посеву (продолжительность обработки гуминовым препаратом, отлежки семян и др.); определены оптимальные условия высева семян в почву (влажность, температура, засоление).

В результате выполненных работ установлена эффективность препарата, получаемого по разработанной технологии на низкопродуктивных почвах с уровнем засоления 0,8-2,2 %. Повышение урожайности зерновых культур достигает 24,2-42,1 %, риса 76,2-78,6%, а сои -34,8 %.

Определены объекты, методы исследования, а также результаты лабораторных и полевых опытов по изучению, разработке и испытаниям гуминовых препаратов и агромелиоративных приемов предпосевной обработки семян, опрыскивания вегетирующих растений водными растворами физиологически активного гумата натрия при выращивании сельскохозяйственных культур на низкопродуктивных почвах на фоне зональной агротехники в различных почвенно-климатических зонах Казахстана.

**Ключевые слова:** экология, бурый уголь, гумат натрия, препарат-стимулятор, биотестирование, энергетическая емкость.

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## IDENTIFICATION AND RESEARCH OF THE PROPERTIES OF LACTIC ACID BACTERIA STRAINS USED AS STARTER CULTURES FOR MAKING RAW-SMOKED HORSEMEAT SAUSAGES

**Abstract.** This article is about identification of flora of raw smoked sausages produced in the course of study, which will enable a further study of its properties and use in the production of raw smoked sausage from horse meat. The article describes the current state of the world market for horse meat and meat products; and production of sausages, including raw smoked sausages. There is a technology that has been developed in order to produce horse meat products using starter cultures: ready cooked smoked *Kazy* and raw smoked sausage. The hip portion, which remains after *jaya* is cut off, is used as the main stock for the production of raw smoked sausage. We compared the quality characteristics of the finished products, and studied the amino acid and fatty acid composition. We provided a comparative description for the organoleptic parameters of raw smoked sausages with starter cultures and a reference sample added. The samples were compared for: pH value, content of mass fraction of protein and microbiological characteristics. We tested elective nutrient medium for lactic acid bacteria in order to see if there was any significant microbial flora in raw smoked sausages.

**Key words:** Flora in raw smoked sausages, fermented meat products, starter cultures, lactic acid bacteria strains, amino acids, fatty acids, identification of microorganisms.

The world market for meat and meat products is one of the major sectors of the food market. One of the main and traditional sources of raw meat in our country is horse meat. According to the data, the Republic of Kazakhstan has sufficient resources of horse meat, which makes it prospective and interesting to be used in the production of national meat products for the population of Kazakhstan, as well as for export. The horse headcount in March 2018 in virtually all of the regions of Kazakhstan reached a maximum over the last 25 years in relative and absolute terms. According to the Statistics Committee of the Republic of Kazakhstan, as of March 1, 2018, there were 2,356.9 thousand horses in Kazakhstan, and as of this April 1, the number of these animals reached 2,463,500 heads. Despite the significant share of horse meat, the associated meat production is largely hampered by the lack of appropriate process solutions that would enable an effective use of this type of resource based on promising types of processing [1].

An analysis of the world horse meat market shows that horse meat production is less than 0.25% of total world meat production, with 700,000 tons of horse meat produced in total per year. If you look across continents, Asia, America and Europe produced 46%, 30% and 18% of the world's horse meat, respectively, with China, Kazakhstan and Mexico as the largest producers. Asia, as the largest producer, has almost no exports or imports, while North and South America exports most of the horse meat to Europe and Japan [2.11].

Despite having so many resources of live weight, Kazakhstan is the main importer of Russian meat products. Russia holds the main share in the structure of imports of meat products (up to 95%).

Today, if we look at European countries, horse meat is widely used in France, Belgium, Italy and Sweden, where horse meat exceeds lamb in sales volumes. In France, horse meat consumption accounts for 0.4 percent of all meat consumed. In Italy, traditional fermented sausage is made without the use of microbial starters, with the end of the product maturation characterized by a slight sourness and an elastic, semi-solid consistency. *Lactobacillus sakei*, *Lactobacillus curvatus* and *Lactobacillus plantarum* are most commonly found lactobacilli in meat and meat products, including fermented sausages processed by various technologies. These include the most often isolated species - *Lactobacillus sakei* [3,4,10].

The main product derived from processing various types of raw meat is sausages. The different types of sausages include raw smoked sausage as the most natural sausage, which belongs to a unique meat products class consisting of only spice added meat. Raw smoked sausages represent a class of traditional meat products that are not heat-treated, that is, produced without pasteurization [3]. High-quality raw smoked products are based on the use of modern biotechnological techniques. Currently, most raw smoked sausages are produced via an accelerated technology using starter cultures, which may include microorganisms of various genera, including *Lactobacillus spp.*, *Pediococcus spp.*, *Staphylococcus spp.*, *Micrococcus spp.* [2, 13].

Meat products are perishable products, which makes finding harmless and effective drugs to increase their shelf life an urgent matter.

One of the most important effects of starter bacterial cultures is an extended shelf life of meat products. The strains used for the meat industry can have a significant impact on the shelf life and quality of fermented foods by suppressing unwanted flora. Undesirable flora is suppressed and beneficial flora is produced due to the release of antibacterial substances, such as organic acids, carbon dioxide, hydrogen peroxide, diacetyl, and bacteriocins [13,14].

**Purpose:** to expand the range of raw smoked horse meat sausages with the possibility of using the portion of the hip, which usually remains after *jaya* is cut off; to improve organoleptic parameters and ensure the safety of the finished product; to shorten the maturation period for the product.

**The following objectives were set in order to address this purpose:**

- ✓ production of raw smoked horse meat sausages using starter cultures;
- ✓ production of raw smoked horse meat sausages without using starter cultures;
- ✓ comparison of quality characteristics and chemical composition of readymade product;
- ✓ identification of technologically significant microflora of finished raw smoked sausages for further study of their properties and use in production.

The following served as the research targets:

1) **starter cultures:** а) BLC -78 - *Staphylococcus carnosus*, *Pediococcus acidilacti*; б) Flora italia LC – *Lactobacillus sakei*, *Pediococcus acidilacti*, *Staphylococcus carnosus*;

2) **food products made with and without a starter culture.**

**Research methods:** pH value was determined by a potentiometric method; protein content in the product was determined by the content of protein nitrogen, which is found by the difference between the amount of total and non-protein nitrogen, based on nitrogen conversion to protein; a capillary gas chromatography with a flame ionization detector (FID) and a quartz column was used for gas chromatographic studies; microbiological research was based on testing elective nutrient media for lactic acid bacteria (medium for singling out lactic acid bacteria according to A. Netrusov's method) in order to identify technologically significant flora of ready-made raw smoked sausages (MRS nutrient medium).

**Results.** The research made it possible to:

- design a technology for the production of raw smoked horse meat sausages using starter cultures;
- design a technology for the production of cooked smoked product - *Kazy* branded as "Almaty" with the addition of starter cultures.

Starter cultures were added together with salt and seasonings at the rate of 0.5 g per 1 kg of minced meat, and they were also added to the brine. Microorganisms, introduced with starter cultures, acted through enzymes to change the structure of meat products, building new substances that contribute better product quality indicators.



Figure 1 – Cooked-smoked product – Kazy "Almaty" with the addition of starter cultures

The results of the study of the quality characteristics of cooked smoked *kazy* with the addition of starter cultures versus a reference sample are presented below (table 1). The production of cooked smoked *kazy* was based on horse meat from the rib section cooled for 48 hours at a temperature of (2-4) °C. What makes this process essential different is the use of a bacterial preparation when treated with brine, which makes it possible to intensify biochemical and microbiological processes during meat ripening. This reduces the duration of treatment with brine, reduces the amount of residual nitrite and improves the organoleptic characteristics of the finished product.

Table 1 – Organoleptic assessment of cooked smoked *Kazy* "Almaty"

Sample	Outer appearance	Appearance and color in cross section	Smell	Taste	Consistency	Juiciness	General score
Reference sample	7.1±0.3	6.7±0.2	6.8±0.3	6.4±0.2	6.4±0.3	6.1±0.3	6.6±0.3
<i>Kazy</i> with starter cultures added	7.5±0.3	7.4±0.3	7.0±0.4	7.4±0.2	7.0±0.4	6.6±0.4	2±0.3

We can see from Table 1 that *Kazy* samples with the addition of starter cultures received high scores compared to reference. *Kazy* made using starter cultures are distinguished by a denser consistency and a pronounced specific taste and aroma.

One of the components impacting taste and aroma are amino acids and fatty acids. The amino acid composition of cooked smoked *kazy* is presented in Table 2. These substances are formed and accumulated as a result of the breakdown of proteins, as well as peptides belonging to extractive substances of muscle tissue.

Table 2 - Amino Acid composition of the product: boiled and smoked *Kazy* "Almaty"

№	amino acid	Height	Area	Mass fraction in %	Concentration mg/l
1	Arginine	1,712	68,87	0,90±0,36	78,0
2	Lysine	0,243	2,415	0,014±0,004	1,20
3	Tyrosine	3,336	154,2	1,84±0,55	160,0
4	Phenylalanine	1,251	45,92	0,51±0,15	44,0
5	Leucine+isoleucine	3,124	233,3	0,98±0,25	85,0
6	Methionine	1,275	64,73	0,62±0,21	54,0
7	Valine	2,355	122,7	0,93±0,37	81,0
8	Proline	2,659	117,3	0,83±0,22	72,0
9	Threonine	1,547	63,64	0,47±0,19	41,0
10	Serine	1,215	59,0	0,36±0,009	31,0
11	Alanine	2,978	145,6	0,71±0,19	62,0
12	Glycine	3,794	225,7	0,89±0,30	77,0

Analysis temperature: 30°C;

Wavelength: 254

Calculation method: absolute calibration of the instrument.

The rate of accumulation of potential predecessor of taste and aroma which are built altogether in the process of cooking is associated with the rate of degradation of high molecular substances of muscle tissue, especially proteins. This is related to the depth of proteolysis [1].

Aromatic compounds obtained as a result of the activity of microorganisms are known to have a significant effect on the formation of the aggregated aroma of fermented meat products. In the development process, starter cultures release enzymes that catalyze the breakdown of carbohydrates, with organic acids, acetone, diacetyl now accumulated, which participate in the formation of taste and aroma of meat products [6.13].

One of the informing and accessible indicators for taste and aroma of meat products is the mass fraction of volatile fatty acids (table 3), which was identified by removing it with direct steam from acidified water extract followed by refining a distillate with alkali [5,8.12].

Table 3 - Fatty Acid composition of the boiled and smoked product: Kazy "Almaty"

№	Time, min.	Fatty acids	Height	Area, %
1	9,43	Oil	0,697	0,6387
2	14,41	Myristic	1,653	0,3807
3	18,78		0,692	0,1012
4	22,23	Stearic	0,724	0,0860
5	22,83		0,624	0,0483
6	26,21		0,689	0,0347
7	27,30		2,903	0,5578
8	29,06		2,393	0,3740
9	30,12		1,891	0,2537
10	30,74	Oleic	6,482	1,2961
11	33,36		5,038	0,8760
12	42,68		5,591	0,7667
13	47,34		24,661	5,1761
14	53,64	Linoleic	1,894	0,3788
15	56,96	Linolenic	7,580	1,8901
16	74,05	Pentadecane	3,170	1,1702
			66,682	13,4763

Chromatograph type – Crystallux – 4000M



Figure 2 – Smoked sausage made from horse meat

Formation of meat products' aroma is predominantly determined by the fermentation of fats, which results in di- and monoglycerides, volatile fatty acids and associated decomposition products [5,15].

*Jaya*, *kazy* and *karta* are the most valuable things in horse meat. We used portion of a horse hip, which remains after we cut out *jaya*, as the main stock for production of raw smoked sausage. The two following types of starter cultures were used in the manufacture of raw smoked sausages: BLC -78 — *Staphylococcus carnosus*, *Pediococcus acidilacti*; Flora italia LC - *Lactobacillus sakei*, *Pediococcus acidilacti*, *Staphylococcus carnosus*. The strains for microorganisms present in the composition of these

starter cultures are intended for the production of various types of raw smoked sausages, and are significantly different in quality from those starter cultures that are available in the market of our country (were purchased in Bulgaria during research training).

The work produced: a reference sample without a fermentation starter added; a test sample with bacterial fermentation starter BLC -78 added; a test sample with bacterial fermentation starter Flora italia LC. The results of the study into the organoleptic characteristics of raw smoked sausage with an addition of starter cultures versus reference sample are presented below (table 4).

Table 4 - Organoleptic assessment of raw smoked sausages

Assessment based on five score scale						
Sausage samples	cross section appearance	color	smell	taste	consistency	general
Test sample with BLC -78 added;	4.9	4.8	4.7	4.8	4.8	4.8
Test sample with Flora italia LC added	4.8	4.8	4.8	4.7	4.9	4.8
Reference (no ferment added)	4.5	4.5	4.6	4.5	4.5	4.52

From table 4 we can see that sausage samples made with starter cultures are rated higher than reference samples in terms of organoleptic indicators. Test samples had a more tender consistency and sourish taste versus reference. Samples of finished sausages also differed in pH:

- test sample No. 1 – 4.74;
- test sample No. 2 – 4.86;
- reference – 4.91.

One of the most important values is the proteolytic activity of microorganisms used as starter cultures. It is determined by the degree of protein breakdown in meat. This principle contributes to higher quality characteristics of raw meat stock. Proteolytic activity of enzymes is about a change in the amount of protein in the final product [8,9,15]. The following data was obtained once the mass fraction of protein in the finished raw smoked sausages was determined (table 5):

Table 5 – Content of mass fraction of protein in finished raw smoked sausages

No.	Protein mass fraction, %	Actual results	Trial regulations
1	Test sample No. 1	28.51	GOST 25011-81
2	Test sample No. 1	28.15	GOST 25011-81
3	Reference	31.0	GOST 25011-81

At the next stage of the research, we tested elective nutrient media for lactic acid bacteria in order to identify technologically significant flora of ready-made raw smoked sausages.

The research revealed that no lactic acid microorganisms were detected in test sample No. 1, since only denitrifying cocci were found in the starter culture used: *Staphylococcus carnosus*, *Pediococcus acidilacti*. Test sample No. 2 revealed the number of lactic acid microorganisms, CFU/g -  $12 \cdot 10^7$ . The reference sample revealed CFU/g –  $6 \cdot 10^7$  of lactic acid microorganisms. At the next stage of research we will single out pure cultures of denitrifying cocci, study the physiological and biochemical properties of the singled out strains and create new starter cultures.

As a conclusion to the work done to study the effect of lactic acid bacteria strains used as starter cultures on the quality characteristics of fermented meat products, we can now state that microorganisms in a starter culture perform many indispensable functions, such as: accelerating biochemical processes occurring in raw meat when treated with brine, and proteolysis of muscle proteins driving the rate of maturation of meat products; improvement of organoleptic characteristics of the finished products; optimal pH reduction; improved sanitary conditions; all of these also play an important role in the formation of taste and aroma.



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### **ЖЫЛҚЫ ЕТІНЕН ҚАҚТАЛҒАН ШҰЖЫҚ ДАЙЫНДАУДА ҚОЛДАНЫЛАТЫН ҰЙЫТҚЫ РЕТІНДЕ ПАЙДАЛАНЫЛАТЫН СҮТ ҚЫШҚЫЛДЫ БАКТЕРИЯЛАР ШТАММДАРЫН БӨЛІП АЛУ ЖӘНЕ ҚАСИЕТТЕРІН ЗЕРТТЕУ**

**Аннотация.** Бұл мақала зерттеу барысында дайындалған, қақталған шұжық өнімдерінен технологиялық тұрғыдан маңызды микрофлораны бөліп алуға, қасиеттерін зерттеуге және алдағы уақытта жылқы етінен қақталған шұжық өнімдерін өндіруде пайдалануға арналған. Мақалада жылқы еті және ет өнімдерінің дүниежүзілік нарықтағы бүгінгі күнгі жағдайы; шұжық өнімдерінің, соның ішінде қақталған шұжық өнімдерінің өндірісі баяндалған. Жылқы етінен ұйытқы қосылған ет өнімдерін дайындау технологиясы құрастырылған: пісіріліп-ысталған Қазы және қақталған шұжық. Қақталған шұжық дайындау үшін, жаяны кесіп алғаннан кейін қалатын, жылқының сан еті пайдаланылды. Дайын өнімдердің сапалық көрсеткіштерін өзара салыстыру, аминқышқылдық және майқышқылдық құрамын зерттеу жүргізілді. Ұйытқы қосылып дайындалған және ұйытқысыз дайындалған, қақталған шұжық өнімдерінің органолептикалық көрсеткіштері салыстырмалы түрде сипатталған. Үлгілерде салыстырмалы түрде: рН мөлшері, ақуыздың салмақтық үлесі және микробиологиялық қасиеттері сипатталған. Дайын қақталған шұжық өнімдерінің технологиялық тұрғыдан маңызды микрофлорасын бөліп алу мақсатында, сүт қышқылды микроорганизмдерді селективті қоректік орталарға себу жүргізілген

**Түйін сөздер:** қақталған шұжық өнімдерінің микрофлорасы, ферменттелген ет өнімдері, ұйытқы, сүт қышқылды бактериялар штаммдары, аминқышқылдары, май қышқылдары, микроорганизмдерді бөліп алу.

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### **ИДЕНТИФИКАЦИЯ И ИЗУЧЕНИЕ СВОЙСТВ ШТАММОВ МОЛОЧНОКИСЛЫХ БАКТЕРИЙ, ПРИМЕНЯЕМЫХ В КАЧЕСТВЕ СТАРТОВЫХ КУЛЬТУР ДЛЯ ИЗГОТОВЛЕНИЯ СЫРОКОПЧЕННЫХ КОЛБАС ИЗ КОНИНЫ**

**Аннотация.** Данная статья посвящается идентификации технологически значимой микрофлоры изготовленных в ходе исследования сырокопченых колбас, для дальнейшего изучения их свойств и применения в производстве сырокопченых колбас из конского мяса. В статье описаны: нынешнее состояние мирового рынка конского мяса и мясных продуктов; производство колбасных изделий, в том числе сырокопченых колбас. Разработана технология производства мясных изделий из конины с использованием стартовых культур: варено-копченая Казы и сырокопченая колбаса. В качестве основного сырья для производства сырокопченной колбасы использован задний окорок (сан ет) конины, который остается после срезания жая. Проведено сравнение качественных характеристик готовых продуктов, исследование аминокислотного и жирнокислотного состава. Сравнительно описаны органолептические показатели изготовленных сырокопченых колбас с добавлением стартовых культур и контрольного образца. Сравнительно описаны в образцах: величина рН, содержание массовой доли белка и микробиологические характеристики. Произведен посев на селективные питательные среды для молочнокислых бактерий, с целью выявления и идентификации технологически значимой микрофлоры готовых сырокопченых колбас.

**Ключевые слова:** Микрофлора сырокопченых колбас, ферментированные мясные продукты, стартовые культуры, штаммы молочнокислых бактерий, аминокислоты, жирные кислоты, идентификация микроорганизмов.

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## **COMPARATIVE STUDY OF FRUITFULNESS OF COW INSEMINATION OF A MILKING HERD AT VARIOUS LEVELS OF PRODUCTIVITY IN THE CONDITIONS OF BAYSERKE-AGRO LLP**

**Abstract.** A comparative analysis of the fruitfulness of cow artificial insemination of milking herd at various levels of productivity was carried out in the conditions of Bayserke-Agro LLP. A study of reproduction performance of the milking herd was conducted based on the results of work performed from January 2018 to March 2019. The comparative data include cows artificially inseminated both according to the natural estrous cycle and according to the hormonal stimulation scheme of the estrus according to the Ovsynch program. It was established that the variability of the insemination index is directly dependent on the level of cow productivity, while the variability of this indicator in terms of lactation numbers has not been established. The service period and the insemination index in high productive groups significantly exceed the optimal indicators, and in groups with milk yields of 6–9 thousand kg, relatively high reproductive qualities are observed, corresponding to zootechnic norms.

**Keywords:** artificial insemination, insemination index, service period, estrous cycle, first-calf heifers.

**Introduction.** The determining factor in the dairy productivity of the herd, along with genetic potential, feeding and housing conditions, is the reproduction rate. It is known that one of the main factors determining the insemination index of cows, in addition to a balanced diet, is a certain level of productivity as well. The relationship between productivity and insemination index was revealed [1], as the milking capacity index increases above 1000, there is a significant decrease in the proportion of fecundated cows to 27.8% ( $P < 0.05$ ) while increasing the milking capacity index to 800 does not have a significant effect [2]. According to research by several authors, indicators of the reproductive function of cattle have a low coefficient of heritability, in the range of 0.1 - 0.15. Consequently, they are largely influenced by environmental factors, though their genetic causation is also in no doubt [3]. Insemination at the age of 20.0 - 21.9 months is further characterized by reduced reproductive traits as an increased seed consumption for one fruitful insemination, extended service period and low fertility rate. Whereas the insemination of mating heifers under the age of 13.9 months are distinguished by a high fertility rate and, accordingly, low seed consumption per fruitful insemination, that indicates a high reproductive trait. At the same time, the periods of productive use of animals of this group are comparably low. [4, 5].

«At this stage of the dairy cattle husbandry development, which is based on the formation of dairy-commercial farms with highly productive dairy cattle based on imported animals or the use of foreign gene pool, there are problems of temporary infertility of animals after calving. The causes of obstetric and gynecological diseases are driven, first of all, by a weakening of the general resistance of the organism and a metabolic disorder. The main factor predisposing to the disease is the unbalance of the diet in terms of acid-base equivalents, minerals, and vitamins, as well as housing conditions and the level of productivity. A metabolic disorder, in turn, causes endocrine insufficiency and hormonal disorders, which leads to a disturbance in the neurohumoral regulation of sexual functions and favorable conditions are created for the development of pathogenic microflora in the genitals causing inflammation processes.» [6].

It has been established that the milk productivity of Holstein cows increases until the fifth lactation [7]. Therefore, the high lifetime productivity of cows is a consequence of the good development and functioning of all organs and systems of vital activity of the organism, including reproductive organs. In reproduction of high productive dairy cattle, it is necessary to maximize the reproductive capacity of high productive breeding stock, including first-calf heifers, that will shorten the service period.

**Materials and methods of research.** The research work was conducted in the dairy complex of Bayserke-Agro LLP. The main breed is Holstein cattle of Canadian breeding. In accordance with the technology, the milking herd is allocated by productivity and feeding is based on the average group productivity. Artificial insemination of cows is carried out once in 12-14 hours from the start of estrus with ordinary seed, and heifers of the mating contingent are divided by sex (homosexual). The milking herd is equipped with motion sensors, thanks to which it is possible to accurately determine the time of estrus onset. The study of pregnancy was performed on the 45-50th day after insemination with ultrasound. The number of groups of animals is 8, of which 3 groups with an average productivity from 38 to 41 kg (high-yielding, lim. 34-79 kg), 4 groups - from 23 to 27 kg (medium-yielding, lim. 21-33 kg) and 1 group is low-productive with average productivity of 14-16 kg per day. Every 14-16 days, the cows regroup according to the average milk yield data for the last 5-7 days of lactation.

Artificial insemination of heifers is carried out starting from 12 months of age upon reaching a live weight of 360 kg.

**The aim of the research.** Comparative analysis of fruitfulness of cow insemination of milking herd at various levels of productivity.

**Research results.** A comparative analysis of reproduction indicators of the milking herd was carried out based on the results of work performed from January 2018 to March 2019. The comparative data include cows artificially inseminated both according to the natural estrous cycle and according to the hormonal stimulation scheme of the estrus upon the Ovsynch program. The stimulation scheme was used for anovulatory estrous cycle, in the absence of natural estrus for more than 55 days from the time of calving, with pronounced signs of ovarian dysfunction (ovarian hypofunction) caused by lactation predominant.

As can be seen from the table, the highest rates of semen consumption per fruitful insemination were observed in the group with a productivity level of more than 11 thousand kg of milk for 305 days of lactation, which averaged 2.96 doses. Consequently, the duration of the inter-calving period was longer than the generally accepted norm by more than 100 days, which is associated with obtaining offspring from these cows one time in 16 months. Groups with average productivity of less than 8,600 kg of milk per lactation had the lowest indices of insemination, which amounted to 2.2 and the duration of the service period corresponded to zootechnic norms. It is also worth noting that the percentage of fruitful insemination in groups with a yield of more than 10 thousand kg are comparatively low and averaged from 32 to 36% in spring and summer and from 34 to 38% in autumn and winter. In groups with indicators of milk yield from 7 to 9 thousand kg per lactation, the average fertility rates during the study for pregnancy ranged from 38 to 47%, and in cows with milk yield of 6 thousand kg per lactation - not less than 54% at single insemination.

Table 1 - Comparative results of artificial insemination of cows

Number of animals	Average productivity for 305 days, kg	Seed consumption per 1 fruitful insemination, doses	Period, days	
			Service period	Inter-calving period
86	11396±160.8	2.96±0.81	198±13.51	481±13.63
92	10522±150.1	2.72±0.46	192±12.8	475±12.1
98	9053±178.5	2.4±0.38	127±11.9	427±12.32
102	8620±125.3	2.2±0.36	98±10.1	379±9.81
58	7002±195	2±0.21	91±10.75	375±10.51
26	6105±203.4	1.85±0.18	80±9.35	364±8.83

Also, comparative analysis of the results of artificial insemination according to the number of lactation, listed in Table 2, was carried out.

Table 2 - Variability of the insemination index of cows by lactations

Age group	n	Insemination index	Age, months
Of the first calving	72	2.4±0.42	23.6±0.26
Of the second calving	83	2.38±0.38	40.1±1.12
Of the third calving and more	45	2.3±0.35	64.7±9.5

For reliable data acquisition, only cows with milk yield from 8.5 thousand to 9.0 thousand kg were taken into account for 305 days of lactation, i.e. with average milk yield in the amount of 200 animals. Of these, first-calf heifers in the amount of 72 animals, cows of the second calving - 83 heads and the third and more calves - 45 heads.

The table shows that the age of registered cows at the time of fruitful insemination averaged 23.6 months for cows of the first calving, 40.1 months for cows of the second calving, and 62.7 months for cows of the third and more calvings. The insemination indices were identical and in the range of 2.3-2.4, the yield of offspring at the end of the year for these cows was 86% per 100 females.

In such a way, on the basis of the obtained data, it was established that the variability of the insemination index is directly dependent on the productivity level of the cows, while the variability of this indicator in terms of lactation numbers has not been established. The service period and the insemination index in high productive groups (more than 10 thousand kg of milk for 305 days of lactation) significantly exceed the optimal indicators, while in the groups with yields of 6–9 thousand kg, relatively high reproductive traits are observed, corresponding to zootechnic norms.

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**“БАЙСЕРКЕ-АГРО” ЖШС ЖАҒДАЙЫНДА ӘР ТҮРЛІ ӨНІМДІЛІК ДЕҢГЕЙІНДЕГІ  
САУЫН ТАБЫНЫНДАҒЫ СИЫРЛАРДЫ ҰРЫҚТАНДЫРУДЫҢ  
ЖЕМІСТІЛІГІН САЛЫСТЫРМАЛЫ ТАЛДАУ»**

**Аннотация.** “Байсерке-Агро” ЖШС жағдайында сауын табынындағы сиырларды қолдан ұрықтандырудың өнімділігін әртүрлі деңгейлерінде салыстырмалы талдау жүргізілді. Сүт алқабының репродуктивті өнімділігін салыстырмалы талдау 2018 жылдың қаңтарынан 2019 жылдың наурызына дейін жүргізілген жұмыстардың нәтижелері бойынша жүргізілді. Салыстырмалы деректерге табиғи сексуалды циклге сәйкес жасанды түрде ұрықтандыру және «Овсинх» бағдарламасына сәйкес жыныстық цикл гормоналды ынталандыру схемасына сәйкес сиырлар жатады. Ұрықтандыру индексінің өзгергіштігі сиырлардың өнімділік деңгейіне тікелей тәуелді екені анықталды, бұл ретте осы көрсеткіштің сауын мөлшері бойынша өзгергіштігі анықталмаған. Жоғары өнімді топтарда ұрықтандыру кезеңі мен индексі сервисі оңтайлы көрсеткіштерден едәуір асып түседі, ал 6-9 мың кг сауындары бар топтарда зоотехникалық нормаларға сәйкес келетін салыстырмалы түрде жоғары репродуктивті сапалар белгіленді.

**Түйін сөздер:** жасанды ұрықтандыру, ұрықтандыру индексі, сервис-кезең, жыныстық цикл, алғашқы тұқым.

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### СРАВНИТЕЛЬНЫЙ АНАЛИЗ ПЛОДОТВОРНОСТИ ОСЕМЕНЕНИЯ КОРОВ ДОЙНОГО СТАДА ПРИ РАЗЛИЧНЫХ УРОВНЯХ ПРОДУКТИВНОСТИ В УСЛОВИЯХ ТОО «БАЙСЕРКЕ-АГРО»

**Аннотация.** Проведен сравнительный анализ плодотворности искусственного осеменения коров дойного стада при различных уровнях продуктивности. в условиях ТОО «Байсерке-Агро». Сравнительный анализ показателей воспроизводства дойного стада был проведен по результатам работ, выполненных за период с января 2018 по март 2019 года. В сравнительные данные включены коровы как искусственно осемененные по естественному половому циклу, так и по схеме гормональной стимуляции половой охоты по программе «Овсинх». Была установлена, что изменчивость индекса осеменения находится в прямой зависимости от уровня продуктивности коров, при этом изменчивость данного показателя по количеству лактации не установлена. Сервис период и индекс осеменения у высокопродуктивных групп значительно превышают оптимальные показатели, а у групп с надоями 6-9 тыс. кг отмечены относительно высокие репродуктивные качества, соответствующие зоотехническим нормам.

**Ключевые слова:** искусственное осеменение, индекс осеменения, сервис-период, половой цикл, перотелки.

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## **<sup>1</sup>MOSQUE CONSTRUCTION FEATURES OF THE KAZAKH PEOPLE (THE MIDDLE XIX – EARLY XX CENTURIES)**

**Abstract.** According to official historiography, a stone mosque in Petropavl is considered to be the oldest mosque in Kazakhstan and the first mosque built by the Kazakhs was built in 1835 organized by Zhangir Khan in the Bukey Horde, also known as the Inner Horde.

The first mosques built by Aral - the Caspian Region Kazakhs started in the late XVIII - early XIX centuries represented by the Mosque Aday Beket-Ata built by Myrzagululy on the bank of the Zhem River. The next stage of the mosque history (XIX century) is related to the names of the historical figures, prophets Tabyn Doszhan Ishan and Tama Nurpeke. Doszhan Ishan was among those first who built the mosque near the Kaynar Spring that is in the Tasastau tract, on the ridge of Dongyztau. The mosque of Doszhan Ishan Kashakuly in the Tasastau-Kaynar was built in the 50s of XIX century.

**Key words:** mosques, Aktobe region, Islam, religious figures, Kazakhs.

### **Introduction**

The contemporary of the famous Ishan, the poet Kerderi Abubakir glorified in his poems the craftsman who constructed the mosque mentioning his name and the people who helped a religious figure Doszhan Ishan, famous among the Kazakh people, to build his second mosque in 1868-70 on the bank of the Shili River (Oyil):

«He built a wonderful mosque,  
Having chosen a craftsman named Birman.  
Hired a hundred men to help,  
Those men who knew their stuff.  
The poet proclaimed:  
Five men of Shuren Mailybay  
Helped to build the mosque», – [1].

This piece of poetry is about the craftsman, Birman, who had a unique skill in building mosques in the West Kazakhstan region. Besides, it gives information about the local tribe and the noble man Mailybay who helped Doszhan Ishan build a mosque (in the poem Bes Shuren, the Little Zhuz Alim, the Shektyn, the Shuren tribe).

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From this point of view, we see that there were people who helped and supported those who initiated to construct mosques and that kind of work was communal in public life.

For example, the mosque built in Kostanay was initiated by the noble man Minaidar and the poet Nurzhan. During one of the meetings, they shared their idea of building a mosque and came to the conclusion that «We should gather from each family, at least one livestock». The funds were raised by the rich, Karim Bekmuhameduly, Leker Haji, Yessentay Haji and others, wealthy people made their contributions as well. The poet Nurzhan was responsible for organization of the construction. For over a short period of time, more than 300 live stock were gathered. The money was handed over to the merchant Abdigaly Yaushevto cover the expenses of the mosque construction [2].

It is difficult to say how much money was spent to build one mosque at that time (late XIX–early XX centuries). For example, we can see that the tombstones erected on the graves in the West Kazakhstan according to the information gathered by Kh. A. Argynbayev, the most complex in design—a dome roofed stone monument in Mangistau cost 100 sheep, and the smallest tombstone cost one horse [3].

If to speak about the history of mosque construction in Aktobe, R. Ilysova gives the following information: «Usen Prophet Mosque, which is on the bank of the Borte River, was built on the expenses of five villages. The people from Tama-Tabyn tribes with the help of local people from neighborhood village stook an active part in the construction of the mosque mostly carrying stones and the construction itself was carried out by Bashkir craftsmen for 25 cattle» [4].

Similarly, according to the information stored in the memory of people, Dilmagambet Mosque (the mosque of the Kultas) on the Irgiz River was built by the Tatar master craftsman for one thousand and five hundred sheep [5].

As noted above, different prices were sated in the history of construction of a certain mosque. In fact it depended on the size of the mosque, the type of building material (straw brick, burnt brick, etc.) and financial capabilities of customers.

While studying the history of mosque constructions we can find out that alongside with mullahs, ishans, local people mentioned the names of wealthy people as well. For example, when Duyseke Dandygululy, the Ishan from the Zhem River Baiuly Taz tribe, decided to build a mosque all wealthy people of Baiuly got together with their labor force, concentrated their work stock, provided workers with food and livestock for meat and milk, built hundreds of houses and organized work. Zhetimek Zhumagazy, Zhary Sarbas and Keldibay Abish gave 500 sheep each. As a result of such an arrangement, it took only a year to build a mosque in 1889 [6].

A large number of rich people provided financial assistance in construction of mosques; this can be seen in studying the history of any mosque. Money and transportation facilities were provided by leaders and wealthy people of the country. One example of a mosque erection taken place in the Turgay region in early XX century is depicted in the work called "Haji Effendy who built the Kalzhan Mosque". This process is given as follows

«...I shall give one hundred tenges as well-

Alimbai Aktasuly endorsed by signature.

Zhasybay, the rich man,

Gave the same amount of money,

Tell them that the son of Zhasyken, Altybaibai

Was the first to give a hundred tenges», – in this way the names of wealthy people are listed on the above mentioned work, showing who provided financial support in building of a mosque [7].

Sometimes wealthy people financed the construction of a mosque them selves, for instance, Zhagalbaily qadi from the Junior Zhuz, the wealthiest person of his time Derbisali Berkinbayev (1837-1913) built on his own expense the two- rowed mosque of Orsk (Zhamankala) and the Nurpeke mosque on the bank of the Elek River, the Orenburg Region [8].

The poet Kerderi Abubakir dedicated some lines to that mosque in his poem «The Praise of Derbisali»:

«You built a mosque shining the religious light.

That cost you twenty thousand money amount,

You did it all by yourself.

Construction of such a place is difficult,



It is out of one person's capacity.  
The great son of the Kazakh, who  
Experienced the gratitude of his people, – he wrote [9].

From these examples, one can come to the conclusion that in the Kazakh society at that time rich people were directly involved in the construction of mosques and even initiated a mosque building process.

Studying the history of mosques, we cannot but mention the materials they were built with and a wide variety of those materials is worth considering as well.

The preparation of materials of construction and delivery to the construction site was largely due to the fact that the construction of any mosque was discussed in details by the organizers. After having decided on the issue of the type of construction materials of the main building of the mosque, they set forward the task of supplying material to the building site. For example, if the bricks necessary to construct a mosque were decided to be made out of the local soil or by cutting off the shore from the riverbank or sometimes with the help of local natural stones, then construction material were transported a short way off. Construction materials, such as timber, not found locally, were transported from faraway places.

Duisenby's brother Saleken was responsible to get the timber used in construction of one of the most famous mosques in the northern Aral area – Duisenby Akhun Mosque. Saleken accompanied by eleven people spent the whole winter in the territory of Kostanay region cutting the necessary amount of wood and drifted the wood through the river (Torgai, Irgiz) during the spring flood [10]. Accordingly, the foundation of the mosque in Uil («Kokzhar» fair), which began its construction in 1893, was laid by wild stones, and the dumping belts were pulled from Orenburg by camel carts [11].

V. V. Vostrov describing the mosque construction in Mangistau region wrote «Mosques in Tushchukuduk and Zharmysh wintering grounds in Mangistau and the dwelling houses were made of limestone (chalk-stone), which was mainly brought from a 250-300 kilometer seashore to the construction site» [12].

The blue mosque of Tama built in Mugalzhar in 1900 and put into operation in 1904, «it was built by two Nogai (Tatar) master craftsmen with the help of villagers. The mosque stone was dug out of the hill at Kakpaktas, about 5 to 6 km away from the village and transported with a camel [13]. Similarly, the mosque of Akhmet Bai in Aktobe was built of the stone brought from Kosestek. The clay used in building the mosque was of the unique clay found in Karatogay (Aktobe region, Martuk district). The pool near the mosque was used to work clay [14].

Considering above mentioned facts, we can see that the issue of the construction of the mosque was a result of collective work. It is important to note that some of the work was arranged, discussed and coordinated. The most suitable place for the construction of a mosque was mostly chosen by experienced, elderly wise men, ishan and craftsmen. Usually, the mosques are located in the most convenient places in all respects (availability of nearby springs, water wells, a natural shelter, fuel supply etc.).

As for preparation and transportation of construction materials were the work of the local youth. Planning of a mosque construction and its erection was carried out by master craftsmen.

In the late XIX – early XX centuries the art of building a mosque, as a cultural process, found its place in our distinctive culture as a result of the inner world of the Kazakh people (morality, faith in God) and the influence of that time. This process is well-known in the history of the construction of the Aral-Caspian region mosques [15]. That means that in order to build a mosque, it required consideration, fostering, financial support and the joint work of all social groups of people [16].

#### **CONCLUSION**

At the same time, the emergence of a mosque on the Aral-Caspian area and other large religious-residential complex was influenced by the tribal, brotherly, affiliated relations that are the main elements of the traditional Kazakh society. The character traits of nomadic Kazakhs in late XIX – early XX centuries such as morality, maturity, wisdom, etc. contributed to it as well. As proof of this, it is important to note that as soon as the mosque construction is over, people arrange a feast to celebrate the event. The children born that day are named Meshitkali and Meshitbai stating the importance of folk values. All this is a sign of the personality of an individual, who cares about his people and country, a man of great wisdom and personal integrity [17].

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**<sup>2</sup>ҚАЗАҚ ХАЛҚЫНЫҢ МЕШІТ ҚҰРЫЛЫСЫН ҰЙЫМДАСТЫРУ ЕРЕКШЕЛІКТЕРІ  
(XIX Ғ. ОРТАСЫ - XX Ғ. БАСЫ)**

**Аннотация.** Жалпы, ресми тарихнамада Қазақстандағы ең ескі мешіт деп Петропавлдағы тас мешітті атаса, ал қазақтардың алғаш салған мешітін 1835 жылы Ішкі Бөкей ордасында, Жәңгір ханның ұйымдастыруымен бой көтерді деп есептеледі.

Арал-Каспий аймағы қазақтарының мешіттерінің бой көтеруі XVIII ғ. аяғы – XIX ғ. басындағы Жем бойындағы Адай Бекет ата Мырзағұлұлының салған мешітінен бастау алады. Мешіттердің салыну тарихының, келесі кезеңі (XIX ғ.) аймақта өмір сүрген, тарихи тұлғалар Табын Досжан ишан мен Тама Нұрпеке хазіреттердің есімдерімен байланысты. Бұл тұрғыда алғанда, Досжан ишанның алғашқылардың бірі болып Доңызтаудағы Тасастау алқабы, Қайнар бұлағының жанында салдырған мешітінің орны ерекше. Қашақұлы Досжан ишанның Тасастау-Қайнардағы мешіті XIX ғ. 50 жж. салынған.

**Түйін сөздер:** мешіттер, Ақтөбе облысы, ислам, діни қайраткерлер, қазақтар

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**<sup>3</sup>ОСОБЕННОСТИ ОРГАНИЗАЦИИ СТРОИТЕЛЬСТВА МЕЧЕТЕЙ У КАЗАХОВ  
(СЕРЕДИНА XIX – НАЧАЛО XX ВВ.)**

**Аннотация.** Согласно официальной историографии, каменная мечеть в Петропавловске называется самой старой мечетью в Казахстане, а первой мечетью, построенной казахами, считается мечеть 1835 года возведенная под руководством Жангир-хана в Букеевской Орде, известной также как Внутренняя Орда.

Первые мечети Арало-Каспийского региона были построены казахами в конце XVIII – начале XIX веков, начиная с мечети Адай Бекет-Ата Мырзағұлұлы на берегу реки Жем. Следующий этап истории строительства мечети (XIX век) связан с именами исторических деятелей как Табын Досжан-ишан и Тама Нұрпеке-хазрет. Досжан-ишан был одним из первых кто построил мечеть возле источника Кайнар, который находится в урочище Тасастау на чинке Доңызтау. Мечеть Досжана-ишана Кашақұлы в Тасастау-Кайнаре по нашим данным, очевидно, была построена в 50-х годах XIX века.

**Ключевые слова:** мечети, Актюбинская область, ислам, религиозные деятели, казахи.

<sup>2</sup> (Мақала №AP05133586 «XIX ғ. – XX ғ. басындағы мешіттер мен діни қайраткерлер: Ақтөбе облысының материалдары негізіндегі зерттеу» (жоба жетекшісі: Р. Бекназаров) жобасы аясында орындалды).

<sup>3</sup> (Статья подготовлена в рамках проекта №AP05133586 «Мечети и религиозные деятели XIX в. – начала XX в.: исследование на материалах Актюбинской области» (руководитель проекта: Р. Бекназаров).

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## **ANALYSIS OF EFFICIENCY OF THE USE OF FINANCIAL RESOURCES OF THE ENTERPRISE**

**Abstract.** At present, with the transition of the economy to market relations, the independence of enterprises, their economic and legal responsibility is increasing. Dramatically increases the value of financial stability of business entities. Business leaders are faced with the problems of financial management.

Understanding that the company needs to change the management system, reduce costs, more effectively manage financial resources comes quickly. The question is how to do this? How to calculate the true cost of products, how to plan purchases with existing stocks, in the improvement of which processes in the first place you need to invest. The efficiency of using financial resources is characterized by asset turnover and profitability indicators. Therefore, management efficiency can be increased by reducing the turnover period and increasing profitability by reducing costs and increasing revenue.

**Keywords:** financial resources of the enterprise, efficiency of use, management system, cost.

### **INTRODUCTION**

The management of an enterprise's financial resources is a set of targeted methods, operations, levers, methods of influencing various types of finances to achieve a certain result, as well as a part of money in the form of revenues and external revenues intended to fulfill financial obligations and incur costs to ensure advanced reproduction.

Financial resources and capital are the main objects of research finance firms. In a regulated market, the concept of "capital" is often used, which is a real object for a financier and which he can influence constantly in order to generate new incomes of a company. In this capacity, capital for the practical financier is an objective factor of production.

Thus, capital - is part of the financial resources involved in the company turnover and generating income from this turnover. In this sense, capital appears as a transformed form of financial resources.

### **MAIN PART**

Accelerating the turnover of working capital does not require capital expenditures and leads to an increase in the volume of production and sales of products. However, inflation rather quickly devaluates working capital, enterprises are buying more and more of them for the purchase of raw materials and fuel and energy resources, and non-payment of buyers distracts a significant part of funds from circulation.

Current assets are used as working capital in the enterprise. Funds used as working capital go through a specific cycle. Liquid assets are used to purchase raw materials that turn into finished products; products are sold on credit, creating accounts receivable; customer accounts are paid and collected, becoming liquid assets.

Any funds not used for working capital may be used to pay liabilities. In addition, they can be used to acquire fixed capital or paid in the form of income to owners.

One of the ways to save working capital, and therefore increase its turnover, is to improve inventory management. Since an enterprise invests in stockpiling, storage costs are associated not only with storage costs, but also with the risk of damage and obsolescence of goods, as well as the time value of capital, i.e. with the rate of return that could be obtained as a result of other investment opportunities with an equivalent degree of risk.

Economic and organizational-production results from the storage of a certain type of current assets in a given volume are specific for this type of assets. A large stock of finished products (associated with the estimated sales volume) reduces the possibility of production shortages with unexpectedly high demand.

Similarly, a sufficiently large supply of raw materials and materials rescues the company in the event of an unexpected shortage of the corresponding stocks from the termination of the production process or the purchase of more expensive substitute materials. A large number of orders for the purchase of raw materials and materials, although it leads to the formation of large stocks, nevertheless, it makes sense if the company can achieve price reductions from suppliers. For the same reasons, the company prefers to have a sufficient stock of finished products, which allows you to more economically manage production. As a result, the enterprise itself, as a rule, offers a discount to its customers.

Increasing the turnover of working capital is reduced to identifying the results and costs associated with storing stocks, and summing up a reasonable balance of stocks and costs. To accelerate the turnover of working capital in the enterprise it is advisable: planning the procurement of necessary materials; the introduction of rigid production systems; the use of modern warehouses; improved demand forecasting; fast delivery of raw materials and materials.

The second way to accelerate the turnover of working capital is to reduce accounts receivable.

The level of accounts receivable is determined by many factors: the type of product, market capacity, the degree of saturation of the market with this product, the settlement system adopted at the enterprise, etc. The management of accounts receivable involves, above all, control over the turnover of funds in the calculations. Acceleration of turnover in dynamics is considered as a positive trend. Of great importance is the selection of potential buyers and the determination of the conditions of payment for the goods provided for in contracts.

The selection is carried out using formal criteria: compliance with payment discipline in the past, the forecast financial capabilities of the buyer to pay for the volume of goods requested by him, the level of current solvency, the level of financial stability, the economic and financial conditions of the seller's enterprise (oversupply, need for cash, etc. . .).

Payment of goods to regular customers is usually made on credit, and the conditions of the loan depend on many factors. In economically developed countries, the "2/10 full 30" scheme is widespread, meaning that: the buyer receives a two percent discount in case of payment of the goods received within ten days from the beginning of the crediting period; the buyer pays the full cost of the goods if payment is made between the 11th and 30th days of the credit period; in the event of non-payment within a month, the buyer will be forced to additionally pay a fine, the value of which may vary depending on the moment of payment.

The most common ways of influencing debtors to pay off debts are letters, telephone calls, personal visits, selling debts to special organizations (factoring).

The third way to reduce working capital costs is to make better use of cash. From the point of view of the theory of investing, cash represents one of the particular cases of investing in commodity and material values. Therefore, the general requirements apply to them.

First, a basic cash pool is needed to make current calculations. Secondly, a certain amount of money is needed to cover unforeseen expenses. Thirdly, it is advisable to have a certain amount of free cash to ensure a possible or predictable expansion of activities.

Thus, the models developed in the theory of inventory management and allowing to optimize the amount of money can be applied to cash. The idea is to estimate: the total amount of cash and cash equivalents; what share should be kept on the current account, and which in the form of marketable securities; when and to what extent to carry out the mutual transformation of cash and marketable assets.

It is also recommended to reduce the scope of variation, if it is possible to generate income due to the high interest rate on securities. Another important tool for improving the efficiency of the use of financial resources is the management of the company's fixed production assets and intangible assets. The main issue in their management is the choice of depreciation method.

There are three methods for calculating depreciation: equal write-off, the amount of work performed and accelerated depreciation.

The success of financial management directly depends on the capital structure of the enterprise. The capital structure can help or hinder the company's efforts to increase its assets. It also directly affects the

rate of return, since the fixed-interest profit components paid on debt obligations do not depend on the predicted level of activity of the company. If the firm has a high proportion of debt payments, there may be difficulties in finding additional capital.

It is considered an axiom that the capital structure should correspond to the type of activity and requirements of the company. The ratio of borrowed funds and risk capital should be such as to provide shareholders with a satisfactory return on investment. Flexibility in changing capital structure can be a necessary element of success.

It is usually easier to negotiate short-term loans than medium-term and long-term loans. Short-term capital can provide expected and unexpected cash flow fluctuations, while medium long-term capital is required mainly for long-term projects (for example, foreign expansion programs).

In Western countries, the expectations of the shareholders of an enterprise have a great influence on the efficiency of financial management. This factor requires the company to establish a minimum long-term rate of return that would provide income to shareholders, and takes into account a number of points: potential dividends and opportunities for raising the cost of capital; an element of risk in business (in industries with a low degree of risk, the income of members of the joint stock company as a whole is also low and vice versa); the amount of return that shareholders might receive elsewhere from investments with comparable risk.

Since the overwhelming majority of shareholders do not have a clear idea of the current or potential problems that the company in which they have invested faces, their expectations regarding income are almost always unrealistic and exaggerated. The extent to which their expectations can be taken into account depends on how strongly their impact on the company is. If the holders are dissatisfied, they can simply sell the shares.

The more competitive the industry, the greater the pressure on the holders of its shares in terms of investments in the renewal and modernization of equipment and facilities, research, training, computerization. None of these areas will likely have a quick return on investment in a year or even a little more. Moreover, the uncertainty of demand, manifested in changes in fashion, consumer behavior, technology, the irregularity of the business cycle, competition, will be reflected in the errors that usually accompany the process of determining profits. When managing financial resources, it is necessary to decide how to determine both the cost of capital taken as the basis for calculations and its increment (retirement).

Table 1 - Group of fixed assets

	At the beginning of the year, OF n.	Received, OF post.	Retired, OF Selected	At the end of the year, OF k.g.	At the beginning of the year, OFN.g.	Received, OF post.	Out, OF Selection.	At the end of the year, OF k.g.
Group of fixed assets	Amount th.tg.	Weight,%	Amount th.rub	Weight,%	Amount th.tg	Weight,%	Amount th.rub	Weight, %
Building	150 000	32,29	15 000	28,29	12 000	35,22	153 000	31,65
Facilities	50 000	10,76	-	-	4 000	11,74	46 000	9,51
Transfer devices	1 000	0,22	150	0,28	20	0,06	1 130	0,23
Machinery and equipment	150 000	32,29	15 000	28,29	15 000	44,03	150 000	31,03
Vehicles	110 000	23,68	22 000	41,49	2 200	6,46	129 800	26,85
Production tools and household equipment	3 000	0,65	750	1,41	750	2,20	3 000	0,62
Other	500	0,11	125	0,24	100	0,29	525	0,11
Total	464 500	100	53 025	100	34 070	100	483 455	100
Including:								
active part	151 000	32,51	15 150	28,57	15 020	44,09	151130	31,26
passive part	313 500	67,49	37 875	71,43	19 050	55,91	332325	68,74

Evaluation and composition of the structure, depreciation of fixed assets (table)

The active part of fixed assets is formed by:

- Transfer devices

- Cars and equipment

The passive part of fixed assets is formed by:

- building;

- facilities;

- vehicles;

- production tools and household equipment

Based on the calculations given in the table, we will construct pie charts showing the structure of the fixed production assets of the enterprise at the beginning and end of the year.

Analysis of the structure of production assets shows that the main share is accounted for buildings, vehicles, machinery and equipment. Together, these three components make up about 87-88% of the volume of OF. Structures account for 9-10% of PF. For the analyzed year, there are no changes in the structure of funds.

## CONCLUSION

The success of the enterprise is not possible without the reasonable management of financial resources. It is not difficult to formulate goals for which the rational management of financial resources is necessary: the survival of a company in a competitive environment; avoid bankruptcy and major financial failures; leadership in the fight against competitors; maximizing the market value of the company; acceptable growth rate of the economic potential of the company; growth in production and sales; profit maximization; cost minimization; ensuring profitable activities, etc.

The priority of a particular goal can be chosen by an enterprise depending on the industry, its position in this market segment and much more, but successful progress towards the chosen goal depends largely on the perfect management of the company's financial resources.

УДК 576

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Қазақ еңбек және әлеуметтік қатынастар академиясы

## КӘСІПкерлік Қаржы Ресурстарын Пайдалану Тиімділігін Талдау

**Аннотация.** Қазіргі уақытта экономиканың нарықтық қатынастарға көшуімен кәсіпорындардың тәуелсіздігі, олардың экономикалық және құқықтық жауапкершілігі артып келеді. Кәсіпкерлік субъектілерінің қаржылық тұрақтылығының құндылығын айтарлықтай арттырады. Бизнес көшбасшылары қаржылық басқару проблемаларына тап болды.

Компанияның басқару жүйесін өзгертуге, шығындарды азайтуға, қаржы ресурстарын тиімді басқаруына тезірек көз жеткізу керек екенін түсіну. Мұны қалай жасау керек? Өнімдердің шынайы құнын қалай есептеу керек, бар қорлармен сатып алуды қалай жоспарлау керек, қайда жақсарту керек, бірінші кезекте инвестиция қажет. Қаржы ресурстары мен капиталы фирманың қаржыларын зерттеудің басты объектілері болып табылады. Реттелетін нарық жағдайында "капитал" ұғымы жиі қолданылады, ол қаржыгер үшін нақты объект болып табылады және ол фирманың жаңа кірістерін алу мақсатында үнемі әсер ете алады. Бұл ретте қаржыгер үшін капитал-практика-өндірістің объективті факторы.

**Түйін сөздер:** кәсіпорынның қаржы ресурстары, пайдалану тиімділігі, басқару жүйесі, шығындар.

УДК 576

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Казахская Академия труда и социальных отношений

## АНАЛИЗ ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ ФИНАНСОВЫХ РЕСУРСОВ ПРЕДПРИЯТИЯ

**Аннотация.** В настоящее время, с переходом экономики к рыночным отношениям, повышается самостоятельность предприятий, их экономическая и юридическая ответственность. Резко возрастает значения финансовой устойчивости субъектов хозяйствования. Руководители предприятий сталкиваются с проблемами управления финансовыми ресурсами.

Понимание того, что на предприятии необходимо менять систему управления, снижать издержки, более эффективно управлять финансовыми ресурсами приходит быстро. Вопрос в том, как это сделать? Как подсчитать истинную себестоимость вида продукции, как спланировать закупки при имеющихся запасах, в совершенствовании каких процессов в первую очередь необходимо инвестировать средства. Финансовые ресурсы и капитал представляют собой главные объекты исследования финансов фирмы. В условиях регулируемого рынка чаще применяется понятие "капитал", который является для финансиста реальным объектом и на который он может воздействовать постоянно с целью получения новых доходов фирмы. В этом качестве капитал для финансиста-практика - объективный фактор производства.

**Ключевые слова:** финансовые ресурсы предприятия, эффективность использования, система управления, себестоимость.

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IN KAZAKHSTAN**

**Abstract.** In the article considered the modern state of small and midsize businesses in a republic, the analysis of problems retentive his development is conducted, authorial vision of their decision is presented. Authors investigate the sources of the financial providing of development of enterprise, problem of their insufficiency, absence of stimuli for realization. On the basis of analysis of entrepreneurial activity in Kazakhstan in the last few years conclusions are set forth and to recommendation for perfection of instruments of adjusting of enterprise in Kazakhstan, a prognosis is given on further development of small business.

It is marked authors, that if to create all corresponding terms providing complex support of enterprise on national and regional levels, increases of level of her financial providing, then these events will result not only in becoming and development of small and midsize businesses but also to the increase on this basis of efficiency of the Kazakhstan economy on the whole.

**Keywords:** small business, tax incentives, sponsorship, financial providing.

**Introduction** - In modern conditions, the functioning of entrepreneurship is of particular importance, ensuring employment of the population, prompt satisfaction of the needs in the production of goods, food and services. In the Message of the President of the Republic of Kazakhstan N.Nazarbayev to the people of Kazakhstan dated January 31, 2017, “The Third Modernization of Kazakhstan: Global Competitiveness” states “The second priority is the cardinal improvement and expansion of the business environment. One of our strategic goals is to ensure by 2050 the contribution of small and medium-sized businesses to the country's GDP of at least 50” [1].

As the analysis of the experience of developed countries shows, the state plays an important role in creating favorable conditions for stimulating innovative activity in all sectors of the economy. The state provides both direct support for innovation (selection of priority areas for the development of science and technology, financing from the state budget) and indirect support (using fiscal methods, legislative regulation, creating favorable conditions for the commercialization of scientific knowledge).

The pivotal goal of the SME support policy implemented within the European Union is to balance the interests of business and the state, ensure rational conditions for business, and increase the competitiveness of SMEs. The unique system of support and regulation of small business in Europe began to emerge as early as the 1970s, and continues to emerge through the introduction of various programs and the creation of support funds for the SB.

**Methodology** - The current state of small and medium-sized businesses in Kazakhstan is characterized by intermittent trends (Figure 1).

According to the results of the analysis, in the structure of active SME entities, according to the organizational and legal forms, the entities that carry out entrepreneurial activities without forming a legal entity prevail - individual entrepreneurs, whose number in 2017 is 747.1 thousand units - 65.2% of the total active subjects. The number of PF - 187.5 thousand or 16.4%, small and medium enterprises - 211.3 thousand units. or 18.4% of the total number of active small and medium-sized businesses (Table 1).

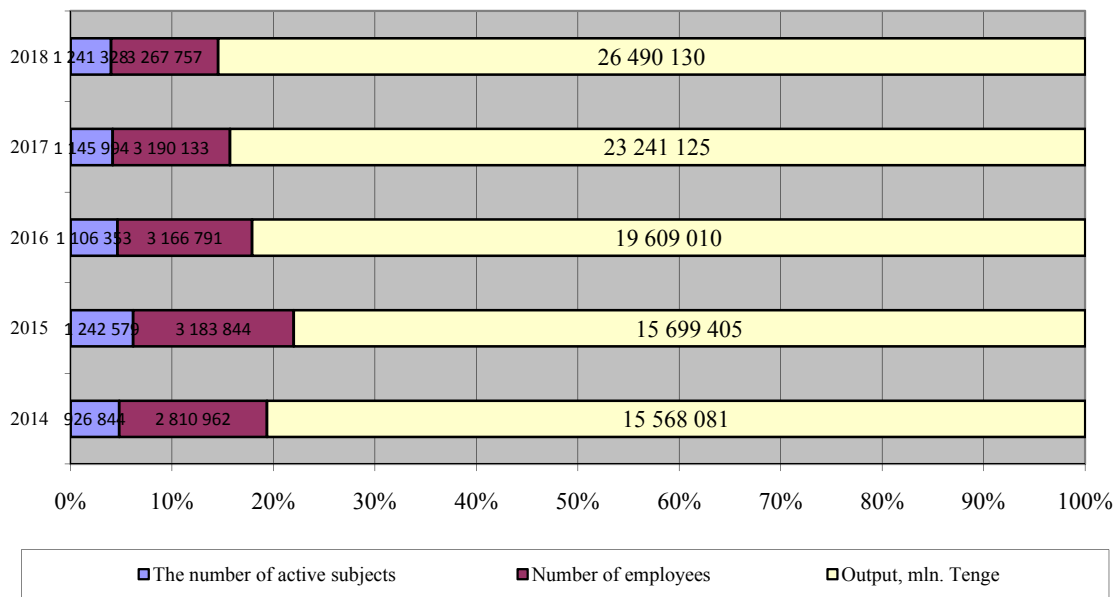


Figure 1 - Dynamics of development of small and medium enterprises in Kazakhstan [2].  
Note – compiled by authors

Table 1 - The structure of active SMEs by organizational legal forms

Type of ownership	2015	2016	2017	Share of total active subjects, in %		
				2015	2016	2017
Individual entrepreneurs	882849	736121	747107	71,0	66,5	65,2
Peasant farms	181 154	177 884	187527	14,6	16,1	16,4
SME	178576	192348	211360	14,4	17,4	18,4
Total	1 242 579	1 106 353	1 145 994	100	100	100

Note: compiled by authors

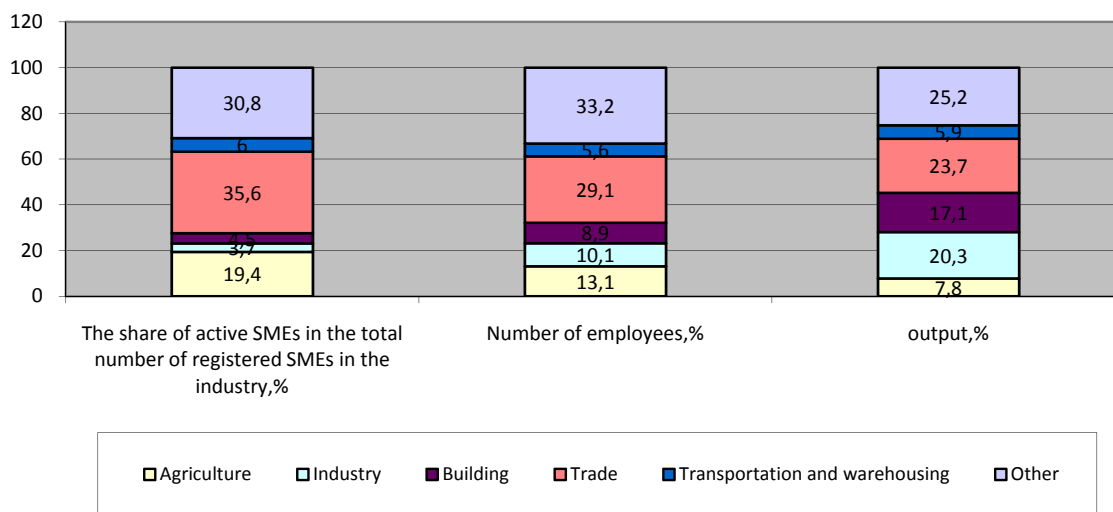


Figure 2 - Estimation of small and medium business by industry

As can be seen from the data presented, the share of active SMEs by industry in 2017 is as follows: agriculture 19.4%, trade 35.6%, transport and warehousing 6%. The largest share in the total volume are trade and communication enterprises, and the smallest industry.

Next, we will analyze small and medium-sized businesses by region in 2017 (Table 2).

Table 2 - Assessment of small and medium business in the context of the regions of the Republic of Kazakhstan as of 01.01.2018

Region	The number of active SMEs, units	The share of active SMEs in the total number of registered SMEs in Kazakhstan, in %
Republic of Kazakhstan	211 360	100,0
Akmola	6 551	3,1
Aktuibinsk	9 133	4,3
Almaty	8 779	4,2
Atyrau	6 119	2,9
West Kazakhstan	5 597	2,6
Zhambyl	5 282	2,5
Karaganda	16 288	7,7
Kostanay	6 761	3,2
Kyzylorda	4 887	2,3
Mangystau	7 498	3,5
South Kazakhstan	16 686	7,9
Pavlodar	8 583	4,1
North Kazakhstan	4 829	2,3
East Kazakhstan	10 058	4,8
Astana city	35 590	16,8
Almaty city	58 719	27,8
Note: compiled by authors		

**Results of a research** - A review of the number of active SMEs by region in 2017 showed that the largest number was located in Almaty (58.7 thousand units), Astana (35.6 thousand units). A smaller number of active SMEs in Kyzylorda (4.9 thousand units). Of all registered SMEs, about 55% are active, i.e. carry out ongoing activities and submit reports to the statistical authorities.

Summing up, we note that as of May 2018, the Republic of Kazakhstan among the countries of the world, according to the favorable conditions for doing business, ranked 28th according to the World Bank's Doing Business rating. According to such indicators as “registration of enterprises”, “registration of property” and “taxation”, Kazakhstan took 36, 18 and 56 places, respectively. It is also worth noting that over the past 3 years, the position of the Republic of Kazakhstan has steadily increased from 80 to 28.

At the same time, despite the positive development trend of small business, as a result of the analysis, the Republic of Kazakhstan is lagging behind in terms of the development parameters of SMEs from foreign countries. It should be noted that the main factors hindering the development of this sector according to the results of monitoring conducted by the Economic Research Institute are:

- imperfection of tax policy;
- instability of the general economic situation in the country;
- low level of solvency of the Kazakhstan population;
- lack of working capital;
- low competitiveness of SMEs;
- interaction with government bodies;
- lack of qualified personnel;
- insufficient number of financial and scientific institutions;
- insufficient financial support and state financial support;
- unavailability of credit funds.

The latter factors are the most important, since it is the state that should support the development of private entrepreneurship. The small business sector is characterized by an increased level of risk, as a

result of which many commercial banks themselves do not risk lending to SMEs. In addition, it should be noted that the refinancing rate set by the National Bank is very unaffordable for many SMEs [3].

In international practice, it is considered normal when about 90% of credit funds are issued under state guarantees. In our country, there is also a system of state lending, which is an indispensable attribute of all government programs to support small and medium-sized businesses. However, it was noted that its volume is not enough to cover the needs of SMEs.

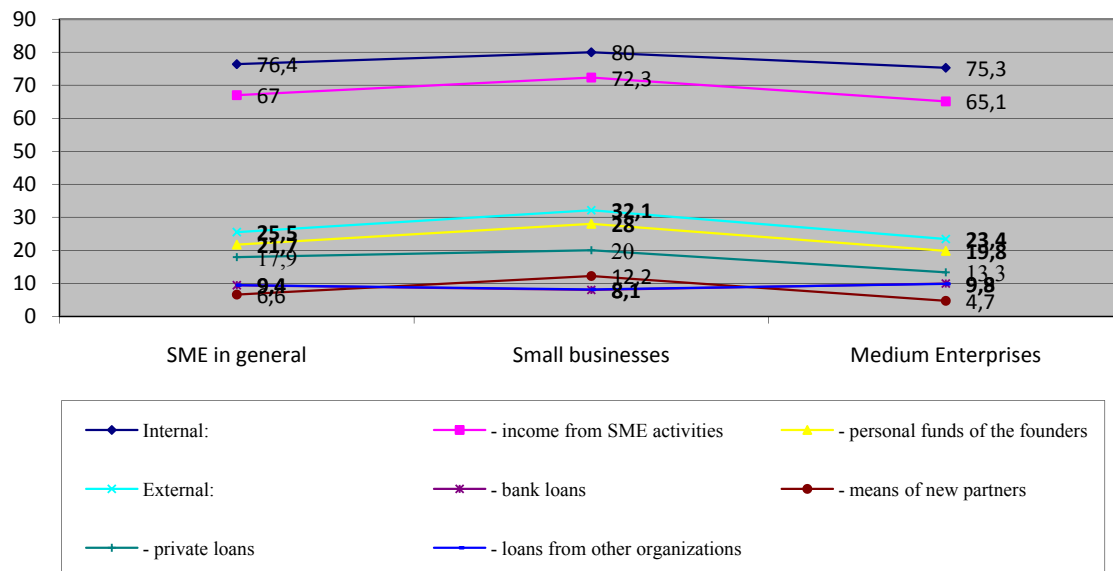


Figure 3 - Sources of financing for SME development, in % [2]

The analysis allows us to conclude that the main sources of financing are the own funds of the founders of small enterprises - 21.7% and the profit obtained as a result of the business activity - 67.0. However, own funds are often not enough, and the lack of financial support can be felt both at the initial stage of business development and in the process of business development. In connection with what enterprises require borrowed funds, but according to the results of the analysis revealed that their share is significant small and is only 25.5%. At the same time, bank loans occupy only 9.4%. 21.7% of enterprises do not have opportunities for development. Small business support is the cornerstone of government policy. This is enshrined in such fundamental documents as the “Strategy of Kazakhstan - 2050”. Issues of further strengthening the business environment are given exceptional attention in the annual Presidential Address to the people of Kazakhstan.

Today in the field of private entrepreneurship there are a number of economic problems, which from the point of view of entrepreneurs themselves include:

- high tax burden (47%);
- limited financial resources (46%);
- corruption in government (32%);
- difficulties in obtaining a loan (25%);
- staff qualification (12%);
- problems associated with the registration of the business itself (11%).

Financial problems manifest, above all:

- in the absence of financial assets to meet their own investment and negotiable needs;
- in reducing the effective demand for products of SMEs;
- in the absence of funds, due to a significant reduction in turnover of small companies;
- in the growth of overdue accounts payable of enterprises to commercial banks, leasing companies and counterparties in the absence of a system for its restructuring;
- in the absence of access to credit in commercial institutions (due to tougher conditions and an increase in interest rates on loans).

Due to the difficulty of obtaining loans today in Kazakhstan operates the National Fund "Damu", whose main goal is to support small businesses.

The growth of the degree of financial support for small and medium-sized businesses is possible through the use of new financial and organizational resource-saving technologies, in particular, the introduction of elements of operational management accounting, factoring, forfeiting, as effective financial technology methods, leasing, outsourcing, franchising, the use of venture capital, cluster approach as modern forms of organization of small business [4].

Improving the effectiveness of financial management for SMEs should be carried out through the improvement and implementation of financial asset management systems, namely, the establishment of an accounting system, optimization and short-term planning, as well as control, in order to improve the financial sustainability of small and medium-sized businesses.

The cluster approach for small and medium-sized businesses is one of the new and promising forms of cooperation in the Kazakh economy. However, its large-scale and successful implementation is possible only within the framework of the state strategy for the development of the national economy.

The development of public-private partnerships must be built on the basis of a concise legal framework. The state should create a transparent and understandable environment for the early large-scale implementation of resource-saving innovative methods, in order to increase the share of SMEs in GDP corresponding to developed countries.

The main economic levers are:

- regulation of the discount rate (discount policy implemented by the National Bank);
- establishing and changing the size of the minimum reserves that financial institutions of the country are obliged to keep in the National Bank;
- operations of state institutions in the securities market, such as the issuance of government obligations, their trade and their redemption.

Direct state economic regulation is carried out by means of budget policy.

The main instrument for raising funds to cover public spending is taxes. Taxes in state regulation of the economy play two roles:

- the main source of financing public spending;
- regulation tool.

In general, the main tasks of state support of financial support for entrepreneurship should be:

- provision of collateral for the obligations of business entities based on credit agreements (leasing, loan agreements, bank guarantees, etc.) in the form of a guarantee;
- maximum satisfaction of the needs of entrepreneurship in credit resources and the provision of financial support;
- financial support of state programs for support and development of entrepreneurship by accumulating budget funds and revenues from own activities;
- increase in the volume of collateral for the obligations of business entities of Kazakhstan (support infrastructure organizations) based on loan agreements (leasing, loan agreements, bank guarantees, etc.) in the form of a guarantee;
- stimulation of banking services for private entrepreneurship due to the system of control over the execution of the tasks facing each of the Banks - Program Participants;
- ensuring the implementation of obligations under the concluded guarantee contracts.

Directions of state financial support for SMEs at the regional and local levels should include:

- preferential loans;
- direct financial subsidies;
- Selective loan guarantee
- granting tax exemptions;
- transfer of a part of state property to the SME entity
- the provision of profitable regional government orders;
- simplification of registration and licensing activities;
- economic and legal preferential consulting.

The central task facing the state is to form a coherent and transparent system of state policy in the field of financial support for small and medium-sized businesses. Such a system cannot be formed without

developing and introducing into practice a mechanism for the separation of powers between the government bodies of the Republic of Kazakhstan.

The effectiveness of financial support for entrepreneurship is largely due to the correct choice of priorities, which takes into account local problems, is stimulating and meets the goals of the socio-economic policy of the regions. Prioritization of financial support is most appropriate at the local level. For example, in regions with a predominance of agro-industrial complex (AIC) in the economy, the emphasis of financial support should be directed to small companies focused on the production, processing of agricultural products and marketing. And in the regions established on the basis of scientific centers, it is reasonable to form, with the support of the administration, technological centers, technoparks, and venture funds [5].

The implementation of financial support programs at the local level will make it possible to reduce such negative tendencies of state support to the IB as scattering budget funds due to the abstract nature of budget beneficiaries and the low level of control over the use of allocated resources. The municipal level will make it possible to clearly define the specific recipients of funds, control their expenditure and timeliness of implementation of measures, as well as assess the effectiveness of measures implemented within the framework of support at the local level.

Within the framework of measures for financial provision of small and medium-sized business entities at the local level, it is advisable:

- develop a program of preferential loans.
- create a guarantee fund to support small innovative businesses, which will help reduce the risks of lending to this category of business entities and increase the effectiveness of the use of funds accumulated to support them.
- provide support through the provision of support to organizations focused on supporting entrepreneurship.
- stimulate the development of leasing activities.
- to expand the information system (conditions for obtaining financial support as part of the implementation of business support programs).
- to establish a system of tax incentives for business enterprises, providing, under conditions stipulated, for example, such as large capital investments, reinvestment of profits in R & D, insurance, etc.

Today, the best way to develop high-tech productions of competitive products with high added value in Kazakhstan is to actively attract strategic foreign investors (companies) from highly developed countries to establish their subsidiaries or branches in our country, they have extensive experience in developing such industries abroad. , they do not need to be called for the production of competitive products, they have better management, they have broad access to innovations, high technologies, good of established economic ties, a great experience in a competitive environment, competitive market - their element. [6].

Only they can facilitate and accelerate the process of introducing the Kazakhstani economy to high technologies, establishing production of products with high value added competitive in foreign markets. They can bring not only the knowledge and experience of business, high technology, effective management, but also cheap long-term money, which is so badly lacking for domestic private business. They will help accelerate the development of domestic highly professional entrepreneurs, especially if joint ventures are created. This would reduce the severity of the problem of long money for domestic entrepreneurs [6,7].

As practice shows, the full-scale development of Kazakhstan entrepreneurship will require much more time. In general, the globalization of domestic business is fully consistent with the long-term goals of the Kazakhstan-2050 strategy to create a highly industrial society based on the principles of a social market economy. In this context, with long-term forecasting, it is advisable to choose the direction of socio-economic foresight until 2050, highlighting the main strategic orientations that determine the functioning of SMEs.

**Application functionality** - Nowadays, many forecasting methods for one time series have been developed [8]. The goal of such a forecast is to show what results can be achieved in the future if we move to it with the same speed or acceleration as in the past. The forecast determines the expected options for economic development based on the hypothesis that the main factors and trends of the past period will be

preserved for the forecast period or that can be justified and take into account the direction of their changes in the perspective. A similar hypothesis is advanced on the basis of the inertia of economic phenomena and processes [9].

The predictions based on the extrapolation of the time series can be represented as a specific value of the function:

$$Y_{t+l}^* = f(y_i, l, a_j) \quad (1.1)$$

where  $Y_{t+l}^*$  - predicted value of a number of dynamics;  $l$  - lead period;  $y_i$  - row level taken as extrapolation base;  $a_j$  is the trend equation parameter.

Having smoothed the time series by the least squares method, we obtain a linear trend dependence of the form:

$$\hat{Y}_t = f(t) \quad (1.2)$$

Extrapolation is carried out by substituting into the trend equation the value of the independent variable  $t$ , corresponding to the value of the lead (forecast) period. Extrapolation makes it possible to obtain a point value of the forecast, i.e., an estimate of the predicted indicator at a point using the equation describing the trend of the predicted indicator. It is the average estimate for the predicted time interval.

The magnitude of the confidence interval of the trend extrapolation is determined as follows:

$$Y_{t+l}^* \pm K^* \cdot S_y \quad (1.3)$$

$$t = n, l = 1, 2, \dots, L$$

where  $Y_{t+l}^*$  - point forecast at the moment  $(t+l)$ ;  $S_y$  - mean square trend error;  $K^*$  - multiplier determined by the table with a given probability

Meaning  $K^*$  зависит only on the number of observations (the number of levels of the series  $n$ ) and  $l$  (lead period). With growth  $n$  meaning  $K^*$  is decreasing, and with increasing  $l$  increase. Consequently, a sufficiently reliable forecast is obtained with a sufficiently large number of observations (for a linear trend, for example, at least 6 and the lead time is not very long. With the same  $n$ , the confidence interval of the forecast increases with increasing  $l$ ).

The standard (standard quadratic) error in estimating the predicted index  $S_y$  is determined by the formula [1.4]:

$$S_y = \sqrt{\frac{\sum_{t=1}^n (Y - \hat{Y})^2}{n - m}} \quad (1.4)$$

where  $Y$  - actual level value;  $\hat{Y}$  - estimated estimate of the corresponding indicator for the model;  $n$  - sample size;  $m$  - number of parameters depending  $f(t)$ .

We illustrate the use of this method on the example of forecasting the indicators of production development of entrepreneurship in the Republic of Kazakhstan. To perform the calculations, we use the data of the time series for the period 2013-2018, presented in Table 3.

Models obtained using regression analysis, allow us to predict the options for the development of economic processes and phenomena, to study the trends in economic indicators, i.e. serve as a tool for science-based predictions. The results of the forecast are the source material for setting real economic goals and objectives, for identifying and making the best management decisions, for developing business and financial strategies in the future.

We will conduct a quantitative calculation of the forecast based on formalized forecasting methods, which are based on actually available information on indicators such as: output by all SMEs, mln. Tenge, number of active SME enterprises, units, number of people employed in SMEs, pers. by the extrapolation method for the analytical alignment of the trend, as well as by the exponential smoothing method.

Table 3 - Forecast indicators of the development of entrepreneurship in the Republic of Kazakhstan

Number of period	Years	Forecast of output by all SMEs, in mln. tenge	Forecast of the number of active SMEs, in units	Forecast of employment in SMEs, in persons
x		f(x)	f(x)	f(x)
1	2013	9 165 412,000	69 388	2 576 899
2	2014	15 568 081,000	79 388	2 810 962
3	2015	15 699 405,000	178 576	3 183 844
4	2016	19 609 010,000	192 348	3 166 792
5	2017	23 241 125,000	211 360	3 190 133
6	2018	26 314 313,100	2 011,783	3460415,4
7	2019	29 533 548,600	2 016,502	3553988,02
8	2020 forecast	32 191 331,513	2 018,397	3621207,916
9	2021 forecast	35 962 099,182	2 018,980	3780313,323
10	2022 forecast	38 992 101,328	2 019,500	3923557,48
11	2023 forecast	42 074 688,734	2 022,700	4013679,267

Forecast calculation of medium-term indicators of production by all SMEs, the number of active SMEs, the number of people employed in SMEs, conducted by simple extrapolation, shows that production by all SMEs by 2023 will increase by almost 2 times compared to 2017 (Figure 3) . The growth will occur mainly due to the extensive factor - the growth in the number of active SMEs, which will grow by 0.3% over the same period. At the same time, by 2023, the number of employed will increase by almost 1.3 times, or by 824 thousand people.

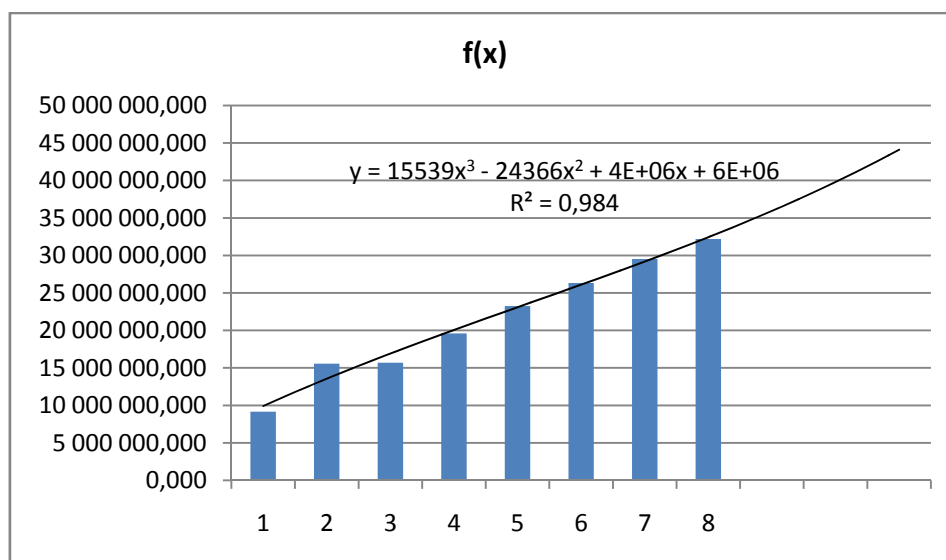


Figure 3 - Forecast of output by all SMEs, mln. Tenge

**Conclusion** - Thus, in order to improve the tools for regulating entrepreneurship, it is necessary:

- at the legislative level, to facilitate access to credit loans, to provide tax benefits to commercial banks lending to small and medium-sized enterprises;
- to optimize the taxation of private entrepreneurship, for example, the tax burden was not the basis for the liquidation of the activity;
- improve the work of leasing companies, provide tax and other benefits to those who provide services to SMEs at low interest rates [10];
- to attract employment services for financing private entrepreneurship so that their financial means go not only to the payment of unemployment benefits, but also, for example, to preferential loans to entrepreneurs who contribute to solving employment problems of the population;
- increase the number of government orders;



- to increase the responsibility of local governments for financial support and development of entrepreneurship, to control the targeted use of funds allocated from the budget for the financial support of small and medium-sized businesses.

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### ҚАЗАҚСТАНДАҒЫ КӘСІПКЕРЛІКТІ РЕТТЕУ ҚҰРАЛДАРЫ

**Аннотация.** Мақалада республикадағы шағын және орта бизнестің қазіргі жағдайы қаралып, оның дамуына кедергі жасайтын мәселелерге талдау жүргізіліп және автор оларды шешудің жолдарын қарастып ұсынған. Авторлар кәсіпкерлікті дамытудың қаржылық қамтамасыз ету көздерін, олардың жетіспеушілігі, іске асыру үшін ынталандырудың болмауы мәселелерін зерттейді. Қазақстанда кәсіпкерлік қызметті талдау негізінде соңғы жылдары Қазақстанда кәсіпкерлікті реттеу құралдарын жетілдіру үшін ШОБ-ты одан әрі дамыту бойынша болжам жасалып қорытындылар мен ұсыныстар берілді.

Егер жалпыұлттық және өңірлік деңгейде кәсіпкерлікті кешенді қолдауды, оның қаржылық қамтамасыз ету деңгейін арттыруды қамтамасыз ететін барлық тиісті жағдайлар жасалса, онда аталған іс-шаралар шағын және орта бизнестің қалыптасуы мен дамуына ғана емес, сонымен қатар осы негізде қазақстан экономикасының тиімділігін арттыруға да алып келетінін авторлар атап өтті.

**Түйін сөздер:** шағын бизнес, салықтық ынталандыру, қаржылық қолдау, қаржылық қамтамасыз ету.

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### ИНСТРУМЕНТЫ РЕГУЛИРОВАНИЯ ПРЕДПРИНИМАТЕЛЬСТВА В КАЗАХСТАНЕ

**Аннотация.** В статье рассмотрены современное состояние малого и среднего бизнеса в республике, проведён анализ проблем, сдерживающих его развитие, представлено авторское видение их решения. Авторы исследуют источники финансового обеспечения развития предпринимательства, проблемы их недостаточности, отсутствия стимулов для реализации. На основе анализа предпринимательской деятельности в Казахстане за последние годы сформулированы выводы и рекомендации для совершенствования инструментов регулирования предпринимательства в Казахстане, дан прогноз по дальнейшему развитию МСБ.

Авторами отмечается, что если создать все соответствующие условия, обеспечивающие комплексную поддержку предпринимательства на общенациональном и региональном уровнях, повышения уровня ее финансового обеспечения, то данные мероприятия приведут не только к становлению и развитию малого и среднего бизнеса, но и повышению на этой основе эффективности казахстанской экономики в целом.

**Ключевые слова:** малый бизнес, налоговые стимулы, финансовая поддержка, финансовое обеспечение.

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**A. Andabay**EO "Almaty Management University", Almaty, Republic of Kazakhstan  
[artum80@mail.ru](mailto:artum80@mail.ru)**FEATURES OF STRATEGIC PLANNING  
IN THE OIL AND GAS INDUSTRY**

**Abstract.** In the face of increasing competition in the global energy markets, given the high importance of the oil and gas industry for the Kazakh economy, the topical issue is improving the strategic planning system in the oil and gas industry. In the article, the author examines the existing hierarchy of program documents of strategic planning in the oil and gas industry, highlights the problems inherent in the current system.

The main provisions and objectives of the strategic planning of oil companies are considered. The role of the oil industry in the main macroeconomic indicators of the country's development is shown.

**Keywords:** strategy, strategic planning, oil and gas market, oil company, trends.

**Introduction**

The processes of globalization of the world economy over the past two decades have led to major changes in the oil and gas sector. Global competition for access to new sources of mineral resources is increasing due to depletion of developed reserves. The need to develop new, less efficient hydrocarbon deposits, leading to a significant increase in the cost of production of a unit of production, the continuous increase in the cost of material and technical resources used to maintain the technical condition and the development of production capacities, high volatility of fuel prices, the instability of the global financial market, all this makes the successful development of companies engaged in the production, transportation and sale of hydrocarbons very risky and problematic. Increased competition and increased risks dictate the need to choose new development guidelines. Subjects of management of the oil and gas complex of Kazakhstan face the problem of improving the conceptual approaches, methods, tools used in the preparation and adoption of strategic decisions in a new unstable environment [1]. Despite the fact that the fuel and energy sector has already formed management structures that meet the specifics of activities in market conditions, given the high inertia and capital intensity of the oil and gas complex, it is vital at the moment and in the future on a permanent basis in order to achieve sustainability and efficiency of its development in the long term to improve management methods, and primarily strategic planning.

**Methods**

Oil is one of the most important sources of energy of this century, it is used in all countries of the world. Indeed, our dependence on oil is very strong and does not seem to be easing.

Since oil accounts for 35% of the world's energy and is used in all spheres of our society, it is the main source of energy. To date, there is every reason to believe that the oil and gas industry may have a tendency to its rapid movement towards the supply crisis, after years of crisis of overproduction. This is hard to believe, given the increase in oil production in the US and the growth of optimism in the sector. In general, the situation in the industry is much better than a year ago: oil prices have recovered. If some time ago it seemed that the price was set in the range of approximately 45 US dollars to 50 US dollars per barrel, today Brent oil is trading at the level of more than 70 US dollars. Thus, there is a recovery of the industry after a difficult period, when low prices prevailed, strict financial discipline was maintained, restructuring of the asset portfolio was carried out and high productivity was ensured. At the same time, the International Energy Agency (IEA) has been signaling the possibility of a supply crisis since 2016. And recently, the possibility of a crisis proposal by the end of the decade warned the heads of Total, Eni and Saudi Aramco [2]. With the growing demand for oil and the fact that investment in many large

projects was postponed during the economic downturn, there is a decline in the potential to meet this demand. Oil companies will need to increase production, and there is a risk that some of them may find it difficult to keep up with the growing demand. The fundamental problem of the sector, of course, is its inherent volatility. Producers will need time to take into account factors of unpredictability in terms of oversupply or unsatisfied demand in the market. In addition, they will have to overcome the difficulties associated with the pace and scale of the transition to electricity production from non-fossil sources. Given these uncertainties, oil and gas companies need to develop a viable strategy to mitigate these risks. In other words, although the period of oversupply in the market is over, its effects will continue to be felt. In the short term, companies must maintain strict financial discipline and focus on improving productivity and applying new technologies. In the long term, they need to restructure their asset portfolios so that they become profitable at low break-even prices [3]. Moreover, they will have to consider how to ensure that their portfolio as a whole meets the requirements of tomorrow and protect it in the context of the transition to a low-carbon economy.

Table 1 – Countries with the largest oil reserves

Country	Reserves, billion barrels	% of world reserves
Saudi Arabia	264,1	21
Iran	137,6	10,9
Iraq	115	9,1
Kuwait	101,5	8,1
Venezuela	99,4	7,9
UAE	97,8	7,8
Russia	79	6,3
Libya	43,7	3,5
Kazakhstan	39,8	3,2
Nigeria	36,2	2,9
USA	30,5	2,4
Canada	28,6	2,3
Qatar	27,3	2,2
China	15,5	1,2
Angola	13,5	1,1
OPEC members	955,8	76
Whole world	1258	100

[4]

As for the prospects for the development of Kazakhstan, since independence, they have been associated with long-term plans for the production of hydrocarbons, the revenues from which should become the basis for the creation of a diversified domestic economy.

#### **Main part**

The oil refining industry is defined among the leading branches of the oil and gas complex, the effective development of which depends on the implementation of the long-term strategy of socio-economic development, formulated by the first President of the Republic of Kazakhstan in the strategy «Kazakhstan – 2050».

On the territory of the Republic of Kazakhstan there are 202 oil and gas fields. Projected recoverable oil resources are estimated at 7.8 billion tons and natural gas at 7.1 trillion tons.m3. About 70% of these resources are concentrated in the Western regions of Kazakhstan. The vast majority of them are associated with subsalt deposits and lies at depths of about five or more thousand meters [5].

Oil production is carried out at 55 fields. The largest fields are Tengiz (oil), Uzen (oil and gas), Karachaganak (oil and gas condensate), Zhanazhol (oil and gas condensate), Kalamkas (oil and gas). Oil companies cannot do without long-term planning.

At the moment there are a number of large foreign companies in the domestic oil industry, representing more than 45 countries, including USA, UK, France, Italy, Switzerland, Germany, Russia, Japan, China, Indonesia and other. In total, in 2000-2013 they invested 150.1 billion US dollars in the oil and gas industry, including 18 billion US dollars in geological exploration (GE). During this period, the volume of investments increased by almost 5 times. The largest investment activity is shown by such large

companies as «North Caspian Operating Company» (18 %), JV «Tengizchevroil» (15 %), JC «Mangistaumunaigas» (12 %), JC «CNPC-Aktobemunaigaz» (11 %), JC «Ozenmunaigaz» (8 %), JC «Embamunaigaz» (4 %), JC «PetroKazakhstan Kumkol Resources» (3 %), JC «Turgay — Petroleum» (3 %), JC «Karazhanbasmunai» (2,5 %) and «Buzachi Operating Ltd» (2 %) [6].

According to the data announced by departmental sources [4] in recent years, Kazakhstan adheres to a pragmatic scenario focused on a consistent increase in oil production to 95-100 million tons in 2020, to 110-115 million tons — by 2030, stabilization in 2040-2050 at the level of 110 million tons [7].

The main problems in the field of production and processing of oil and gas raw materials today include the shortage of Kazakhstan's specialized personnel, a small number of processing enterprises for hydrocarbon raw materials and a relatively small hydrocarbon recovery rate.

One of the central issues unresolved today is the shortage of qualified specialists in the oil and gas sector. This problem is directly related to the problems of the education system of the Republic of Kazakhstan. Personnel shortage of oil workers, natives of Kazakhstan, was felt almost at all times. Now, as before, this problem is solved by inviting specialists from abroad to senior positions.

Solving the problems of dynamic development of oil and gas enterprises and the state as a whole, it is necessary not only to act decisively, but also to think carefully about future steps. In short, the oil and gas complex is the driving force of the socio-economic reforms carried out in the Republic, the conductor of modern innovative and managerial decisions.

The time-line of the project from exploration to commissioning is 10-12 years. In the developed regions, with other favorable conditions, it is possible to keep within five years. In the developed regions, under favorable conditions, it is possible to cope within five years. On average, it takes another 5-7 years from the first oil to the output of the field to the design level of production. To a normal return on capital, under which it makes sense to invest 15 years. That is, the average payback horizon of the field development project from scratch is 20-25 years. If the project is associated with the application of new technologies, the decade may be required only to ensure that this technology is ripe. A good example is the development of shale oil fields in the United States. The pioneers of the industry began drilling their first wells in the 1990s, and their efforts paid off in the 2010-s [8].

The development of a strategic plan, the final version of which must be supported by extensive research and evidence, is a daunting challenge. To function effectively in a highly competitive environment, oil companies must constantly collect and analyze vast amounts of information about the industry, market, competitors and other factors.

Strategic plans should be designed not only to remain coherent over long periods of time, but also to be flexible enough to be modified and reoriented as necessary. The overall strategic plan should be seen as a programme in which an oil company operates for a predetermined period of time. At the same time, it is necessary to realize that the conflict and constantly changing business and social situation makes constant adjustments to the strategic plan inevitable.

Strategic planning is the only way to formally predict future challenges and opportunities, and therefore provides the basis for appropriate management decisions. In addition, formal planning helps to reduce risks when making management decisions, including due to consideration of erroneous or inaccurate information about the capabilities of the corporation or the external situation. Planning, because it serves to formulate goals, helps participants in all business processes to create a common goal within the oil company [9].

A widespread methodological mistake that occurs in the strategic management of the development of an oil company is that certain aspects of development are considered and particular tasks are separately solved (development of the production technological base, formation of an investment program, intensification of production), which leads to inconsistency, and often to the unrealizability of management decisions. With this in mind, in order to improve the efficiency and coordination of management decisions, the development of an oil company should be considered as a single cross-functional business process. This process covers the analysis of the market environment of the system, the formation, coordination and optimization of options for «technological» development and financial and economic schemes of their implementation. This takes into account the results of operating and financial activities of the company, acting on the basis of a unified methodology and modern information management technologies.

As a rule, the strategy of oil companies is aimed at expanding the scale of operations, increasing sales and profits. However, in real conditions, the implementation of such a strategy may be limited by numerous factors, the main of which are: market saturation, competition with manufacturers of similar petroleum products, the possibility of falling under the antitrust law when trying to oust competitors from the market, causing damage to the environment, etc.

The following strategic approaches can help mitigate these constraints [10]:

- inception into new geographical markets;
- development and supply of new types and grades of oil products to the existing or new market;
- acquisition of technology for production of promising products from another company or merger with the manufacturer in order to expand the range of products (this way is faster than the development of new products on their own, but requires significant financial resources).

There are strategic principles that will keep the business at the expense of meeting the requirements of tomorrow, regardless of market volatility in the short term:

- continuous management of the asset portfolio as a whole at significantly lower break-even prices regardless of actual oil prices;
- the observance of strict financial discipline;
- when investing and carrying out activities, shift the focus to maintenance of assets;
- it is necessary to replace the «owner-operator» model with an approach in which only the owner is important and profitability is a priority;
- implementation of digitalization policy;
- professional development of specialists to prepare them for work in the era of new technologies.

Strategic planning usually includes 4 areas of management:

- 1) resource allocation programme;
- 2) ways to adapt to the environment;
- 3) internal coordination areas;
- 4) organizational strategic foresight.

The resource allocation programme includes the allocation of typically limited organizational resources, such as investment funds, scarce managerial staff and technological expertise.

Adaptation to the external environment covers all actions of a strategic nature that improve the relationship of the corporation with its external environment. Oil companies need to adapt to both favourable and unfavourable external conditions, develop appropriate best practices and ensure that the strategy is effectively adapted to the environment, primarily through the development of better production systems, through interaction with the authorities, the creation of a favourable image, etc.

Internal coordination includes the coordination of strategic activity for display strong and weaknesses of the corporation with the aim of achieving effective integration of internal actions of the components of its business processes.

Effective internal operations ensuring is an integral part of the Corporation's management activities.

The search for organizational strategies is the main goal of organizational strategic foresight. In its framework, among other organizational tasks, the tasks of systematic development of managers' thinking are solved by creating such a training organization in which they can learn from previously adopted strategic decisions. The ability to learn from experience enables the oil company to correct its strategic direction and improve the level of management in the field of strategic management.

We can distinguish the following main stages of solving the problems of strategic planning [11]:

- identification of strategic development goals and criteria for their achievement;
- diagnostics of problems and opportunities of the organization, including their definition, establishment of the reasons and consequences for the organization;
- development of different solutions to problems and/or use of available opportunities;
- analysis of the likely consequences of each of the planned options;
- choosing of the most appropriate option;
- planning — transition from a description of what should be done to a description of how it should be done (formation of budgets, schedules, distribution of tasks between performers, etc.);

- measuring and forecasting results, comparing them with the intended goals;
- assessment of trends and major changes taking place both within organizations and in the external economic environment;
- bringing the elements of the strategic plan to the performers and creating a motivational environment for its implementation.

#### **The obtained results (conclusions)**

The implementation of these stages of the strategic planning process should ensure the formation of long-term strategic development programs for vertically integrated companies and monitoring their implementation. If the function of strategic planning is successfully set in the oil company, the formation of long-term programs will be carried out on the basis of a unified methodology, formal models and methods, information technology and software and algorithmic decision support tools.

Thus, the proposed measures for the introduction of modern methods of work at the enterprise level and the creation of a comprehensive system of strategic planning are becoming increasingly important for Kazakh oil companies operating in a highly competitive environment. Despite the fact that strategic planning as a separate element does not guarantee success, it simultaneously creates conditions for the emergence of some important and favorable factors for the development of the company.

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#### **МҰНАЙ-ГАЗ СЕКТОРЫНДАҒЫ СТРАТЕГИЯЛЫҚ ЖОСПАРЛАУДЫҢ ЕРЕКШЕЛІКТЕРІ**

**Аннотация.** Әлемдік энергетикалық нарықтардағы бәсекелестіктің артуына карамастан, мұнай-газ саласының қазақстандық экономиканың маңыздылығы ескеріле отырып, мұнай-газ саласында стратегиялық жоспарлау жүйесін жетілдіру өзекті мәселе болып табылады. Мақалада автор мұнай-газ саласындағы стратегиялық жоспарлаудың бағдарламалық құжаттарының бар иерархиясын қарайды, қазіргі жүйеге тән проблемаларды айқындайды.

Мұнай компанияларын стратегиялық жоспарлаудың негізгі ережелері мен міндеттері қарастырылады. Мұнай өнеркәсібінің ел дамуының негізгі макроэкономикалық көрсеткіштеріндегі рөлі көрсетілген.

**Түйін сөздер:** стратегиясы, стратегиялық жоспарлау, мұнай-газ нарығы, мұнай компаниясы, үрдістер.

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#### **ОСОБЕННОСТИ СТРАТЕГИЧЕСКОГО ПЛАНИРОВАНИЯ В НЕФТЕГАЗОВОЙ ОТРАСЛИ**

**Аннотация.** В условиях усиления конкуренции на мировых энергетических рынках, с учетом высокой значимости нефтегазового комплекса для казахстанской экономики актуальным вопросом является совершенствование системы стратегического планирования в нефтегазовой отрасли. В статье автор рассматривает существующую иерархию программных документов стратегического планирования в нефтегазовой отрасли, выделяет проблемы, присущие сложившейся системе.

Рассмотрены основные положения и цели стратегического планирования компаний нефтяной промышленности. Показана роль нефтяной отрасли в основных макроэкономических показателях развития страны.

**Ключевые слова:** стратегия, стратегическое планирование, нефтегазовый рынок, нефтяная компания, тенденции.

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**Z.K.Ayupova<sup>1</sup>, D.U. Kussainov<sup>2</sup>**<sup>1</sup>Kazakh national agrarian university, Almaty, Kazakhstan;<sup>2</sup>Kazakh national pedagogical university named after Abai, Almaty, Kazakhstan**ROLE OF INTEGRATION PROCESSES IN HARMONIZATION  
OF THE LEGAL SYSTEMS OF CENTRAL ASIAN COUNTRIES**

**Abstract.** Legal integration is the modern stage of evolutionary development of law, consists of complex of the legal processes, based on the achievement of equilibrium of the legal systems of the states, within the framework of single model of the legal system. Doctrine shows the different forms of the evolutionary development of law, the legal integration between the legal systems of the states. Undoubtedly, the problem of scientific understanding of the relation of integration association and international law is one of the most urgent and complex issues of theory and practice in modern jurisprudence. Interaction, mutual influence, differentiation of terms of reference for the international and integration law under the influence of modern globalization processes, multidisciplinary scientific problem, which has important theoretical and practical value. Exploring ways of mutual penetration of the rules of one legal system to another, as well as to what extent the norms of integration law may come into conflict with obligations of states under international law and how integration associations should act in these cases is the key issue.

**Key words:** integration, globalization, harmonization, legal system, legal family, international law, international legal order, model, unification, systematization.

Deepening the process of integration between Kazakhstan and South Korea requires an increasingly in-depth study of international legal mechanisms through the prism of ensuring the further development of economic, social and cultural aspects. Therefore, in this article we would like to reveal the modern mechanisms of international legal integration. Undoubtedly, the most important form of legal integration in the present period of the history of Kazakh-South Korean relations is the modern international law. This provision is the main conclusion of this article, and is based on the analysis of all applicable scientific and theoretical provisions and the necessary information.

In this aspect of the study, international law is not seen as a system designed to ensure international security and cooperation, the protection of human rights and the implementation of other principles of international law. International law is considered as a tool and a form of global legal integration of state legal systems, and, accordingly, the so-called legal families. There are doctrinal opinions that suggest that at the present stage of globalization there is a tendency of “formation of international law as a necessary tool for regulating social relations, and as an adequate and appropriate system of legal regulation of national and international processes in the context of globalization” [1, P.87]. At the same time as the recognition of such a provision, it is impossible to speak of international law only as an instrument of international legal integration. Most of the works devoted to the definition of the essence and meaning of international law consider it through the prism of legal customs that form the basis of international law (the so-called principles of international law). In this particular case, it is important for us to speak about the understanding of international law as a tool for achieving certain goals, since the direction of development of international law and, accordingly, globalization through legal integration is formed on the basis of the goals of international policy.

For example, many scholars consider international law in conjunction with the international legal system of relations and relevant institutions. The modern system of principles, which is the skeleton of the modern world legal order, was formed after the second world war and is based on the UN Charter, which for the first time formed the main objectives of the international legal order and international policy in this

new era – the peaceful coexistence of States and the protection of human rights. For the first time, these two principles have been the focus of attention in the international arena, and it is from them that the modern system of coordinates for international politics emerges. Thus, many scholars see the significance of international law after the Second World War precisely in the fact that it has become an instrument for the peaceful coexistence of States and international security. For example, Vereshchetin V.S. and Mullerson R.A., speaking about the primacy of international law in international politics, note that “although international law has existed since ancient times, changes in the world community and in the nature of international law itself have given it a completely new meaning. The fact that in the past was considered only as one of the attributes of foreign policy, a means to justify their actions or, conversely, accusations of political and ideological opponents, turns into an important way to solve the main problems of our time” [2, P.81]. In this particular case, many scholars point out that international law should not be seen only in the light of the stated goals and principles, since international law is a set of interests of States, the change of which leads to a change in international law. Moreover, international law is regarded as an unreliable guarantor of the implementation of the principle of peaceful coexistence of States, since international law itself needs additional guarantees [3, P.26].

Some scholars approach the understanding of international law from a broader perspective. For example, Pozdnyakov E., Shadrina I. considered international law as part of the “international system”, by which he respectively understood States, organizations (international, interstate), various associations of States, Nations and peoples fighting for independence, and some state-like entities [4, P.26]. Another understanding of international law and its role is given in the article “International law in the era of globalization: some conceptual and substantive characteristics”, which notes that one of the most popular modern concepts, which embodied the skeptical attitude of a certain part of scientists, politicians and lawyers to international law, was the theory of “world management”. Its proponents propose to consider the traditional area of international law in the broader context of “regimes” of world politics. The totality of these regimes in various spheres of world politics and is, from their point of view, the body of “world management”, which acts as the main regulatory beginning of modern world processes [5, P.96].

In the context of our article, this approach is more applicable, as it speaks about the role of international law as an instrument that creates a common direction of development of international policy, and, accordingly, contributes to the convergence of the legal systems of the Republic of Kazakhstan and South Korea. Figuratively speaking, international law, setting the rules of the game in the international arena, contributes to the legal rapprochement of our States. The Republic of Kazakhstan partially participates in the creation of these “rules of the game” and brings a particle of peculiarities and originality of its legal validity to these rules. Thus, our country is under continuous mutual influence and interaction, as by creating rules, they also adapt to these rules, thereby changing their legal validity and legal system. And although currently decentralization in the world legal order established by international law is rather high and the structure of this legal order is poorly integrated, it should be noted the fact (this is also noted by the doctrine [6, P.61] that the international community is steadily developing in the direction of increasing integration of its subjects, which creates objective prerequisites for the growing influence of non-power, including legal, factors. In this regard, it is important to understand the wave-like and abrupt nature of globalization in general, globalization of law in particular, and especially the processes of legal integration. In legal integration, the processes of unification and differentiation are inseparable parts of the General orientation. This common orientation leads to a common law and order, which will be in demand in the “global society”. This is reflected in the fact that even when we see both negative and positive dynamics of legal integration, the general orientation leads forward to the creation of an integral system of law, which will be the fruit of universal mutual integration. Some authors partially agree with this direction of integration [7, P.49]. It is noted that even the presence of various evidence of differentiation and disintegration, however, does not negate the fact of the presence of many evidence to the contrary, confirming the steady movement of humanity towards a more sustainable and holistic international community. In recent years, there has been a tendency to reduce the capacity of national governments to deal with pressing problems on a local, state-limited scale, without close coordination with each other. Integration processes taking place today in the political, economic, information, spiritual spheres, cause the need for closer interaction of state-political systems, the basis of legal regulation of which can only be international legal norms.

In the light of these reasons, international law can indeed be seen not only as a tool for achieving specific goals (for example, for the protection of peace or human rights, etc.), but as a tool through which the most significant stage of globalization is carried out legal integration (and the formation of a single model of the legal system). Thus, the role of the process of legal integration through the development of international law is clearly visible. This tool through “unification of domestic legislation of individual countries, harmonization and convergence of national legal systems” [7, P.50] objectively leads in the long term to the formation of a single legal space. At the same time, some scholars note that it is impossible to “artificially intensify the process of increasing the role of international law, as it can lead to the opposite results. The scope and nature of the requirements of international legal norms should objectively correspond to the existing interest of the Republic of Kazakhstan and South Korea in the universal mechanism of regulation of certain types of social relations” [7, P.51].

Even today, international law, despite the criticized weakness in addressing specific issues, still plays a huge role in the universalization of the law of all countries. And although, indeed, there is a part of the declared norms that are not implemented, this fact does not speak about the ineffectiveness of international law as a means of legal integration, as it is a matter of law enforcement in the short term. What is more important is the long-term perspective, where the rule that caused the rejection of a particular legal system eventually becomes an integral part of it. Within the framework of the general globalization, the fact of unification of legislation is more important than the issues of its momentary conscientious implementation.

In this role of international law it is also impossible not to see the global dynamics of development and the global goal of achieving justice and reasonableness in the coexistence of societies and States. These two concepts were the goal and requirements of any management system at any stage of human development. It is justice and reasonableness as an expression of the effectiveness of the interaction of the constituent units of the system in the process of self-regulation that were declared as components of any governance - monarchical, democratic, totalitarian, etc.

In the conclusion we would like to note, that in recent decades there has been a significant expansion of the range of social relations that make up the subject of its legal regulation is a clear evidence of the increasing effectiveness of international law as an instrument of legal integration and globalization of law. At the same time, this process of expansion is expressed not only in the regulation of new areas of interstate cooperation, but also (remarkably) in the deep penetration of the regulatory impact of international legal norms in the sphere of domestic relations. Thus, modern international law helps the integration of socio-cultural life of the Republic of Kazakhstan and South Korea, which are moving to a new stage of relations on the basis of friendly relations between our countries.

**З.К. Аюпова, Д.Ө. Құсайынов**

#### **ОРТАЛЫҚ АЗИЯ МЕМЛЕКЕТТЕРІНІҢ ҚҰҚЫҚТЫҚ ЖҮЙЕСІН ГАРМОНИЗАЦИЯЛАУДАҒЫ ИНТЕГРАЦИЯЛЫҚ ПРОЦЕССТЕРДІҢ РОЛІ**

**Аннотация.** Әлемде жүріп жатқан жаһандану процесстері, экономикалық және саяси дағдарыстар Орта Азия республикаларын бір-бірімен экономикалық байланыстарын нығайта түсуді талап етеді. Әрине, осы экономикалық және басқада қарым-қатынастардың құқықтық және заңнамалық негіздерін қалыптастыру ауадай қажет процесс. Сондықтанда, осы мемлекеттердің құқықтық жүйелерін гармонизациялап, бір-біріне үйлесімді етіп жетілдіру әрі теориялық, әрі практикалық мәселе. Ол құқықтық интеграцияны талап етеді. Ал енді құқықтық интеграция-бұл құқықтық жүйенің бірыңғай моделі шеңберінде мемлекеттердің құқықтық жүйелерінің тепе-теңдігіне қол жеткізуге бағытталған заң процесстерінің кешенінен тұратын құқықтың эволюциялық дамуының қазіргі сатысы. Бұл доктринада құқықтың эволюциялық дамуы өтетін әр түрлі формалар мен бірыңғай құқықтық өріс құрылатын және мемлекеттердің құқықтық жүйелері арасында құқықтық интеграция жүргізілетін әр түрлі әдістер туралы көзқарастар мен пікірталастар айтылады. Осы пікірталастар негізінде белгілі бір жүйеге келтірген, өмір талаптарына сай құқықтық мемлекет принциптеріне сүйене отырып жасалған, жетілген құқықтық жүйе қалыптасады.

**Түйін сөздері:** интеграция, жаһандану, үйлестіру, құқықтық жүйе, құқықтық жануя, Халықаралық құқық, әлемдік құқық тәртібі, модель, унификациялау, систематизациялау.

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## РОЛЬ ИНТЕГРАЦИОННЫХ ПРОЦЕССОВ В ГАРМОНИЗАЦИИ ПРАВОВЫХ СИСТЕМ СТРАН ЦЕНТРАЛЬНОЙ АЗИИ

**Аннотация.** Правовая интеграция – это современная стадия эволюционного развития права, состоящая из комплекса юридических процессов, направленных на достижение равновесия правовых систем государств в рамках единой модели правовой системы. Доктрина говорит о разных формах, в которых проходит эволюционное развитие права и о разных методах, которыми строится единое правовое поле и проводится правовая интеграция между правовыми системами государств. Правовая интеграция правовых семей романо-германского, общего и религиозно-общинного права пройдет в два этапа: взаимная интеграция романо-германского и общего права в единую модель правовой системы, и одностороннее поглощение правовых систем семьи религиозно-общинного права. Эти положения являются основными выводами данной части исследования, и сделаны на основе анализа всех применимых научно-теоретических положений и необходимой информации. Далее представлен процесс рассмотрения и изучения всех соответствующих элементов и доводов обоснованности заявляемых положений. Существуют различные классификации, составленные учеными разных стран в разные периоды истории, но используемая классификация является наиболее подходящей для данного исследования и наиболее полно отражающей современное состояние глобализации права.

**Ключевые слова:** интеграция, глобализация, гармонизация, правовая система, правовая семья, международное право, мировой правопорядок, модель, унификация, систематизация.

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[alma.b.78@mail.ru](mailto:alma.b.78@mail.ru)**INTERNATIONAL EXPERIENCE OF INCREASING  
THE ECONOMIC POTENTIAL OF FOOD INDUSTRY  
(ON THE EXAMPLE OF THE DAIRY INDUSTRY)**

**Abstract.** In all regions of the world, the requirements for the management of dairy farming are increasing, taking into account the need to protect ecosystems. The dairy industry is increasingly moving to farming without the use of fertilizers and pesticides (organic farming) or using them in small quantities (integrated farming). This is due to the growing popularity of whole milk consumption among the population. Growing demand in less developed markets stimulates dairy producers to increase their own production. At the same time, a situation of tightening the struggle for high-quality raw materials (raw milk) with countries - exporters of raw materials. States whose dairy industry is in high demand to achieve a level of product self-sufficiency are investing in the development of production, improving assortment policy, and entering into contracts for the supply of quality raw materials.

**Keywords:** international experience, productivity increase, dairy industry, competitiveness.

**INTRODUCTION**

World consumption of dairy products, including milk, cheese and oils, according to experts, will grow by 36% by 2024 and reach level of 710 million tons. The growth in demand for milk in the next decade will be due to the growth of population and its welfare in Asia, Africa and Latin America that will lead to a shortage of dairy products on world market and, consequently, to the inevitable increase in prices for this type goods. In the camps of Europe and North America, on the contrary, occurs decrease in demand for dairy products, more precisely, for traditional goods. In the European and North American market, manufacturers for attracting the attention of consumers are forced to offer more and more perfect dairy products with improved nutrition properties that include additional nutrients [26].

**MAIN PART**

For the developed market of milk and dairy products in Kazakhstan, the experience of its organization and regulation in economically developed foreign countries.

It should be noted that dairy cattle in foreign countries is a specialized industry with well-developed meat cattle breeding. Milk production in foreign countries is carried out in mainly on specialized dairy farms. General trend recent years for all economically developed countries is their consolidation and reduction of the number. Particularly sharp reduction in the number of farms occurred in Belgium, Denmark, France, Italy, Spain and Sweden, where in 1995 there were 44-55% less than in 1985 the number of farms was less sharp than in Europe, but the increase in size herds were more significant. On average, the herd has grown from 40 to 62 heads. Currently, dairy farms with a population of 100 animals give 50% of milk produced in the United States. In 2013, the ten largest importers of whole and dry milk included: Russia (28.4% of all imported milk), China (21.5%), Venezuela (15.8%), Egypt (15.8%), Croatia (15.6%), Brazil (14.4%), Bangladesh (10.3%), United Arab Emirates (6.7%). In Canada, over the past 20 years, the number dairy farms decreased by more than 3 times, and the average livestock in per farm reached 49 heads [23]. What is presented in the table one, below.

Table 1 - Forecast balance of milk and dairy products

Years	Developing countries		Industrial countries		Transition countries economy	
	Overall	Production	Overall	Production	Overall	Production
1979-1981	129,5	112,3	207,5	224,9	126,5	127,3
1997-1999	239,1	219,3	225,8	245,8	94,5	96,6
2015	375,8	346,2	240,4	268,5	96,9	100,4
2030	523,1	484,0	250,5	286,3	98,6	103,8

The dynamics of milk production is characterized by long-term growth trend. According to the forecast of production and consumption of dairy products by 2030, an increase of more than 2 times will occur in developing countries.

The enlargement of dairy farms is accompanied by an increase in productivity.

cows, which is achieved by proper feeding and genetic improvement of livestock. Only in the period from 1997 to 1999, the yield per cow per year increased in the United States from 7653 to 8043 kg, in Canada from 6464 to 6830, Great Britain - from 6674 to 6565 kg. In recent years, he has compiled France 5627 kg, Finland - 6435, Australia - 4906, New Zealand - 3462 kg [24].

According to the International Dairy Federation (IDF), in 2013 in the world produced 473.2 million tons of cow milk. Largest milk producers are European Union countries (144 million tons), the USA (91 million tons), India (58 million tons), China (35 million tons), Russia (31 million tons) (table 2). These countries provide 2/3 of total world milk production.

Table 2 - World milk production

Country	Milk production, thousand tons			
	2016	2017	2018	2018 % to 2016
EU countries	142920	143750	143850	100,7
USA	88978	90824	91444	102,8
India	53500	55500	57500	107,5
China	30700	32600	34500	112,4
Russia	31646	31917	31400	99,2
Brazil	30715	31490	32380	105,3
New Zealand	18965	20567	19678	103,8
Argentina	11470	11679	11796	104,4
Ukraine	10804	11080	11160	103,3
Mexico	11046	11274	11270	101,8

Table 3 - the ratio of population and livestock cattle in selected countries

Countries	Ratio	Countries	Ratio	Countries	Ratio
New Zealand	1:2,3	France	3,3:1	Hungary	14,3:1
Ireland	1:1,5	USA	3,3:1	Korea	14,7:1
Australia	1:1,2	Mexico	3,4:1	Indonesia	15,2:1
Argentina	1:1,2	India	3,7:1	Philippines	16,2:1
Sudan	1:1,2	Germany	6,4:1	Greece	18,8:1
Brazil	1:1,1	Russia	7:1	Algeria	21,5:1
Bolivia	1:1	Spain	7,6:1	Japan	29:1

In the world milk production by 2018, there was a tendency to increase production from 0.7 in the EU countries to 12.4% in China, while in Russia in the period from 2016 to 2018 milk production decreased by 0.8%. Growth milk production is also observed in Iran, Indonesia, Argentina, Brazil, which provides increased productivity milking herds and an increase in the number of cows. In the US, an increase in the number livestock occurred in the past 5 years by 2.4%, or 2.3 million heads. The greatest reduction of cattle livestock is observed in Ukraine - 27.9%, or 1.2 million heads. The total consumption of milk

increases every year in an average of 15 million tons [25]. Currently, the planet is inhabited by about 7 billion people, and the cattle population is 1.3 billion heads, i.e., on average, for every 5 people there are approximately 1 cow.

From table 3 it follows that there are countries where the livestock of cows exceeds the number of inhabitants. For example, in New Zealand, cows double more than people. The largest amount of milk per person produced in New Zealand - 3814 kg. In this country, dairy products mainly go to export - about 13 million tons is shipped to other countries. In addition to New Zealand, such countries as Ireland — 1390 kg, Australia — 526, Belarus — 490, France — 419 kg, etc., most successfully solve the problem of milk production [37, 21]. In order to fully provide the inhabitants of the planet with milk (at the rate of 360 kg of dairy products per year per person, according to the norms of the World Health Organization of the United Nations), it is necessary to produce 2.5 billion tons of milk annually, which is three times more than is currently produced.

Milk production in the Member States of the Customs Union in 2013 was distributed as follows: Russia - 31 million tons, Kazakhstan - 4.9, Belarus - 6.7 million tons, however, an analysis of production showed that in per capita Belarus occupies a leading position - 704.1 liters milk per person (in Russia - 219.3 liters, in Kazakhstan - 299.4 liters).

The Belarusian dairy market is export-oriented: export revenues from the supply of dairy products to the foreign market in 2010 amounted to \$ 1.5 billion. USA. Today Belarus is a major participant in the global food market [26].

According to the Food and Agriculture Organization UN (FAO), in the TOP-20 of Belarus is included in 10 export positions, and in the main 5 - in the top five of the world's leading food exporters. The export structure of dairy products is as follows: milk and cream, condensed and dry - 37.65% of total exports, cheeses and cottage cheese - 23.73, milk and cream not condensed - 15.22, butter - 14.3, other products - 9.09%. Strategic foreign market for Belarusian dairy products is Russia. Thus, about 92% of the total dairy products, among export markets outside the CIS should be highlighted Venezuela, Iran, African countries and the European Union. However for the last 10 years, exports of dairy products to the CIS countries increased by 30.5 times, while to non-CIS countries (namely, to Western Europe) decreased almost 10 times. This circumstance is a significant threat to the Belarusian dairy market. Difficulties in expanding the geography of supplies are due to lower quality of raw materials compared to EU countries and lower levels of fat and protein [26].

Rapid economic growth in China, high demand for dairy products is a big opportunity manufacturers of dairy products operating in the country. The Chinese government encourages the creation of large dairy farms. This influenced the growth of self-sufficiency in dairy products, the level of which in 2019 was 86%. Abroad Chinese government encourages expansion of its dairy companies through the acquisition of foreign and building partnerships. Chinese industrialists rely on product diversification, product line expansion. Growing demand and consumption evolution predetermined the demand for environmentally friendly products of premium class.

Government creates incentives to invest in dairy animal husbandry, the industry is growing from family farms to professional managed large dairy farms. Growing demand for dairy products are satisfied by the importers with whom China concludes contracts and is in partnerships.

In all regions of the world, the requirements for the management of dairy farms, taking into account the need to protect ecosystems. Increasingly the number of farmers switches to housekeeping without using fertilizers and pesticides (organic farming) or using in small numbers (integrated farming). This is due increasing popularity of whole milk consumption among the population. World consumption of dairy products, including milk, cheese and oils, according to experts, will grow by 36% by 2024 and reach level of 710 million tons. The growth in demand for milk in the next decade will be due to the growth of population and its welfare in Asia, Africa and Latin America that will lead to a shortage of dairy products on world market and, consequently, to the inevitable increase in prices for this type goods. In the camps of Europe and North America, on the contrary, occurs decrease in demand for dairy products, more precisely, for traditional goods. In the European and North American market, manufacturers for attracting the attention of consumers are forced to offer more and more perfect dairy products with improved nutrition properties that include additional nutrients [26].

## CONCLUSION

Kazakhstan needs to introduce all advanced technologies used in developed countries, first of all, the reconstruction of feed rooms must be accompanied by significant changes in production capacity, which is often not technically acceptable. In dairy cattle breeding, there are opportunities to reduce production costs through the introduction of innovative resource-saving technologies in feed production. It is advisable to invest in the improvement of technological processes that will allow producers to reduce unit production costs, improve the quality of milk, and thereby ensure the growth of profitability. The most important direction for improving the quality of feed for dairy cattle is the construction of new ones, as well as the reconstruction and modernization of existing feed mills and workshops.

The feed mill will allow to produce feed for each age-sex group of dairy cattle using modern technologies in an automatic mode. The planned economic effect can be obtained on the basis of the introduction of modern resource and energy saving technologies, which allow to reduce the average consumption of labor costs and electricity. Energy efficiency is the main reserve for the growth of competitiveness of feed production, as well as the release of high-quality feed products for dairy cattle.

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### **ТАМАҚ ӨНЕРКӘСІБІНІҢ ЭКОНОМИКАЛЫҚ ӘЛЕУЕТІН КӨТЕРУДІҢ ХАЛЫҚАРАЛЫҚ ТӘЖІРИБЕСІ (СҮТ ӨНЕРКӘСІБІНІҢ ҮЛГІСІ)**

**Аннотация.** Экожүйелерді қорғау қажеттілігін ескере отырып, әлемнің барлық өңірлерінде сүтті фермерлік шаруашылықты басқару талаптары өсіп келеді. Сүт өнеркәсібі тыңайтқыштар мен пестицидтерді (органикалық фермерлерді) пайдаланбастан ауыл шаруашылығына жиі ауысады немесе оларды аз мөлшерде (кешенді егіншілікпен) пайдаланады. Бұл тұрғындар арасында сүт тұтынудың артуының артуына байланысты. Аз дамыған нарықтарда сұраныстың өсуі ынталандырады сүт өндірушілер өздерінің үлесін арттырады өндіріс. Сонымен қатар, күресті қатаңдату жағдайы Шикізат экспорттаушы елдермен жоғары сапалы шикізат (шикі сүт). Сүт өнеркәсібі өнімнің өздігінен қамтамасыз етілу деңгейіне жетуді талап ететін елдер өндірісті дамытуға, ассортимент саясатын жетілдіруге, жоғары сапалы шикізат жеткізуге келісім-шарттар жасауға инвестиция салады.

**Түйін сөздер:** халықаралық тәжірибе, өнімділікті арттыру, сүт өнеркәсібі, бәсекеге қабілеттілік

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### **МЕЖДУНАРОДНЫЙ ОПЫТ ПОВЫШЕНИЯ ЭКОНОМИЧЕСКОГО ПОТЕНЦИАЛА ПИЩЕВОЙ ПРОМЫШЛЕННОСТИ (НА ПРИМЕРЕ МОЛОЧНОЙ ПРОМЫШЛЕННОСТИ)**

**Аннотация.** Во всех регионах мира усиливаются требования к ведению молочного хозяйства с учетом необходимости охраны экосистем. Молочная промышленность все больше переходит на ведение хозяйства без использования удобрений и пестицидов (органическое фермерство) или с использованием их в небольшом количестве (интегрированное фермерство). Это объясняется ростом популярности у населения потребления цельного молока. Растущий спрос на менее развитых рынках стимулирует производителей молочной продукции к увеличению собственного производства. Одновременно возникает ситуация ужесточения борьбы за качественное сырье (сырое молоко) со странами – экспортерами сырья. Государства чья молочная промышленность пользуется высоким спросом для достижения уровня самообеспеченности продукцией инвестируют средства в развитие производства, совершенствуют ассортиментную политику, заключают договоры поставок качественного сырья.

**Ключевые слова:** международный опыт, повышение производительности, молочная промышленность, конкурентоспособность.



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## **THEORETICAL RESEARCH OF SOCIAL ENTREPRENEURSHIP IN THE REGION (ON THE EXAMPLE OF THE ATYRAU REGION)**

**Abstract.** The main difference, according to the authors, lies not in the plane of motivation (to do it for the sake of money or from altruism), but in the sphere of the characteristics of “anticipated and produced value” (good). In the case of ordinary business, the market value becomes a blessing, which can be expressed in the category of income and profit (which is misleading when comparing the motivation of the two types of entrepreneurs). In the case of social entrepreneurship, it is the value expressed in the advantage that a significant part of society or society as a whole receives from the “large-scale transformation” produced by the social entrepreneur. At the same time, the target groups for which “value” is intended are the least protected and least prosperous segments of the population, who do not have either financial resources or political levers to achieve “the value obtained as a result of transformation” by their own efforts.

**Keywords:** social entrepreneurship, entrepreneurship, social problems, types of capital, social capital, creativity, innovation.

### INTRODUCTION

A typical representative of a global organization of social entrepreneurship that supports social and entrepreneurial initiatives around the world is the Ashoka Foundation, founded by B. Drayton in 1981. B. Drayton says the following about social entrepreneurs: catch her. They will not calm down until they revolutionize the fishing industry itself.” This popular definition contains, perhaps, the whole essence of social entrepreneurship. Social entrepreneurship differs from other phenomena of social work carried out by various organizations in the commercial and non-profit sector, in the field of activity and conditions of service provision. The concepts of innovation and entrepreneurship are key. In line with this, social entrepreneurship seeks to reduce social problems in an innovative way, inventing or combining social and economic resources so as to create a self-replicating, capable of expanding the mechanism of production and the provision of targeted social benefits.

In different countries, social entrepreneurship develops in different socio-economic and cultural contexts. A deep comparative analysis of this issue is contained in the work “Social Entrepreneurship in Russia and in the World: Practice and Research” [2]. In European countries, researchers attribute increased attention to this phenomenon with the crisis of the European model of the welfare state. All proposals for its reform are contradictory. But it is obvious that, for example, the disagreement of ordinary citizens to pay large taxes, the money from which can go to solve social problems, does not mean that people are in favor of dismantling the existing social support networks. That is why now the ideas of the new philosophy of the social state, new practices of their implementation, the ideas of the new organization of the welfare of the state are in great demand. In such conditions, social entrepreneurship develops through the creation of flexible organizations characterized by a limited amount of resources and developed creative culture, aimed at combining resources from previously divided social spheres [3]. From the very beginning, the growth of the welfare state was perceived by citizens as a symbol of social progress. But the same process was accompanied by the development of the service sphere of the welfare state as a cumbersome, non-initiating structure, filled with bureaucracy.

## MAIN PART

Some researchers consider social entrepreneurship as a process of creating value by combining resources in new ways. These combinations of resources are primarily intended to explore and take advantage of opportunities to obtain social benefits by stimulating social change or meeting social needs. It is easy to see that the above definitions are largely consistent with the classical approaches to the analysis of entrepreneurship proposed by the already mentioned Say, Schumpeter and Drucker. This is confirmed by Martin and Osberg [4]. From their point of view, the key word in the category of social entrepreneurship is “entrepreneurship”, and “sociality” plays only a modifying role. Paying attention to the merits of the classics of entrepreneurship theory, they emphasize the key properties of any entrepreneurship: value creation (“as a result of moving assets to higher productivity”, - Say), “creative destruction” as a transformative activity (Schumpeter), search for changes and use of opportunities (Drucker). All this applies equally to both entrepreneurships in general and social entrepreneurship: in both cases, a new value (good) is proposed, the well-balanced balance is overcome.

Despite the fact that the benefits of social entrepreneurship are clear to very many, its significance and specificity have not been studied enough. With the growing popularity of social entrepreneurship, this concept can be understood differently by different people. This is due both to the relative novelty of the term and to the diversity of social initiatives, which differ in scope, target groups and countries in which they are implemented. For some, social entrepreneurship is associated exclusively with non-profit organizations that have opened any profitable enterprises. Others understand this as non-profit organizations. Still others consider it a type of social responsibility of business that implements socially significant programs through independent organizational structures.

The most frequently cited definition of social entrepreneurship belongs to Gregory Diez, who identified five main factors determining this type of activity:

- 1) taking on the mission of creating and maintaining social values (benefits);
- 2) identification and use of new opportunities for the implementation of the selected mission;
- 3) the implementation of a continuous process of innovation, adaptation and learning;
- 4) decisiveness of action, not limited to available resources;
- 5) the responsibility of the entrepreneur for the results of their activities both to their direct clients and to society [5].

The phenomenon of social entrepreneurship can be divided into two important components. The first is related to social development and is expressed in the fact that

- 1) the results of the activities of the entrepreneur associated with social being;
- 2) entrepreneurs use various forms of social capital associated with other forms of capital;
- 3) the organizations created by entrepreneurs for the implementation of their business are public as they do not belong to their owners and do not make profit as their main goal; in addition, these organizations are part of civil society;
- 4) social entrepreneurs are associated with specific, local communities.

The second component of social entrepreneurship is reflected in the fact that

- 1) entrepreneurs are always faced with a challenge from unexpected circumstances;
- 2) they are inspired by the awareness of their mission related to solving certain problems;
- 3) a social entrepreneur always acts as an innovator: he is busy developing new services and organizations [6].

In assessing individual spheres and parameters of life, trends of various manifestations of social inequality persist. So, for older people, in their opinion, many opportunities become more closed and difficult to reach, while young people are more optimistic in their assessments of life prospects and improving the quality of their lives. Taken together, these factors indicate that age is an important aspect of social inequality in the context of quality of life. In the context of the regions, the Karaganda, Kostanay, Atyrau, Pavlodar regions attract attention, where the most difficult socio-economic situation is recorded, which is reflected in the living standards of the respondents. Residents of Almaty, traditionally, demonstrate the most critical attitude to the social policy of the state and the maximum indicators of the expectations of protest actions. In general, the standard of living of Kazakhstanis can still be described as low. The results of the study demonstrated the presence of multiple manifestations of social inequality in

different areas and at different levels. The people of Kazakhstan themselves are more or less ready to accept this state of affairs, since they accept certain forms of social inequality that are permissible from their point of view.

The Atyrau region is a region with a large share of the GRP of the oil industry and therefore, for the Chamber of Entrepreneurs of the Atyrau region, working with large operators to increase the local content is a priority.

For its part, RPP is doing a great job of increasing the proportion of local content, and here the joint work with TCO LLP, North Caspian Operating Company, JSC NC Kazmunaygas, Karachaganak Petroleum Oil in the framework of the Aktau Declaration development is indicative.

The financial result of the activities of large, medium and small enterprises of the region in 2018 was determined in the amount of 4,478.9 billion tenge of income, of which the share of large and medium-sized enterprises 85.2% (3515.8 billion tenge), and compared with 2017 it increased respectively, by 57.2% and 40.4%.

In general, the profitability of production of enterprises in the region in 2018 amounted to 51.8%. The most profitable were large and medium-sized enterprises of the mining industry and quarrying (102.4%).

More than 79.5% of the total profit was obtained by mining and quarrying enterprises.

The largest amount of profit in the regional context was accounted for by the enterprises of Atyrau - KZT 4451.8 billion (99.4% of the regional indicator).



Figure 1 - the Dynamics of profit (loss) before tax

The costs of production and sales amounted to 7,376.8 billion tenge, production costs - 4,532 billion tenge, of which 20.8% were material costs, the share of labor costs and amortization, respectively, 13.8% and 25.8 %

Accounts receivable as a whole for enterprises as of January 1, 2018 increased by 27.7% and amounted to KZT 2463.5 billion. The debt on obligations amounted to KZT16,915.1 billion and compared to the data as of January 1, 2018 increased by 66.3%.

Regional business also requires RPP to actively interact with major operators in the region, for example, TCO, NCOC. RPP has become a dialogue platform between business and subsoil users.

The results of the program over the past year were announced during the Kurultay social entrepreneurs, held in Atyrau.

Note that the main goal of the Zharkyr project, implemented by the Eurasia Foundation of Central Asia with financial support from Tengizchevroil, is to promote innovative social initiatives aimed at providing sustainable business solutions to social, economic and environmental problems of communities of the Atyrau region.

Among the winners in 2018, there are 8 projects: a center for preparing for childbirth, a project on domestic tourism in local lore, two sports centers for people with disabilities, a kindergarten for children with disabilities, and an educational children's center in Kulsary. The total amount of funding for these projects amounted to 13.3 million tenge. It is expected that they, in total, will cover up to 1,000 residents

of the Atyrau region. In addition to summarizing the results of the program, in the course of the Kurultay social entrepreneurs, there was a celebration of citizens and organizations that promote the promotion of social entrepreneurship in the region. Among them is the Chamber of Entrepreneurs of the Atyrau region.

Thus, according to a sociological survey of internal migrants in Almaty, conducted by the Institute of International and Regional Cooperation of the KNU in July 2015, the rating of problems in everyday life that influenced the decision to move was led by: • unstable financial situation of the family, low wages; • unemployment, problems of employment, massive layoffs. In terms of average monthly nominal wages, the leaders are Atyrau, Mangistau oblasts, Astana and Almaty; The minimum monthly wage is received by residents of the North Kazakhstan Oblast, Zhambyl, Akmola and South Kazakhstan regions. At the same time, the average salary in the regions is two to three times different (min. 79.7 thousand tenge in the DIS and max 223 thousand tenge in the Atyrau region). Regions of the country differ in the provision of social infrastructure. There are differences at a qualitative level when comparing the level of services in the field of education, health, etc. (although formally statistical indicators differ little from region to region). Thus, in the southern and western regions, due to a higher natural population growth, there is a shortage of educational facilities and a high burden on medical organizations, and in the northern and eastern regions, on the contrary: there is a problem of small schools due to population decline.

Thus, the current differentiation of the levels of development and the socio-economic status of Kazakhstan's regions was substantially a result of differences between Kazakhstan's subjects in the dynamics of change from the beginning of market transformations of social production, capital-forming investments and the standard of living of the population.

#### CONCLUSION

Our country today clearly distinguishes several types of business models of social entrepreneurship. Here are some of them:

1) social entrepreneurship in agriculture:

- a social entrepreneur acquires agricultural land, creates infrastructure, acquires the necessary equipment and technology, after which those groups that are commonly referred to as socially vulnerable are involved in the project: children leaving orphan homes into adulthood, recent prisoners, people suffering from drug addiction or alcohol addiction. They are given everything they need to start a new life based on their own business;

- similar technology works in “depressed” regions (so that young people do not aspire to the cities, but remain in their villages and villages).

2) solving the problem of employment of mothers with many children, single mothers and other categories of people for whom full-time employment is not possible. There is a creation of a home-based business (usually with the maximum involvement of all family members in creative activities), and, very importantly, the delivery of raw materials and its distribution is organized.

3) ensuring a full life for the disabled. An example is the company "Armor": thanks to the technology developed in the company for the manufacture of special individual corsets, yesterday's patient has the opportunity to return to the world of healthy people.

- Special travel companies. It is no secret that our cities are often poorly adapted for the movement of people in wheelchairs. Created travel companies spend a significant proportion of their efforts on exploring routes for the unimpeded movement of people with wheelchairs.

- Employment of the visually impaired, hearing impaired, etc. Examples of such industries can be the production of corrugated cardboard and other paper products, the production of PET packaging, homemade food, etc.

4) education, leisure activities:

- kindergartens and schools, especially in “depressed” regions, sports sections;

- the creation of food points, which simultaneously have entertainment and development centers for children;

5) development of entrepreneurial culture. It also provides assistance to those who want to start their own business: training is provided.

the necessary elements, including the writing of business plans, are supported in their subsequent implementation;

6) infrastructure development. Examples of such projects include hairdressing, workshops, economy-class laundries, bathhouses (especially where there is no hot water supply), projects for sorting and recycling garbage, refining territories.

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#### АЙМАҚТЫҢ ӘЛЕУМЕТТІК КӘСІПКЕРЛІКТІ ТЕОРИЯЛЫҚ ЗЕРТТЕУ (АТЫРАУ ОБЛЫСЫНЫҢ МЫСАЛЫНДА)

**Аннотация.** Авторлардың пікірінше, негізгі айырмашылық мотивацияның жазықтықта емес (бұл ақша үшін немесе альтруизм үшін), бірақ «болжамды және өндірілген құндылықтар» (жақсы) сипаттамалары саласында. Кәдімгі бизнестің жағдайында нарықтық құны кірістер мен пайданың (кәсіпкерлердің екі түрінің дәлелін салыстыра отырып, жаңылыстыратын) санатында көрсетілуі мүмкін бата болып табылады. Әлеуметтік кәсіпкерлік жағдайында бұл қоғамның немесе қоғамның айтарлықтай бөлігі әлеуметтік кәсіпкердің «ауқымды трансформациядан» алатындығын білдіретін құндылық. Сонымен бірге, «құндылық» деп аталатын нысаналы топтар өздерінің күш-жігері арқылы «өзгеру нәтижесінде алынған құндылыққа» жету үшін қаржы ресурстарына немесе саяси тетіктеріне ие болмаған ең аз қорғалған және ең аз гүлденген сегменттер болып табылады.

**Түйін сөздер:** әлеуметтік кәсіпкерлік, кәсіпкерлік, әлеуметтік мәселелер, капитал түрлері, әлеуметтік капитал, шығармашылық, инновациялар.

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#### ТЕОРЕТИЧЕСКИЕ ИССЛЕДОВАНИЯ СОЦИАЛЬНОГО ПРЕДПРИНИМАТЕЛЬСТВА В РЕГИОНЕ (НА ПРИМЕРЕ АТЫРАУСКОЙ ОБЛАСТИ)

**Аннотация.** Основное различие, по мнению авторов, лежит не в плоскости мотивации (делать ради денег или из альтруизма), а в сфере характеристик «предвосхищаемой и производимой ценности» (блага). В случае обычного предпринимательства благом становится рыночная ценность, которая может быть выражена в категории дохода и прибыли (что и вводит в заблуждение при сравнении мотивации двух видов предпринимателей). В случае социального предпринимательства это ценность, выражаемая в преимуществе, которое получает значимая часть общества или общество в целом от произведенной социальным предпринимателем «крупномасштабной трансформации». При этом целевыми группами, для которых предназначена «ценность», служат наименее защищенные и наименее благополучные слои населения, не имеющие либо финансовых ресурсов, либо политических рычагов для достижения «получаемой в результате трансформации ценности» собственными силами.

**Ключевые слова:** социальное предпринимательство, предпринимательство, социальные проблемы, виды капитала, социальный капитал, креативность, инновация.

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## **THE FEATURES OF MARKETING STRATEGY IN THE OIL AND GAS INDUSTRY**

**Abstract.** The development of oil companies depends on their ability to predict and respond flexibly to the changing conditions of the external environment, to gain competitive advantages in the struggle in the markets. In such conditions, the role of strategic management in oil companies increases, which determines the relevance of the article, which reveals the directions and methods of formation and implementation of the marketing strategy for the development of oil complex enterprises. The article discusses the trends in the oil and gas market and their impact on the marketing strategies of oil companies in the near future. The article also substantiates the importance of marketing to coordinate the activities of participants in technological processes within the oil and gas industry, improve the efficiency of enterprises, achieve competitive advantages, as well as to reduce risks in management decisions.

**Key words:** marketing strategy, oil and gas market, oil company, trends, energy market.

It is no secret that the oil and gas sector is now in a state of transformation. The energy business can change dramatically in the light of recent events. What is happening requires decisive action from the leaders of oil companies, which will allow the business not only to survive in the short term, but also to prepare the corporations for future changes.

Over the past two decades, humanity has scooped out more than 60 billion tons of oil. At the same time, the higher the demand for oil, the more it is produced, the more capital is poured into the industry, the more active is the exploration for oil, the faster new fields are opened and developed.

In the world, the general trend of development of the modern oil industry is the reduction of proven reserves of light oil. Almost the entire increase in reserves is due to heavy viscous sulfurous oil.

In this regard, the further development of the oil refining industry is aimed at increasing the depth of oil refining and oil residues. The search for new technologies and catalysts resistant to high content of sulfur, metal organic matter, paraffins and other impurities is the main task of the near future [1].

The formation and development of the Republic of Kazakhstan as a sovereign state, ensuring economic and social progress of society is associated with the development of oil and oil refining, as well as gas and gas processing industries, which are the basis of the country's economy.

The strategy for the use of fuel and energy resources is based on long-term partnership with the largest oil and gas companies in the world in order to attract capital and modern technologies, the creation of a system of export pipelines from the standpoint of the efficiency of the use of future revenues from the export of resources. The oil refining industry is defined among the leading branches of the oil and gas complex, the effective development of which depends on the implementation of the long-term strategy of socio-economic development, formulated by the first President of the Republic of Kazakhstan in the strategy «Kazakhstan – 2050».

As part of the Strategy «Kazakhstan - 2050» sectoral departments will develop the most optimal scenario for the development of energy resources of the country and Kazakhstan's entry into the top 30 most developed countries. The source of progress should be not so much raw materials as a diversified economy with a developed agricultural and industrial processing sector, engineering, innovation economy, etc [2].

Crude oil production at the end of 2018 in real terms amounted to 77.5 million tons, which is 6.3% more than in 2017; in money - 12.2 trillion tenge. Almost two thirds (60.9%) of production was in Atyrau

region (47,2 million tons, +11,6% for a year), 23,3% - in Mangistau region (18 million tons, +0,7% for a year) and 8,3% - in Kyzylorda region (6,4 million tons, - 6,2% for a year) [3].

The volume of oil transportation through the oil pipeline of «MunaiTas» LLP amounted to 3 million 878 thousand tons (217 thousand tons - increase). Cargo turnover amounted to 1 billion 522 million tons/km (85 million tons/km - increase).

In the first 11 months of last year, export prices for Kazakh oil increased by 42.2% compared to the same period a year earlier. At the same time, export prices for the world outside the CIS for January - November 2018 increased by 42.1% year-on-year.

According to the data announced by departmental sources [4] in recent years, Kazakhstan adheres to a pragmatic scenario focused on a consistent increase in oil production to 95-100 million tons in 2020, to 110-115 million tons - by 2030, stabilization in 2040-2050 at the level of 110 million tons.

Solving the problems of dynamic development of oil and gas enterprises and the state as a whole, it is necessary not only to act decisively, but also to think carefully about future steps. Based on this, it is necessary to attach great importance to the organization and implementation of marketing activities, which will allow to obtain stable volumes of profit and assumes that the marketing service and the management of the oil and gas enterprise will be more careful in solving the issues of planning, implementing and controlling the marketing strategy and tactics of market behavior.

Currently, the activities of Kazakhstan's vertically integrated oil companies in the foreign and domestic market are subject to a detailed review and study by high-level specialists in various fields of knowledge. However, the issues of marketing activities of oil companies, which most fully reflects both the current state of the company and the possibility of its growth and development, in connection with the specifics of the fuel market attract the attention of practitioners. But even in this case, the essence of marketing is considered as a means of implementing sales policy, not a holistic concept, there is no comprehensive assessment of the marketing activities of the company.

The International Energy Agency (IEA) has been signaling the possibility of a supply crisis since 2016. And recently, the possibility of a crisis proposal by the end of the decade warned the heads of Total, Eni and Saudi Aramco. Given the growing demand for oil and the fact that investment in many large projects was postponed during the economic downturn, there is a decline in the potential to meet this demand [5].

Oil companies will need to increase production, and there is a risk that some of them may find it difficult to keep up with the growing demand.

The fundamental problem of the sector, of course, is its inherent volatility. Producers will need time to take into account factors of unpredictability in terms of oversupply or unsatisfied demand in the market. In addition, they will have to overcome the difficulties associated with the pace and scale of the transition to electricity production from non-fossil sources. Given these uncertainties, oil and gas companies need to develop a viable strategy to mitigate these risks.

In other words, although the period of oversupply in the market is over, its effects will continue to be felt. In the short term, companies must maintain strict financial discipline and focus on improving productivity and applying new technologies. In the long term, they need to restructure their asset portfolios so that they become profitable at low break-even prices. Moreover, they will have to consider how to ensure that their portfolio as a whole meets the requirements of tomorrow and protect it in the context of the transition to a low-carbon economy.

The oil and gas sector should take into account its development and specific features. Companies need not only to monitor the technical, economic and financial indicators of the internal environment of the enterprise, but also to obtain and study relevant information about the state of the market and all elements of the external environment. It is marketing research that is a tool for a prompt and effective response to global trends. For the oil and gas industries, there are features of development, so the marketing analysis, as a whole of the market and its individual participants is specific. The main indicators of the market size are the market capacity and market share of companies. The number and size of oil and gas companies operating in the market, as well as their market share, are used as indicators. The size of the oil and gas market is determined by the volume of sales of oil and oil products, gas. The capacity of the oil and gas market characterizes the possible volume of sales of produced oil and gas in the local market for a certain period of time, as well as the possible volume of sales of oil and gas products [6]. It is necessary to



take into account the prospects of future sales of petroleum products in the domestic Russian market or in the world market. To regulate them, it is necessary to develop criteria and indicators for assessing the state of the markets. Their choice is based on the definition of goals and objectives of regulation on the one hand, and allows you to adjust these goals on the other. The main indicators are the contribution of the industry to the gross regional product, the percentage and amount of revenues to the budgets of all levels in the valuation [7].

The central issue of the market orientation of the oil and gas company is the identification of consumer demand for the final industry products - petroleum products. One of the main tasks, the solution of which directly depends on the level of prices in the market, the degree of customer satisfaction, the state of the competitive environment, is to achieve a balance of interests of consumers and suppliers of petroleum products. The consumer is always focused on the real supply from the producer of petroleum products, and the manufacturer - on the consumer demand, which is the main engine of the economy. Consumer demand should be moderately ahead of production capacity. If not, the investment does not go to the development of the industry. In addition, if the income of the population falls, the manufacturer is trying to find such marketing solutions that would allow him to save on a variety of components of his production and marketing activities [8]. Namely, on advertising and PR, on sales promotion, on technological processes, on quality of production, etc. Producers are ready to certain manipulations in all components of activity for increase in consumer demand and for adoption of effective decisions on advance of production.

At a time of crisis, when the state and industries, in particular oil and gas, do not have a large number of financial resources, it is especially important to assess the promising areas of business structures. The behavior of an economic entity in various economic situations is associated, on the one hand, with the market position it has won in a particular marketing communication space, and on the other, with the state of the resource potential of the entity itself. We need to find a way out of the crisis with the least losses. After all, during the economic crisis, the company's attention to the role of marketing increases: competent marketing in crisis conditions contributes to the survival of the company and even its growth. Marketers assess and reduce the risks of the company, as well as correctly use new opportunities in the market by searching for new niches, restructuring policy, finding new reserves and new points of application of efforts (points of growth). Therefore, it is necessary to develop anti-crisis marketing programs that would allow companies to survive the crisis, to exist and develop.

The latter type of analysis should take into account the specific nature of the oil and gas market - compliance with quality standards. In the oil and gas industry, the quality of goods (oil, gas or refined product) depends primarily on the natural indicators of the field, then - on the quality of the processing plant. The parameters of the requirements for the product are very strictly regulated. At the same time, technical, regulatory and economic parameters play a primary role when aesthetic and ergonomic parameters are not taken into account [9]. Following international standards, i.e. the transition to environmentally friendly fuel and resource-saving technologies for research, drilling, production and processing, will allow oil and gas companies to stay on the market. But if conditions, such as the location of deposits, initially require large costs from companies, perhaps the company should follow PwC's advice and find a new segment. In June 2015, at the annual exhibition "Gas and oil" in Calgary, Canada, 30 oil service companies were surveyed on what marketing strategies they use to conclude contracts [10]. According to the results of the survey revealed that only half of the companies developing a marketing plan (although you set the budget for marketing activities), and almost none of the companies does not evaluate the results of the work of the marketing department, considering it unnecessary. Oilfield service companies should pay more attention to marketing strategies — in a highly competitive environment and the preferential establishment of partnerships through direct sales only effective marketing will allow the service business to succeed in the market. A possible way to develop marketing strategies for oilfield service companies can be integrated marketing, which includes in addition to the traditional market analysis advertising, PR, sales promotion and the formation of a recognizable brand. The formation of the marketing strategy has its own characteristics: it is necessary to have a significant management experience, based on both intuition and common sense; it is necessary to take into account the risk factor and uncertainty; requires a high level of knowledge and skills; entails a large amount of strategically important information; the process includes the analysis of a variety of information from which it is

necessary to distinguish only relevant, and make decisions on its basis; it is necessary to develop an individual approach so that the company can succeed among competitors thanks to its strengths. The need for marketing strategies for the oil and gas business is due to the fact that in the absence of marketing plans, the company can spend much more on projects that then will not bring any results. The work of the marketing Department will allow the company to determine the most effective ways to find customers, form a recognizable brand and build a "road map" to achieve strategic goals. Evaluation of the division's performance will give managers an objective picture and show the strengths and weaknesses of the organization. Thus, marketing implies not only analysis and timely adaptation to changing conditions, but also an increase in sales through advertising, PR, building strong relationships with customers, and is the key to successfully overcoming the crisis and entering new conditions for oil and gas companies [11].

There are several main marketing strategies that can help to get out of the crisis situation with the least losses. The first is a strategy of unfair competition, the essence of which is to compensate for the declining volume of sales by increasing the price for buyers or reducing the price for suppliers. This strategy is not customer-oriented. Nevertheless, this alternative is a reality in the Russian markets of gasoline and other petroleum products controlled by monopolists. The second is the strategy of crisis adaptation: provides for a competitive advantage in the lower price segment by reducing costs, reducing the range, reducing the quality of products, etc. On the one hand, the strategy is focused on taking into account the declining effective demand, and on the other hand, on moving to a lower price segment, which is detrimental to the brand and image. The third is the development strategy: focused on ensuring competitiveness by increasing the value of products to the consumer while maintaining prices at the same level. The strategy is of the greatest interest, because it implements the key function of marketing - ensuring the development of the company in a changing environment [12].

An important part of marketing research in the oil and gas industry is to assess the level of monopolization and competition. The level of monopolization of the market can be measured using indicators such as the concentration coefficient and the index of the Genfindal-Hirschman. These indicators are widely used by the Antimonopoly service to assess the competitive environment of the market. These indicators make it possible to assess the state of the market in full, as well as to identify market parameters that are amenable to regulatory influence. Understanding the state of the market allows us to develop measures (directions) to improve the efficiency of marketing behavior of a particular enterprise in the oil and gas market.

Thus, the use of marketing opportunities in overcoming crisis phenomena is a powerful tool for regulating the activities of risk reduction, as well as to avoid strategic mistakes and identify the most promising ways to overcome crisis phenomena.

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#### **МҰНАЙ-ГАЗ САЛАСЫНДАҒЫ МАРКЕТИНГТІҢ СТРАТЕГИЯСЫНЫҢ ЕРЕКШЕЛІКТЕРІ**

**Аннотация.** Мұнай компанияларының дамуы олардың сыртқы ортадағы өзгеріп жатқан жағдайларға икемді түрде әсер ету және болжау қабілетіне, нарықтардағы бәсекелестік артықшылықтарға ие болуына байланысты. Мұндай жағдайларда мұнай компанияларында стратегиялық басқарудың рөлі өсіп, мұнай компанияларын дамытудың маркетингтік стратегиясын қалыптастыру мен іске асырудың бағыттарын, әдістерін және әдістерін ашатын мақаланың өзектілігін анықтайды. Мақалада мұнай-газ нарығындағы тенденциялар және олардың жақын арада мұнай өндіру және мұнай өңдеу компанияларының маркетингтік стратегиясына әсері талқыланады. Сондай-ақ, мақалада мұнай-газ саласының технологиялық үдерістеріне қатысушылардың қызметін үйлестіру, кәсіпорындардың тиімділігін арттыру, бәсекелестік артықшылықтарға қол жеткізу, сондай-ақ басқару шешімдерін қабылдау кезінде тәуекелдерді азайту мақсатында маркетингтің маңыздылығын негіздейді.

**Түйін сөздер:** маркетингтік стратегия, мұнай және газ нарығы, мұнай компаниясы, үрдістер, энергетикалық нарық.

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## CORPORATE SOCIAL RESPONSIBILITY OF BUSINESS IN THE REPUBLIC OF KAZAKHSTAN

**Abstract.** Recently, in Kazakhstan, attention to such phenomenon as “corporate social responsibility” has increased. The problems of socially responsible business behavior, its role in the socio-economic development of the country, possibilities and effectiveness of interaction with the local community are widely discussed.

This article reveals the importance of researching the basis of social responsibility in business, the practice of applying this concept both in Kazakhstan and abroad. The reasons for the insufficient development of social responsibility of domestic companies, most typical management problems in this area, as well as the issues of financing charitable and social activities of companies are considered. The possibilities and directions for improving the social responsibility of business in Kazakhstan are substantiated.

**Keywords:** social responsibility, business, corporate, charity.

### Introduction

Corporate Social Responsibility (CSR) is a concept that is increasingly spreading around the world. The concept of social responsibility is used in many areas of activity, but only in a business context, pointing to specific areas of development, does it acquire a clear wording. For a long time corporate social responsibility is one of the most debated topics that lie in the field of business. At present, in the most general sense, corporate social responsibility is understood as the philosophy of behavior and the concept of building up by the business community, companies and individual business representatives. Their activities aimed at meeting the expectations of stakeholders for sustainable development. However, until now, it is difficult to give one single definition of this term. Even in economically developed countries, companies are not always able to come to a common opinion regarding the understanding of social actions of business.

### Main part

This term is unique in that it has a certain meaning, but its understanding in different regions is not always unambiguous. For example, in Canada, Corporate Social Responsibility is often reduced to corporate philanthropy and social marketing; in Cambodia, Corporate Social Responsibility is understood as a business partnership with the International Labor Organization to improve working conditions, in Australia, these are projects of corporations under pressure from the authorities; pressure, which, in essence, is determined by environmental and human rights organizations, in India CSR is a charity and minimizing the consequences of poor public infrastructure, and in China, business has priority over the health and safety of employees.

In the United States, Corporate Social Responsibility was defined in terms of the sponsorship model: companies transparently make a profit, pay taxes, and then deduct a certain portion of income to charity. In the UK, the government sees CSR as a contribution to the development of sustainable development goals; the extent to which companies take into account their impact on the economy, society and environment - maximizing the positive and minimizing the negative consequences, recognizing the long-term needs and needs of society.

Today, one of the most frequently used approaches to social responsibility is the approach proposed by the American researcher Archie Carroll - the Carroll pyramid.



Figure 1-Carroll pyramid

#### Economics.

The first thing any company should think about is their profits. The task is quite simple - a minimum of expenses, maximum income. When company is firmly on its feet, it can think about investing. In this case, expenses will increase and income will not be received immediately. The same thing happens with innovation. You have an economic responsibility to your employees, investors and shareholders. It also means creating good products and services that do not adversely affect the health of your customers. Every person in your organization should be personally responsible for their actions. For this you need to carry out work to educate your subordinates.

#### Legitimacy.

The minimum requirement for any business: it must be legal. In many countries, this means: Being honest about the products and services you sell. Provide your employees and customers with security. Do not destroy the environment. Pay taxes. In the western world, the company's reputation is paramount. If it is caught and fined for illegal activities, most clients will turn away from it. Provide your employees and customers with reliable and timely information.

#### Ethics.

This element extends your responsibilities. You must determine what is good and what is bad, even if the law does not require it. For example, by law you have a right to use as much sugar in your products as you wish. However, if you realize that there is too much sugar in them, you can reduce its quantity, even if it affects sales, or, for example, you may not structure your company in such way that leads to paying less taxes.

#### Charity (philanthropy).

This is the highest commitment the company makes. If you do not do this in order to get tax or monetary benefit on this, then you act extremely humanely. You want to improve the world around you, so you donate money to education or health care. You can also allow your subordinates to volunteer. Your company's expenses are growing, but you can afford it without any negative effect.

Charity can be expressed not only in monetary terms, but also in the form of such assistance as:

- Keeping personal territory clean, cleaning parks, planting trees;
- Providing employment for people with disabilities;
- Care for elderly, orphans, etc.

- In general, the social responsibility of a business has three directions:

- Environmental (solution of issues related to depletion, pollution of natural (water, land) resources, climate change on the planet, etc.);

- Social;
- Economic.

The economic responsibility that lies at the base of the pyramid is directly determined by the company's basic function in the market as a producer of goods and services that can satisfy the needs of consumers and, consequently, make a profit. Legal responsibility implies the need for law-abiding business in a market economy, its compliance with the expectations of society, as reflected in legal norms. Ethical responsibility, in turn, requires that business practices conform to the expectations of society, not specified in legal norms, but based on existing standards of morality. Philanthropic responsibility encourages the company on actions aimed at maintaining and developing the welfare of society through voluntary participation in the implementation of social programs.

Thus, CSR is a business commitment to make a voluntary contribution to the development of society, including social, economic and environmental spheres, taken by the company beyond what is required by law and the economic situation. The model of the pyramid of CSR A. Carroll, based on the subordination of the economic, legal, ethical and philanthropic "levels" of social responsibility, has recently been subjected to a strict critical assessment and rethinking. Critics proceed from the fact that ethics is the most important element of all CSR levels considered by A. Carroll, while the question whether CSR is a duty or implies some kind of "non-binding efforts" remains open.

The Canadian CSR model is similar to the American model in terms of its main features, and it should only be noted that in Canada many organizations cooperate with the National Institute of Quality of Canada implementing the special Canadian CSR standard - a model of quality excellence and a healthy workplace. The Government of Canada prioritizes the need to adhere to the principles of social and environmental responsibility of companies operating abroad, and to adhere to local and international laws, while respecting national values and international obligations. CSR initiatives are often viewed as company events that go beyond the legal minimum.

There are five main levels of corporate social responsibility, which are located on the principle of hierarchy from the lowest form to the highest. The first, or basic, level includes the obligations of the organization to carry out its activities within the framework of the current legislation in the field of employment, protection and remuneration of labor, protection of the environment and payment of taxes.

At the second level of responsibility of the organization, two aspects stand out - external and internal. External responsibility of the organization involves the charitable and sponsorship activities of the organization. Within the framework of internal responsibility, the organization voluntarily implements internal social programs. The recipients of corporate social responsibility in this case are the employees of the organization. Examples of such programs are job creation programs, staff development, social benefits, as well as programs aimed at creating and maintaining corporate culture, etc. The third level, or the level of qualitative interaction with interested parties, is characterized by the achievement of corporate goals by the organization, taking into account the interests of internal and external stakeholders. The mechanism of the organization's dialogue with its primary and secondary stakeholders is based on the principles of responsible behavior enshrined in the corporate governance code and the provision of social reporting. Social report confirms the transparency and openness of the organization's activities and contains a strategic vision of its development prospects.

At the fourth level - socially responsible investment - the organization acts as a subject and as an object of attracting socially responsible investments. "Socially responsible investments" means the process of making investment decisions, which takes into account the social and environmental consequences of investments as part of traditional financial analysis.

At the fifth level - harmonization - the organization seeks to maximize exclusively social and environmental activities against the background of constant indicators of profit and capitalization.

Building an organization's CSR system is determined by the nature of the relationship with other interested parties. As levels, the degree of awareness of the need for CSR and, accordingly, orientation to the document base can be taken.

The first level is adherence to laws and other regulatory acts. The second level is recognition of need to carry out socially responsible activities in a wider context than normative acts require, but at the same time it is assumed that this to a certain extent narrows the development possibilities of the organization itself.

The third level is a socially responsible activity aimed at simultaneously obtaining positive effects in the external environment and on the organization itself.

Regardless of the type of enterprise or organization, there are groups of people who influence the organization or are affected by the organization itself. This group of persons is called the “interested party” or “stakeholders”. Stakeholder theory, or interested party theory, appeared in the early 1970s. XX century in England in response to the emergence of large corporations. This theory considers the dependence of a firm's actions on the interests of a wide variety of stakeholders. Using the concept of stakeholders in modern times is considered important because it improves corporate governance and social responsibility of the company. A person is interested in something if his income depends on the result or he is concerned about the result itself. Stakeholders are not only those persons in whom the organization is interested, but also those who are interested in the result of the organization's activities. As a rule, some of the stakeholders have greater influence than others, and the business should have an understanding of the level of influence which each group of stakeholders can make.

CSR is, first of all, the realization that many stakeholders are involved in the implementation orbit of the company's management decisions, primarily those who have socially significant interests in relation to the company's activities, for example, employees, suppliers, partners, local communities, government bodies, society as a whole. The rationale for CSR activities is based on individual perspectives of corporate governance: i.e. Corporations must conduct their business in such a way that they benefit all those concerned, to whom they must also be accountable. CSR actions required by stakeholders can include many things: from using more environment- friendly materials in products, to meeting the interests of specific non-profit organizations.

Business is embodied in its stakeholders. Businesses are buyers, suppliers, employees, investors and community organizations. However, it should be understood that not all interested parties are equally involved in the social activities of an enterprise. Accordingly, the question arises about the balance of interests of stakeholders. Of course, business must be profitable, but it must also create value. Do not forget about the true purpose of the business. From a position of creating value, companies around the world are very similar, although there are intercultural differences that determine the peculiarities of relationships with stakeholders in different countries. The company manufactures products that consumers expect, seeks loyalty of suppliers and employees, tries to be a good corporate citizen in the local community, otherwise its activity will be limited immediately. Stakeholder theory encompasses an absolutely universal, fundamental approach to doing business. Business is not just market operations that can be studied using conventional theoretical models, business is the creation of value for stakeholders.

Doing business in accordance with international standards implies knowledge of the concept of corporate social responsibility. Although various researchers interpret this term differently, the main components of this concept remain constant, such as paying taxes in full and in a proper way, preserving existing ones and creating new jobs, maintaining workers' rights and protecting them, providing social guarantees for employees, bona fide compensation package for employees and hiring young professionals.

The diversity of existing concepts, approaches and models of CSR in international practice indicates the scale that CSR received as a phenomenon.

Among the countries of Central Asia, the Republic of Kazakhstan (RK) is perhaps the leader in the field of CSR. Indeed, the first prerequisites for the development of social responsibility in independent Kazakhstan appeared in the mid-1990s with the entry of foreign companies to the market, which had already demonstrated their social responsibility. However, despite this, just five years ago, the concept of CSR was considered relatively new in Kazakhstan. Today, the awareness of the population and domestic companies about the basic principles of social responsibility is growing rapidly. Nevertheless, a common understanding of the concept of CSR in Kazakhstan has not yet been formed.

The main factors preventing companies from taking social responsibility activities are: lack of financial resources; lack of government incentives; lack of relevant knowledge and skills; imperfection of the regulatory framework; lack of information in the community; insufficient public acceptance of the contribution of companies to society and the difficulty of measuring the effect of CSR. Despite the fact that the Tax Code of the Republic of Kazakhstan provides tax deductions for charity in the amount of 3%, for many companies this is not an incentive, as the rate itself is small, and the procedure for filing documents to confirm this deduction is characterized by a high degree of red tape.

Table 1- Comparative characteristics of CSR models in national cultures.

CSR models	American- Canadian	European	Japanese-chinese
CSR form	Open	Hidden	Hidden
Economicresponsibility	Focus on compliance with advanced principles of corporate governance, decent remuneration and consumer protection.	Legislative frameworks of behavior, for example, the 35-hour work week, the minimum wage, regulation of overtime work, rules for the production and testing of medical products.	Active participation of the state in corporate strategic planning
Legalliability	Low level of statutory corporate behavior	Deeply developed legislation on business rules	Effective legal basis for CSR and corporate behavior (Charter of corporate behavior).
Ethicalresponsibility	Tendencies of prevalence of local community support.	High taxes and high level of state social protection.	Formation of the correct perception of being, society and the surrounding world. Strivingfortheprogressofcivilization as a whole.
Charity (philanthropy)	Sponsoring art, culture and university education.	A high tax burden transfers to the state responsibility for financing culture, education, etc.	Environmental Protection. Education and culture. Development of technical capacity. Community support.
Key stakeholders in order of importance	Staff. NGO andcommunity.	Staff. Consumers. Community. Shareholders.	Staff. Shareholders. Together The division of stakeholders into internal (personnel, shareholders) and external (community, consumers). Priorityisgiventointernal. Tostakeholders
CSR stimulating / drivingforces	The corporations themselves. NGO and community.	The corporations themselves. NGO and community. State.	State. Community. The corporations themselves.
The role of non-governmental / non-profit organizations	It is a global resource for companies that seek to preserve commercial success by showing respect for ethical values, people, society, and the environment (US Business for Social Responsibility (BSR), Canadian Business for Social Responsibility (CBSR).	They have a great influence on public opinion and pressure on business.	NGOs do not exert pressure on business.
Trends in social reporting (JI)	Initiated by the business itself. Standards are well adapted and widely applied. Focusedonmoststakeholders	Initiated by the business itself. Standards are well adapted and 8 are applied. Focusedonmoststakeholders.	It is initiated both by the business itself and by the state. It has three main areas: environmental protection (sustainable development), corporate philanthropy, responsibility towards the client and protection of human rights.

As for the oil and gas industry, CSR is divided into two categories: mandatory social payments and voluntary CSR programs. Regarding the first category, all social projects are developed in conjunction with local authorities and funded by compulsory deductions from mining companies as a percentage of their capital expenditures. Such projects are usually aimed at supporting various major events, as well as the construction and reconstruction of social infrastructure facilities (schools, hospitals, including the purchase of medical and school equipment). Voluntary CSR programs that implement most oil and gas companies are often aimed at supporting small and medium-sized businesses, as well as women entrepreneurs. According to L. Gulbrandsen and A. My, the only negative point in the implementation of CSR in the oil and gas industry is the lack of cooperation between local and international companies



operating in the Republic of Kazakhstan. In this regard, it sometimes happens that different companies hold charity events for the same segments of the population, while others are simply overlooked.

If we talk about CSR as a whole, the study conducted by R.M. Potluri, et al., Showed that the majority of civil society representatives are satisfied with the social behavior of Kazakhstani companies. Nevertheless, shareholders, employees of companies and government agencies believe that Kazakhstan's enterprises should pay more attention to the execution of economic and legal responsibility. At the same time, members of civil society believe that organizations need to pay more attention to ethical and philanthropic responsibility.

#### **The obtained results (conclusions)**

As the part of Kazakhstan's strategy to become one of the 50 most competitive and dynamically developing countries in the world, Elbasy Nursultan Nazarbayev stressed the need to introduce international standards for social responsibility of business as one of the priorities for the further modernization of society. "It is necessary to develop and improve collective bargaining mechanisms. This applies to wages, occupational safety and health, including the environmental safety of people, professional training and advanced training of specialists. Business should take part in the construction of social facilities and the development of regions", - said the former Head of State.

In this regard, it should be emphasized that the goal of Kazakhstan's joining the 30 highly developed countries of the world requires the consolidation of efforts and constructive interaction between the state and the entire Kazakhstani society. Therefore, today in the business environment, the factor of responsibility towards society, the improvement of work on the formation of a socially oriented business, is becoming increasingly important.

The issues of social responsibility of business for sustainable development are determined and implemented by the Republic of Kazakhstan on the basis of national priorities and peculiarities, as well as active participation in relevant international processes, programs and initiatives, including the UN Global Compact.

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#### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА БИЗНЕСТІҢ КОРПОРАТИВТІК ӘЛЕУМЕТТІК ЖАУАПКЕРШІЛІГІ**

**Аннотация.** Қазіргі таңда Қазақстанда «әлеуметтік корпоративті жауапкершілік» феномені күшейді. Бизнесітегі әлеуметтік-жауапкершілік мәселесі, оның мемлекет дамуындағы әлеуметтік-экономикалық рөлі, жергілікті қоғамдастықпен өзара іс-қимылдың мүмкіндіктерімен тиімділігі мәселелері кеңінен талқылануда.

Бұл мақалада бизнестің әлеуметтік жауапкершілік негіздерін зерттеудің маңыздылығы, осы тұжырымдаманы Қазақстанда және шетелде қолдану практикасы ашылады. Отандық компаниялардың әлеуметтік жауапкершілігінің жеткіліксіз даму себептері, осы саладағы неғұрлым типтік басқару, сондай-ақ компаниялардың қайырымдылық және әлеуметтік қызметін қаржыландыру мәселелері қарастырылады. Қазақстандағы бизнестің әлеуметтік жауапкершілігін жетілдірудің мүмкіндіктері мен бағыттары негізделді.

**Түйін сөздер:** әлеуметтік жауапкершілік, бизнес, корпоративтік, қайырымдылық.

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#### **КОРПОРАТИВНАЯ СОЦИАЛЬНАЯ ОТВЕТСТВЕННОСТЬ БИЗНЕСА В РЕСПУБЛИКЕ КАЗАХСТАН**

**Аннотация.** В последнее время в Казахстане усилилось внимание к такому феномену, как «корпоративная социальная ответственность». Широко обсуждаются проблемы социально-ответственного поведения

бизнеса, его роли в социально-экономическом развитии страны, возможностей и эффективности взаимодействия с местным сообществом.

В данной статье раскрывается важность исследования основ социальной ответственности бизнеса, практика применения данной концепции как в Казахстане, так и за рубежом. Рассматриваются причины недостаточного развития социальной ответственности отечественных компаний, наиболее типичные управленческие проблемы в этой сфере, а также вопросы финансирования благотворительной и социальной деятельности компаний. Обосновываются возможности и направления совершенствования социальной ответственности бизнеса в Казахстане.

**Ключевые слова:** социальная ответственность, бизнес, корпоративный, благотворительность.

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**APPLICATIONS OF IFRS FOR SMALL AND MEDIUM BUSINESS  
IN THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** According to the authors, the development of entrepreneurship is accompanied by the increasing role of accounting information in the areas of management, control and analysis of business activities. The timeliness, quality and accuracy of this information are achieved by a high level of preparedness and professionalism of an accountant. The complexity of applying IFRS for small businesses is also understood by the FCMSU, which has been developing the specialized standard for small-medium business for several years already. Developing a universal standard is a very difficult job, as small business policies and, accordingly, their requirements vary significantly in different countries. Meanwhile, by adopting this standard of the FMSC, it will be possible to maximally incorporate its provisions into the national accounting and financial reporting system.

**Keywords:** international financial reporting standards (IFRS), unification, accounting principles, revision of standards, preparation of financial statements.

**INTRODUCTION**

International Financial Reporting Standards is a constantly updated system that is updated both editorially and periodically changes the name. The basis of these transformations is the unification of accounting principles used by companies around the world to prepare financial statements.

Periodic revision of standards, which is associated with the prescription of their application and the need for changes based on the development of accounting theory and practice, also has a role in the standardization process of accounting.

In the message of the President of the Republic of Kazakhstan to the people of Kazakhstan dated February 6, 2008, "Growth of the welfare of citizens of Kazakhstan - the main goal of the state policy" one of the priorities is to accelerate the transition of all legal entities to international financial reporting standards (IFRS).

To realize this priority, it is necessary to ensure the development of accounting in the Republic of Kazakhstan.

The organization of accounting is a system of conditions and components of the construction of the accounting process and the organization of work of performers in order to obtain reliable and timely information about the activities of the enterprise.

At the enterprises accounting is carried out by a special service - accounting. This is an independent unit headed by a chief accountant or financial director.

The accounting service in its activities is governed by various regulations, one of which are international financial reporting standards.

As for national standards, various structures take part in their development, including associations of accountants and auditors, legislative bodies, exchange commissions, central banks, institutes and other scientific institutions, tax authorities. The degree of participation in the development of accounting standards varies.

## MAIN PART

International Financial Reporting Standards - financial reporting standards approved by the Foundation Committee of International Financial Reporting Standards. This is a constantly updated system that is being upgraded both editorially and periodically changes the names. The basis of these transformations is the unification of accounting principles used by companies around the world to prepare financial statements.

A distinctive feature of IFRS is the multivariate approach to solving accounting problems. An example is the possibility of using alternative methods for calculating depreciation (depreciation) of fixed assets, accounting for stocks, investments, etc.

The need to move to the International Financial Reporting Standards and the International Standards on Auditing is determined by the general policy of the state and the strategy of reforms focused on building a market economy in Kazakhstan. Therefore, the integration of Kazakhstan into the world economy requires the inclusion of norms or individual documents of international public organizations in Kazakhstan law and giving them the status of regulatory legal acts of the Republic of Kazakhstan.

Generally, a standard is a document developed on the basis of the consent of interested parties, in which rules, general principles or characteristics relating to various types of activities or their results are established for universal and repeated use.

Article 1 of the Law of the Republic of Kazakhstan dated February 28, 2007 No. 234-111 "On Accounting and Financial Reporting" introduces such concepts as:

- financial reporting standard - a document that establishes the principles and methods of accounting and financial reporting;

- national financial reporting standards (hereinafter - national standards) - financial reporting standards approved by the authorized body;

- International Financial Reporting Standards (hereinafter - International Standards) - Financial Reporting Standards approved by the Foundation Committee of International Financial Reporting Standards.

Based on this, it can be concluded that the financial reporting standards in the Republic of Kazakhstan consist of national financial reporting standards and international financial reporting standards.

International Financial Reporting Standards are rules recommended for use by countries that are members of the Committee for International Financial Reporting Standards, which allows in most cases to preserve national accounting features when applying International Financial Reporting Standards (IFRS). The development of International Standards is influenced by periods of adoption, established traditions of accounting standardization, the current practice of keeping records of an object and other circumstances.

Since 2005, all companies of European Union countries whose shares are listed on stock exchanges are required to prepare consolidated financial statements in accordance with IFRS. An exception is made only for enterprises that use the Generally Accepted Accounting Principles (hereinafter - GAAP) of the USA, as well as for firms that have only debt obligations (bonds) listed on stock exchanges. Such enterprises will have to switch to IFRS from 2007. According to the European Union, the introduction of IFRS will eliminate barriers to international trade in securities, ensuring uniformity, reliability, transparency and comparability of financial statements in EU countries. The plans of the European Union affect almost 8,700 companies listed on European stock exchanges, representing about 25% of world market capitalization.

It is believed that international financial reporting standards are the most developed and advanced accounting standards in the world. That is why in many countries, for example in Australia, Germany and the UK, foreign issuers may submit their reports to stock exchanges in accordance with international standards. In other states, such as Canada, Japan and the USA, this is also allowed, but companies preparing IFRS financial statements must additionally submit a list of its differences from the statements that would have been prepared in accordance with the national standards of these countries. In some countries (for example, the Czech Republic, the Baltic countries), all large enterprises must make IFRS statements. In Kazakhstan, since 2003, all financial organizations, since 2005, joint-stock companies, and since 2006, other organizations (except state institutions) will have to prepare IFRS statements.

It is possible that in the near future, the problem of mastering IFRS will affect not only European companies. Not long ago, the Financial Accounting Standards Board (FASB) and the Foundation

Committee for International Financial Reporting Standards (hereinafter - the Federal Financial Reporting Service (IAS)) announced their intention to harmonize US GAAP and IFRS.

According to the harmonization program, US GAAP and IFRS will be amended to eliminate certain discrepancies between the two standards systems. Over time, it is planned to completely eliminate the existing differences between them. Given that the United States accounts for about 52% of world market capitalization, IFRS have a real chance to become truly global accounting standards.

In the context of the above, it should be noted that international standards, regulating virtually all aspects of the activities of enterprises, cannot cover quite extensive areas of its functioning, since they are presented only in a general form. Therefore, studying IFRS, we must not forget that their use allows the company to choose the most commonly used options.

From here accounting and reporting information, formed according to IFRS, have both advantages and disadvantages, which are summarized in table 1.

Consider the positive and negative features of international accounting standards. Their objective advantages over national standards in individual countries are:

- a clear economic logic;
- generalization of modern world practice in accounting;
- Ease of perception for users of financial information throughout the world.

Table 1 - Advantages and disadvantages of IFRS

Benefits	Disadvantages
-expansion of opportunities for familiarizing with international capital markets;	- the generalized nature of the standards;
- transparency, usefulness of information and regulation of the disclosed volume, helping the user to make informed decisions;	- a large enough variety in accounting methods;
- reduction of time and other costs, including material ones, for the development of national	- lack of detailed explanations for specific cases;
- increasing the responsibility and expanding the volume of knowledge, skills and powers of accountants who can increase the reliability and significance of accounting for sustainable growth of the republic's economy;	- differences in the levels of development of different countries;
- development of cooperation with other countries through information transparency, reducing risks and increasing confidence;	- the lack of rules and order, taking into account the traditions and national characteristics of the economy;
- unification of economies of different countries based on the formation of high-quality comparable financial information;	- the need to adapt IFRS to the national accounting system and in some cases the cumbersome work;
- approximation - approximation of economic integration and harmonization of accounting and reporting.	- Difficulty in understanding some terminology due to incorrect translation;
- expansion of opportunities for familiarizing with the international capital markets;	- discrepancy of the regulatory system on individual issues.
- transparency, usefulness of information and regulation of the disclosed volume, helping the user to make informed decisions;	- lack of knowledge and skills of accountants, as well as the systematic need for training;

The combination of these advantages largely ensures the desire of various countries to use IFRS in national accounting practices. However, it should be noted and disadvantages of IFRS.

These include, in particular,:

- The generalized nature of the standards, providing for a sufficiently large variety in the methods of accounting;

- lack of detailed interpretations and examples of the application of standards to specific situations.

The creation of an international standard is a long-term work that covers approximately three years, which, summarizing in stages, can be represented as Figure 4

Figure 1 - The process of creating an international standard

1 stage	Formation of editorial commission
2 stage	Development of a draft international standard
3 stage	Preparation of a draft standard
4 stage	Board approval of the working draft

Depending on the nature, content and other criteria, IFRS can be classified, i.e. group in different directions. From the Latin word "classification" means a system of coordinated concepts (classes, objects, phenomena) in any branch of knowledge. In other words, the classification implies the distribution of certain objects according to their classes (sections), depending on their common features, which fix the regular links between them in a single system.

In various sources of information devoted to the problems of IFRS, the term "classification" is interpreted differently. This is apparently due to the fact that standards were developed in different years and with different functional goals.

Summarizing, we can say that all varieties of IFRS classifications are aimed at highlighting the uniformity of the structure and characteristics of standards, introducing a clear understanding of the accounting according to international rules.

In other words, the classification of IFRS is a possible grouping of standards according to some similar criteria with respect to certain conditions.

Classification of standards by purpose involves the division of standards according to certain associated features (Figure 2).

Classification of standards by purpose (Fig. 2)

General methodological standards	IFRS 1, 7, 8, 10, 14, 15, PKI 8, 17, 18 IFRS 21 and PKI 7, 11, 19 IAS 29, 30, 34, 35, 36, 37
Standards governing the composition, content and consolidation of financial statements	MFSO 1, 10, 14, 27, 29, 30, 31, 34 IFRS 22 and PKI 9, 22 IFRS 27 and PKI 12 IFRS 31 and PKI 13
Standards defining individual objects	Accounting Standards: - stocks of IFRS 1 and PKI 1; - long-term assets of IFRS 11, 16, 38, 40 PKI 14, 23, 6 - financial assets of IFRS 17, 23, 25, 28, 40, PKI 15, 2, 3, 20 - financial instruments MFSO 32, 39, PKI 5, 16 - incomes of MFSO 19, 20 and PKI 10 - profits of MFSO 12, 33 and PKI 21, 25, 24 - MFSO 19, 26 personnel maintenance

In this case, as can be seen from Figure 2, such blocks are distinguished:

- 1) general methodological standards, which are based on the formation of international accounting principles;
- 2) standards governing the composition and content of financial statements;
- 3) standards defining the rules for accounting for individual objects. This group, due to the large number of objects taken into account, can be divided into additional subgroups.

Table - Classification of standards for economic content

The economic content of International Financial Reporting Standards						
Standards of a general economic nature	Accounting standards related to economic interests of partners with the economic interests of the state and предприятий	Accounting standards related to the economic interests of partners	Accounting standards for the regulation of economic relations between employers and employees	Accounting standards reflecting international economic interests	Accounting standards for foreign exchange transactions, accounting standards for joint venture activities	Labor Cost Accounting Standards
Standards of accounting principles, accounting policies, financial reporting standards	Standards for accounting for income and expenses, standards for accounting for taxes, standards for accounting for government investments	Accounting standards for business segments, accounting standards for mergers	Accounting standard for operations reflecting industry specific work	Merger Accounting Standards	Banking Accounting Standards	Insurance Accounting Standards

Along with the above classification of standards by purpose, they can be classified according to economic content, which are based on a grouping that involves solving accounting problems arising in the course of economic relations.

The basis of this classification is the following division of the relationship between:

- the state and the enterprise, involving the interaction of certain interests in the formation of the national budget;
- producers and consumers, based on the combination and opposition of the interests of the seller and the buyer, regulated by the demand and supply of goods;
- horizontal enterprises, i.e. between partner enterprises, which are based on an economic interest to make a good deal;
- structural units of the company (segments), aimed at their own development separately and the development of the company as a whole;
- contributors to the joint capital of a joint stock company, based on the interest in receiving benefits, in proportion to the invested capital;
- the employer and the employee, based on a combination of mutually beneficial and interrelated interests;
- countries associated with a high level of integration and interdependence not only of individual firms, but also in general of states and continents.

Thus, the introduction of IFRS is due to the integration of Kazakhstan into the world economy and entry into the WTO, aimed at strengthening Kazakhstan organizations in international markets.

In the process of transformation of accounting in the transition to IFRS, the company needs to revise the accounting policy and schedule of documents, reflecting the movement of primary documents, because information about the facts of financial and economic activity of the enterprise, which could have a significant impact on the opinion of users of financial statements, in accordance with IFRS be reliable, neutral, prudent, complete and reflect the economic content of events and operations.

#### CONCLUSION

The problem of the complexity of applying IFRS for small and medium-sized businesses is also understood by the Federal Financial Markets Service, which has been developing a specialized standard for small-medium businesses for several years already. Developing a universal standard is a very difficult job, as small business policies and, accordingly, their requirements vary significantly in different countries. Meanwhile, by adopting this standard of the FMSC, it will be possible to maximally incorporate its provisions into the national accounting and financial reporting system. National legislation serves as the core of state regulation of accounting.

According to current Kazakhstan standards, the accounting policy of an enterprise should be drawn up by an appropriate organizational and administrative document, for example, an order. International standards give companies the right to choose: the information contained in the accounting policy can be disclosed either in the notes to the financial statements or as its separate component. At the same time, it is not necessary to approve the accounting policy as a separate regulatory document.

The use of IFRS significantly reduces the time and resources needed to develop new national reporting rules. These standards reinforce a fairly long experience in accounting and reporting in a market economy. They are formed as a result of labor and the search for more than one generation of accountants-researchers, representatives of various scientific schools.

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#### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДАҒЫ ШЕКТЕУЛІ ЖӘНЕ ОРТА БИЗНЕС ҮШІН ҚОҒАМНЫҢ ҚОЛДАНЫСТАРЫ**

**Аннотация.** Авторлардың пікірінше, кәсіпкерлікті дамыту бизнесті басқару, бақылау және талдау салаларында бухгалтерлік ақпараттардың рөлі артып келеді. Бұл ақпараттың уақтылығы, сапасы мен дәлдігі

бухгалтердің дайындығы мен кәсіби деңгейінің жоғары деңгейімен қамтамасыз етіледі, шағын кәсіпкерлік субъектілеріне ҚЕХС қолданудың күрделілігі шағын-орта бизнестің бірнеше жылдар бойы мамандандырылған стандарттарын әзірлеп келе жатқан МКМЖК-мен түсініледі. Әмбебап стандарт әзірлеу - бұл өте қиын жұмыс, себебі шағын бизнес саясаты және, тиісінше, олардың талаптары әртүрлі елдерде айтарлықтай өзгереді. Сонымен бірге, ҚҰБ-нің осы стандартын қабылдау арқылы оның ережелерін ұлттық бухгалтерлік есеп пен қаржылық есептілік жүйесіне барынша қосуға болады.

**Түйін сөздер:** қаржылық есептіліктің халықаралық стандарттары (ҚЕХС), біріздендіру, бухгалтерлік есеп принциптері, стандарттарды қайта қарау, қаржылық есептілікті дайындау.

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### ПРИМЕНЕНИЯ МСФО ДЛЯ МАЛОГО И СРЕДНЕГО БИЗНЕСА В РЕСПУБЛИКЕ КАЗАХСТАН

**Аннотация.** По мнению авторов, развитие предпринимательства сопровождается возрастанием роли бухгалтерской информации в сферах управления, контроля и анализа предпринимательской деятельности. Своевременность, качество и достоверность этой информации достигаются высоким уровнем подготовленности и профессионализма бухгалтера. Проблему сложности применения МСФО для малого бизнеса понимает и ФКМСБУ, который уже не первый год занимается разработкой специализированного стандарта для малого-среднего бизнеса. Разработать универсальный стандарт - это очень сложная работа, так как политика в отношении малого бизнеса и, соответственно, требования к ним существенно различаются в разных странах. Между тем по принятию данного стандарта ФКМСБУ можно будет максимально инкорпорировать его положения в национальную систему бухгалтерского учета и финансовой отчетности.

**Ключевые слова:** международные стандарты финансовой отчетности (МСФО), унификация, принципы бухгалтерского учета, пересмотр стандартов, составление финансовой отчетности.

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[ruslan.karatabanov@gmail.com](mailto:ruslan.karatabanov@gmail.com), [jgm44@mail.ru](mailto:jgm44@mail.ru)**ASSESSMENT OF NATURAL-RESOURCE FACTOR  
OF GEOPOLITICAL SECURITY  
OF THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** Modern geo-ecological problems of Kazakhstan have different origins and varying degrees of severity, determining to a large extent the level of sustainability of PCS and the viability of the population. To determine the sustainability threshold of spatial-territorial formations, zonal, azonal and intrazonal groups of environmental problems were systematized, which are clearly manifested in the form of areas in the country. The presence of natural resources is an important factor that determines, among other things, the ability of the state to defend its independence and interests, and strengthens its strength in the negotiation processes. Also, the availability of a resource base determines the attractiveness of one country for another, and therefore it is important to assess the natural resource factor within the framework of Kazakhstan's geopolitical security.

**Keywords:** natural resource potential, geopolitics, territories, land valuation, natural resource factor assessment, security.

**INTRODUCTION**

Favorable is the remoteness from the great powers and the shortest possible length of land borders. In this regard, the “safest” in the world is Japan, England, Australia. Kazakhstan at first glance, the benefits - the disadvantages of its territory are mutually balanced, but the following factors are added: the interest of China (eastern neighbor) due to demographic reasons for territorial expansion; instability on the Central Asian borders, where the confrontation of Islamic and secular lifestyles is still far from the final clarification. Only from the west (from the side of the Caspian Sea) nothing seems to threaten Kazakhstan, but there Tengiz and oil, and the formula “where oil is there is blood” is one of the most proven postulates in world politics.

The presence of natural resources is an important factor that determines, among other things, the ability of the state to defend its independence and interests, and strengthens its strength in the negotiation processes. Also, the availability of a resource base determines the attractiveness of one country for another, and therefore it is important to assess the natural resource factor within the framework of Kazakhstan's geopolitical security. The regions are the first to feel all the negative consequences of the irrational approach to the use of the natural resource potential. In connection with this provision, ensuring rational use of the natural-resource potential becomes one of the most important tasks, and its successful solution has a positive effect on the development of the economy and the strengthening of social stability in the resource-producing regions. The study of the category of natural resource potential is dictated by the need to bring the methodology of assessment, accounting and management of natural resources in line with the environmental situation, the needs of society and the economic realities in the country and in the world as a whole.

**MAIN PART**

However, it should be noted that, so far, the assessment of natural resources has been carried out and carried out separately from the territorial whole. This is due to the fact that, until recently, the principles of traditional economics are based on the assessment of a natural resource - a cost-based approach to the use

of any natural resource in a particular production. At the same time, the external effect (impact on the ecosystem of the territory and everything connected with it) [6] has not been taken into account and is not taken into account until now. In our opinion, this is due to the fact that, until a certain time, mankind did not have a complete understanding of the environment and its possibilities.

With the development of knowledge and the accumulation of experience interacting with nature, the study and assessment of technogenic consequences has led to the need for a revision of the methods for evaluating all types of natural resources. New approaches suggest reaching the level of complexity, considering any resource as part of a whole, taking into account its mutual influence and interdependence, taking into account the present and long-term consequences caused by the withdrawal of a natural resource from the ecosystem. In this connection, new definitions are introduced into the scientific circulation, such as: Natural-resource potential of the territory; Natural capital. Their main task is to give an idea of the totality of natural resources, of their patterns of development, existence and the possibility of using them without disturbing the balance in the ecosystem of the region.

Problems of sustainable development of natural-economic systems in the context of the balanced environmental management of the Republic of Kazakhstan are especially relevant today. The aggravation of the ecological situation not only in our country, but in the world as a whole, has been considered a problem since the first half of the twentieth century. The world community today has proved powerless in dealing with the problems of combating global, regional, and even local sources of environmental and economic stress. The global financial crisis has vividly demonstrated the instability of the modern financial and economic system and has set the task of finding an alternative model for achieving economic growth, taking into account environmental safety factors, with particular urgency.

The general situation of the development of natural-economic systems against the background of environmental degradation cannot be considered normal. All this necessitates the development of a scientifically based concept of replacing the existing structure of the economy with an environmentally sound one, i.e. "Green economy", where, on the basis of a single methodological base and in mutual communication, the problems of urban development, resettlement of the population and the reproduction potential of administrative-territorial units and the whole territory of the country should be solved.

At the same time, taking into account the economic consequences of a geopolitical nature will allow Kazakhstan to avoid possible negative aspects of regional development.

Currently, there are no uniform criteria for assessing the level of regional development and the degree of disturbance in PCS. Analysis and evaluation of the development of ecological and demographic processes showed that depressive foci with a low level of quality of life of the population were forming. Solving the problems of areas of depressive stress requires the development on a fundamentally new basis of assessment criteria reflecting the level of quality of life of the urban and rural population.

The quality of life of the population is determined by a system of environmental and socio-economic indicators, the latter provide an opportunity to identify the level of depression and compare it with sustainable development indicators developed by international organizations: the UN, UNDP, UNESCO, etc.

Under the conditions of independence, studies of the institute received a new impetus, since geographical science, as well as throughout the world, proved to be in demand in Kazakhstan. These are the problem of climate change and food security, the lack of fresh water, the degradation of glaciers, the intensification of natural hazards (floods, mudflows, landslides, avalanches and a complex of meteorological risks.), Etc.

The indicated research directions of the institute belong to the category of strategic and are combined into four main blocks:

Assessment and forecast of resources and the regime of surface waters of the Republic of Kazakhstan, taking into account climate change and economic activities, the development of geographical bases to ensure the water security of the Republic of Kazakhstan as the basis of sustainable development.

Identify patterns of formation and distribution of hazardous natural disasters, natural disasters and environmentally hazardous environmental changes with an assessment of their socio-economic consequences.

Assessment of the natural resource potential of the republic, development of information and analytical base of national and regional programs for environmental management, environmental protection, and reconstruction of environmentally destabilized natural-economic systems.

It is advisable to include an assessment of natural resources in the national wealth of the country. So far, this has not been done, which indicates an underestimation of the environmental factor. Meanwhile, this assessment is an important component of national wealth, reflecting the country's natural potential. This potential, along with social wealth (accumulated production and non-production assets), largely determines the development of the national economy for the future.

The institute traditionally has close cooperation with world centers of geographical science, participated in the development of more than 20 international projects together with scientists from Germany, France, Switzerland, Sweden, Finland, Italy, Japan, China and is deservedly perceived in the world scientific community as a significant center of modern geographical science. It is not by chance that, in accordance with the signed Agreement between the Government of the Republic of Kazakhstan and UNESCO, the Central Asian Regional Glaciological Center under the auspices of UNESCO, as well as the “International Water Assessment Center” (IWAC), is created on the basis of the Institute as a regional structure of the OSCE.

The technology for assessing the natural resource potential based on computer-aided landscape modeling and land potential assessment consists of two main blocks;

1) Geoinformation mapping block.

It is the basic basis for the implementation of the whole complex of works. Its goal is to form a geoinformation model of the territory based on a set of maps and field data. In conjunction with the Simulation block, the Geoinformation Block allows you to form a Geographic Information Model of a municipal territory (GMMT).

The content of the model is predetermined, on the one hand, by the tasks of the work, and on the other - by the specificity of the socio-economic, environmental and other conditions of a particular territory. The cartographic part includes a number of basic vector layers, data on resource potential, as well as maps obtained in GIS by analyzing the information of the main layers (thematic samples, overlay, building buffer zones, etc.). Layers also contain attribute information. The base layers are: a topographical basis, as well as a complex of thematic maps of various kinds: land use maps, modern landscapes, soil, geobotanical, geomorphological. Desirable the inclusion of a digital elevation model (DTM) of sufficient detail. It is also necessary to use current and archived remote sensing data.

2) Simulation unit.

The main one is the sub block Modeling and evaluation of crisis processes. To develop a model of the occurrence of crisis processes in the delta, the methodological basis of the theory of ecotones and destabilized natural environment was used by V.S. Zaletaeva, the system model of the occurrence of crisis processes D.A. Slavinsky, the ecological and economic balance of the territory Kochurov.

Natural objects are forest areas; mineral deposits; enclosed water bodies; fishing areas of rivers, spawning grounds; fishing areas of the shelf; non-forest natural ecosystems (areas of steppe, river floodplains); swamps, etc.

The main objects of natural resource assessment are all components of the environment, and the natural object itself, its reserves and ecosystem services can be assessed. For example, a natural object: forest, forest areas; stock of natural resources: wood; ecosystem services: carbon sequestration, flow regulation, erosion prevention, air purification, biodiversity conservation, recreation. Or a natural object: fishing areas of rivers, shelves, spawning grounds; stock of natural resources: fish and seafood; ecosystem services: recreation, biodiversity conservation, etc.

The assessment of natural resources, both economic and non-economic, should precede their use. The result and goal of the economic assessment of natural resources is the economic accounting and control of national natural wealth by solving problems of determining the amount of natural resources and assessing their quality, as well as creating economic incentives that encourage enterprises and organizations to rational use and protection of these resources in order to increase the efficiency of public production and full satisfaction of national economic needs.

Non-economic assessment of natural resources includes the definition of ecological, hygienic, socio-psychological, and cultural and other values of a natural resource or object, for example, a unique landscape, historical monuments, in economic indicators are usually not expressed, but can be conventionally calculated as the amount that society can ready to donate for the preservation of such a natural resource assessment object.

Currently, two directions are being developed in the assessment of natural resources: this is a resource and cadastral assessment. Resource assessment is a set of measures to identify and record natural biological resources in order to determine the prospects for the development of traditional economic sectors, valuation of land and determine the state of resource-containing land, depending on the impact of anthropogenic factors on them. The objective of the resource assessment is to determine the extent of damage to the land by the influence of anthropogenic factors, and to identify the likelihood and timing of the restoration of the lost natural qualities of the resource-containing land. The assessment of natural resources in relation to oil fields includes the study of remaining reserves, chemical composition and quality of raw materials, depth and other parameters. Studies on the assessment of natural resources may also include an assessment of fisheries resources and forest valuation. The assessment of the natural resource potential is complex and includes consideration of economic, social, technical, ecological and geographical factors that determine the spatial differences and significance of natural resources for human life and activity.

Cadastral valuation is a type of land valuation work to determine the specific indicators of the cadastral value of land for tax purposes. The object of cadastral valuation are all exploited, prepared for exploitation and economically developed natural resources. The results of such an assessment are included in the relevant inventories of natural resources and serve as the basis for specific calculations for the development and location of nature exploiting industries and territorial complexes.

The development of Kazakhstan's tourism requires the creation of a new paradigm that provides for meeting the recreational needs of the population with the condition of preserving the quality and sustainability of the natural subsystem to changing anthropogenic pressure.

## CONCLUSION

The problem of the economic assessment of the natural resource potential and the efficiency of their use is seen in the desire to reduce the analysis not only to a quantitative assessment of the parameters of the PDP, many of which are difficult to formalize, but to do this on the basis of one methodology, one indicator. Meanwhile, it seems that the PDP as a system concept should be modeled through a system of indicators.

The complexity of evaluating the effectiveness of using PDPs consists in determining the methodological foundations that predetermine the methodology. First of all, it concerns the interpretation of the concept of "effectiveness".

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### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫНЫҢ ГЕОЛОГИЯЛЫҚ ҚАУІПСІЗДІГІНІҢ ТАБИҒИ-РЕСУРСТАР ФАКТОРЫН БАҒАЛАУ**

**Аннотация.** Қазақстанның қазіргі геоэкологиялық проблемалары әртүрлі дәрежедегі және әртүрлі дәрежелі дәрежеде, ПКС тұрақтылығының деңгейін және халықтың өміршеңдігін айқындайды. Кеңістіктік-аумақтық құрылыстардың тұрақтылық шегін анықтау үшін аймақтық, азональды және ішкі аймақтық экологиялық мәселелердің топтары жүйелендірілді, олар елдегі облыстар түрінде көрініс тапты. Табиғи ресурстардың болуы, басқалармен қатар, мемлекеттің өз тәуелсіздігі мен мүдделерін қорғау қабілеттілігін айқындайтын маңызды фактор болып табылады және келіссөз процестерінде оның күшін нығайтады. Сондай-ақ, ресурстық базаның болуы бір ел үшін басқа елдердің тартымдылығын анықтайды, сондықтан Қазақстанның геосаяси қауіпсіздігі шеңберінде табиғи ресурстық факторды бағалау маңызды.

**Түйін сөздер:** табиғи ресурстық әлеует, геосаясат, аумақтар, жерді бағалау, табиғи ресурстарды бағалау, қауіпсіздік.

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**ОЦЕНКА ПРИРОДНО-РЕСУРСНОГО ФАКТОРА  
ГЕОПОЛИТИЧЕСКОЙ БЕЗОПАСНОСТИ РЕСПУБЛИКИ КАЗАХСТАН**

**Аннотация.** Современные геоэкологические проблемы Казахстана имеют различное происхождение и различную степень остроты, определяя в значительной мере уровень устойчивости ПХС и жизнеспособности населения. Для определения порога устойчивости пространственно-территориальных образований были систематизированы зональные, азональные и интразональные группы природоохранных проблем, которые отчетливо проявляются в виде ареалов на территории страны. Наличие природных ресурсов – важный фактор, определяющий, в числе прочего, возможность государства отстаивать свою независимость и интересы, усиливает его силу на переговорных процессах. Также, наличие ресурсной базы определяет привлекательность одной страны для другой, а значит важна оценка природно-ресурсного фактора в рамках геополитического безопасности Казахстана

**Ключевые слова:** природно-ресурсный потенциал, геополитика, территории, оценка земель, оценка природно-ресурсного фактора, безопасность.

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[2] Art. 31 and 38 of the Constitution of the Republic of Kazakhstan adopted at a republican referendum on August 30, 1995.

[3] Sustainable development is the development of society in which the satisfaction of the needs of this generation is carried out without prejudice to future generations of people, it is a managed balanced development of society that does not destroy its natural foundation and ensures the continuous progress of human civilization. The term “sustainable development” was introduced into wide use by the International Commission on Environment and Development (Brundland Commission, UN, 1987).

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## CLIMATIC FACTORS OF THE FORMATION OF THE GEOSYSTEMS OF THE UPPER ERTIS BASIN

**Abstract.** According to the authors, due to the large distance and isolation of mountain systems, warm and moist air masses from the Atlantic Ocean reach here transformed, having lost most of the moisture, and air masses penetrating from the Arctic Ocean are cold and dry. Hilly low-slope and flat areas of the Ertis left bank are especially dry. The highest moisture content is characteristic of the western and northern peripheral as well as central highland regions of Altai. Complex orography, the presence of closed basins and plateaus cause large differences in the climatic features of individual regions of Altai. The climate of Altai as a whole is much milder than in the neighboring areas, the summer is cool, and the winter is relatively warmer.

**Keywords:** climatic factors, geosystem, basin, upper Ertis, precipitation, continent.

### INTRODUCTION

Climatic factors are the basic elements of climate: solar radiation (light, heat), precipitation and atmospheric pressure, air humidity, soil moisture, air circulation (wind), hydrospheric pressure. Climatic factors determine the development of biogenesis, or pricing systems.

The climate of East Kazakhstan is continental with large daily, seasonal and annual amplitudes of fluctuations in air temperature, which is determined by the deep inland position of the territory. Studies show that in the Quaternary, the alternation of pluvial and xerothermic eras took place on the territory of Kazakhstan, but the type of modern relief-forming processes more closely corresponds to the xerothermic epochs. This is evidenced by the reduction of runoff in the valleys, the partial transfer of concentrated runoff to the plane runoff (in the ancient valleys of Betpakdala and the Northern Balkhash region), reduction of the water area of the lakes, the presence of abandoned aryknyh systems far from the modern bed with water, the dying off of the tributaries of the right bank of the r. Ertis at the level of the modern floodplain. The right bank of the river is high, steep, and it is composed of loose rocks of sedimentary origin, which are easily eroded. The most common and most characteristic texture of sedimentary rocks is lamination, which is expressed in the alternation of layers with different composition or with different structure. More or less distinct stratification can be seen in almost every layer of the rock. It, along with other lithological signs of sedimentary rock, is one of the main indicators of the conditions for the formation of deposits.

### MAIN PART

In the warm season, the radiation balance everywhere, with the exception of the high-alpine alpine belt, is positive with the largest values in June-July. The negative balance is observed everywhere from November to February and reaches the lowest values in December-January. Maximum monthly average amounts of radiation balance can reach from 9.8 to 10 J / m<sup>2</sup>, and minimum amounts from 1.7 to 1.9 J / m<sup>2</sup>. The total annual values of the radiation balance vary from 37 j / m<sup>2</sup> in the high mountains to 42 j / m<sup>2</sup> in the northern foothill areas and reach 40 j / m<sup>2</sup> in the south of the Zhaysan depression, in the valley of Ertis and Buktyrma to 43 j / m<sup>2</sup> [1].

Due to temperature inversion, the climate is milder on the slopes and well-blown valleys than in the closed valleys and basins. At the high-mountainous meteorological station Kara-Turek, located at an altitude of 2300 m, the average January temperature is  $-16.9^{\circ}\text{C}$  [2].

The total solar radiation over the territory changes regularly from north to south and is 108-110 in the north, 122-124 in the valley of the Buktyrma river, and 134-135 kcal / cm<sup>2</sup> in the south.

East Kazakhstan can be attributed as a whole to the well-humidified territories of Kazakhstan, if we consider that 30% of its territory is less than 200 mm / year and only 20% of the territory is 400 mm / year. [3].

The river basins Malaya Ulba, Uba, and Turgusun receive 2000 mm of precipitation per year, most of which fall in solid form in winter. Mezhgoryn hollows and leeward slopes of the Altai Mountains are depleted in rainfall -200-400 mm. In the basin of Lake Zhaisan, the annual precipitation does not exceed 160 mm [4].

The annual amounts of precipitation vary over the territory of the subregion from 119 to 220 mm in the central parts of the Zhaisan depression. On the foothill plains of Rudny Altai, they vary from 300 to 500 mm, and they reach 2000-2500 mm high in the mountains. In Southern Altai, they can fall to 1200-1500 mm. So, the mountains become a barrier or a kind of barrier to the air masses. Such a barrier is formed when air masses are forced to rise along the windward slopes of the mountains.

Monthly maximum precipitation is most often observed in June or July. In the South-West Altai there is still a second maximum, less pronounced, falling from October to November. In the remaining areas of Gorny Altai and Upper Ertis from summer to autumn there is a gradual decrease in the amount of precipitation (Tables 1 and 2).

The largest amount of precipitation falls in the region of r. Malaya Ulba, annual precipitation there is 1500-2000 mm and more (according to observations of the hydrometeorological service, in 1979 their amount was 4000 mm.). The second area of large precipitation is located in the Southern Altai, it is also a center of glaciations. From the station, the largest amount of precipitation falls in Ridder (675 mm), in Zyryanovsk (605 mm) and Ust-Kamenogorsk (498 mm).

The middle mountain and high mountain areas of Rudny and Southern Altai, the central part of Kalba and Sauyr belong to the zone of sufficient moisture. In mountainous areas, the amount of precipitation reaches 1000 and even 1500 mm / year. It is these sediments that feed the rivers originating in Altai. In the direction from the mountains to the valley Ertisa precipitation decreases sharply. In the middle course of Buktyrma they are only 400 mm. And within the eastern, higher part of Kalba rainfall reaches 700-800 mm, and in the foothills decreases to 300-400 mm. The least amount of precipitation is noted in Zhaisan (311 mm).

A significant amount of precipitation falls in the form of snow (Table 3). Average for the cold season, the height of the snow cover reaches 86 cm in Zyryanovsk, remaining high (about 0.5 m) and at other stations. In general, it should be noted that the presence of stable snow cover for 5 months a year or more is typical for East Kazakhstan (Table 3).

It is known that orographically complex regions are a significant obstacle to air flow. At none of the stations, the average annual wind speed does not exceed 3 m / s. At Zyryanovsk station, it is only 0.8 m/s.

The influence of orography is clearly visible: the wind blows along the Ertis valley up or down the valley. The frequency of calm is somewhat lower than in Zhaisan, but high - 31% per year. In winter, it exceeds 40%.

In the mountains of East Kazakhstan at altitudes from 600 to 1400 m, a belt of increased frequency of clear-sky conditions and intense solar radiation is distinguished.

Precipitation is most evenly distributed in the lowland areas of Priertis'ya, Zaisan depression and the Kazakh Hills. Their number on the slopes of Chingiz-Tau, Kalbinsky ridge and Sauro-Tarbagatai varies greatly depending on the height of the terrain and the orientation of the slopes with respect to the prevailing moisture transfer. Precipitation is especially unevenly distributed over the territory of Altai, where at a relatively short distance there are slopes and intermontane depressions that are well moistened with precipitation, which are characterized by a very small amount of precipitation. The difference in annual precipitation on differently oriented slopes of the ridges with respect to the moisture-bearing air masses reaches 300-500 mm. In orographically homogeneous regions, the height of the terrain has a decisive influence on the amount of precipitation [5].

The continent climate of the subregion is underlined by large amplitudes of annual and daily temperatures. The annual temperature amplitude in the Orlovsky settlement is 43, in the Zyryanovsky 42, on the foothill plains it is 35-37, on the slopes of the mountains about 30 ° C.

The average annual air temperature ranges from 3.0 ° C to minus 3.6 ° C in the flat south-western regions and near large water bodies (Zhaisan), to “minus” 6-7 ° C in high-mountainous areas (Table 4). In the lowland and foothill-lowland areas, there is an increase in average annual air temperature as it moves from north to south and from east to west [3].

Table 1 - Monthly, annual and seasonal precipitation, mm

Station	Height, m	Monthly precipitation												(XI-III)	(IV-X)	y.
		I	II	III	IV	V	VI	VI	VIII	IX	X	XI	XI			
Upper Ertis																
around the country	195	18	14	17	18	24	35	37	25	19	25	28	23	100	183	283
Kokpekty	510	24	19	18	18	26	31	33	27	18	22	35	35	131	175	306
Buktyrma	373	19	20	28	30	41	54	57	41	28	41	42	33	142	292	434
Katon-Karagay	1081	16	12	14	26	56	63	67	58	36	35	27	22	91	341	432
Buran	409	10	9	12	16	20	18	19	15	13	20	21	16	68	121	189
Zhaisan	604	9	9	16	28	40	41	37	27	23	24	21	16	71	220	291
Abay	617	11	10	13	20	28	38	42	23	13	11	20	16	70	175	245
Zharma	678	13	12	18	23	31	31	43	30	21	23	28	21	92	202	294

Table 2 - Monthly and annual precipitation (mm)

Station	Months												Year
	1	2	3	4	5	6	7	8	9	10	11	12	
Ust-Kamenogorsk	25	26	33	35	48	56	62	49	36	46	46	36	498
Ridder	17	17	25	52	87	87	10	82	70	67	43	24	675
Zyryanovsk	42	33	31	38	60	60	72	54	43	60	58	54	605
Shemonaiha	24	25	27	33	47	49	60	42	33	44	41	35	460
Samarka	26	22	23	26	35	41	46	34	29	38	47	33	400
Zhaisan	10	9	17	32	42	42	40	29	25	27	21	17	311
Semey	19	16	20	18	26	37	40	28	20	28	30	24	306

Table 3 - Snow depth (cm)

Station	Months								Year		
	10	11	12	1	2	3	4	Average	max	min	
Ust-Kamenogorsk	1	12	28	40	5	32	13	57	93	11	
Ridder	4	17	27	33	3	29	17	44	87	7	
Zyryanovsk	1	24	51	67	7	70	43	86	132	47	
Shemonaiha	1	12	30	37	4	27	11	47	98	10	
Samarka	1	16	32	44	5	35	13	57	98	23	
Zhaisan		7	15	18	1	10	3	22	42	6	
Semey		6	15	19	2	13		27	83	5	

The average temperature of the warmest month (July) everywhere (except for highlands) exceeds 15 ° C, reaching 20 ... 22 ° C in dry steppes and semi-deserts in the south-west and west of the territory (table 6), in the foothill plains 18 ... 23 ° C, on the slopes of the mountains 16 ... 18 ° C, in mountain hollows 14 ... 16°C. By noon, the air temperature can usually reach 24 ... 26 ° C. Absolute maxima are 40 ... 42 ° C. The temperature gradient in July for mountainous areas is 0.5-0.7 ° C per 100 m. Near the glaciers, the average July temperature does not exceed 6-10 ° C.

The coldest month is January. The distribution of January temperatures depends on macrocirculation factors and relief. The average January temperature here ranges from minus 14 to minus 19 ° C. The coldest place in winter on the territory of the region is in the closed Orel hollow, pos. Orlovsky (Kurshym district), where the average January temperature is “minus” 27 °, and the absolute minimum - “minus” 62 ° C.



Table 4 - Average monthly and annual air temperature, °C

Station	Height, m	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Year
Semey	195	-17,1	-16,6	-9,3	3,8	13,0	19,0	20,9	18,6	11,9	3,8	-6,8	-14,1	2
Kokpekty	510	-20,9	-19,5	-11,0	2,6	12,1	17,9	20,4	18,6	11,9	2,4	-9,3	-18,4	0
Buktyrma	373	-18,3	-16,0	-9,6	3,3	12,0	17,7	20,4	18,4	12,2	4,4	-7,6	-16,0	1
Katon-Karagay	1081	-14,8	-12,5	-6,1	3,2	10,2	15,1	17,2	15,2	10,6	2,8	-8,5	-13,6	1
Buran	409	-18,8	-16,5	-7,3	6,2	14,4	20,1	22,2	20,0	13,6	4,7	-6,2	-15,0	3
Zhaisan	604	-17,8	-15,8	-7,7	5,8	14,2	20,4	22,7	21,4	15,2	5,7	-6,1	-15,0	3
Abay	617	-14,1	-13,8	7,2	4,1	12,2	17,9	20,3	18,3	12,2	3,7	-6,2	-12,6	2
Zharma	678	-15,4	-15,2	-8,8	3,1	11,4	17,1	19,3	17,3	11,2	3,1	-7,4	-14,0	1

Due to the position almost in the center of the continent, very large amplitudes of temperature fluctuations are characteristic of the upper Ertis basin. The absolute minimum reaches “minus” of 62 ° C in high-mountainous areas, and “minus” of 53 ° C in the plains. The absolute maximum reaches 42 ° C (Semey) in the flat part, and in the high-mountainous part it is much less.

The vegetation period (with an average daily temperature above 50) lasts from the second to the third decade of April - the second decade of May until the end of September or the end of October. With an increase in altitude, the length of the growing season is reduced from 190 days in the foothill area to 60 days a year in the highlands.

The first snowfalls and unstable snow cover in the north-western regions are observed in October, in the north-eastern foothill areas in September, and in the high-mountainous regions of Altai in late August-early September. A steady snow cover is formed on average 20-30 days later.

The duration of the occurrence of sustainable snow cover varies from 135-150 days in lowland and low-mountainous areas to 170 days in the north-eastern foothill areas of Altai.

#### CONCLUSION

Thus, due to the large distance and isolation of mountain systems, warm and moist air masses from the Atlantic Ocean reach here transformed, having lost most of the moisture, and air masses penetrating from the Arctic Ocean are cold and dry. Hilly low-slope and flat areas of the left bank of the Ertis River are particularly dry [6]. Complicated orography, the presence of closed plains and plateaus cause large differences in climatic features of individual regions. The climate of Altai as a whole is considerably milder than in the neighboring areas, the summer is cool, and the winter is relatively warm.

The climatic conditionality of environmental conditions leads to the following conclusions: the climate of Eastern Kazakhstan has a huge impact on the state of the environment, is a major environmental factor that has a strong impact on surface and groundwater, soil, vegetation, and natural-anthropogenic landscapes under the influence of various natural and anthropogenic factors), features of the circulation of air masses of the anticyclonic mode b contribute to atmospheric pollution and exacerbate air pollution in large cities and industrial centers of East Kazakhstan (Ust-Kamenogorsk, Ridder, Zyryanovsk).

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## ЖОҒАРЫ ЕРТЕЗ БАҒДАРЛАМАСЫНЫҢ ГЕОЗИСТЕРІН ӨЗГЕРТІЛЕТІН КЛИМАТИКАЛЫҚ ФАКТОРЛАРЫ

**Аннотация.** Авторлардың пікірінше, тау жүйелерінің үлкен қашықтығы мен оқшаулануы арқасында Атлант мұхитының жылы және ылғалды ауа массалары ылғалдың көп бөлігін жоғалтып, Арктиканың мұхитына еніп келе жатқан ауаның массасы суық және құрғақ. Ертістің сол жағалауындағы шұңқырлы төмен жоталы және жазық жерлер әсіресе құрғақ. Батыс және солтүстік периферияның, сондай-ақ Алтайдың орталық таулы аймақтарының жоғары ылғалдылығы тән. Күрделі орография, жабық бассейндер мен

платформалардың болуы Алтайдың жекелеген өңірлерінің климаттық ерекшеліктерінде үлкен айырмашылықтар туғызады. Алтайдың климаты тұтастай алғанда көрші аудандарға қарағанда әлдеқайда жұмсақ, жазы салқын, ал қыста салыстырмалы түрде жылырақ.

**Түйін сөздер:** климаттық факторлар, геосистема, бассейн, үстіңгі Ертіс, жауын-шашын, құрлық.

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### **КЛИМАТИЧЕСКИЕ ФАКТОРЫ ФОРМИРОВАНИЯ ГЕОСИСТЕМ БАСЕЙНА ВЕРХНЕЙ ЕРТИС**

**Аннотация.** по мнению авторов, из-за большой удаленности и отгороженности горными системами теплые и влажные воздушные массы с Атлантического океана доходят сюда трансформированными, потерявшими большую часть влаги, а воздушные массы, проникающие с Северного Ледовитого океана, - холодными и сухими. Особенно большой сухостью отличаются холмисто-мелкосопочные и равнинные районы левобережья Ертиса. Наибольшая увлажненность характерна западным и северным периферийным, а также центральным высокогорным районам Алтая. Сложная орография, наличие замкнутых котловин и плоскогорий обуславливают большие различия климатических особенностей отдельных районов Алтая. Климат Алтая в целом значительно мягче, чем в соседних районах, лето прохладное, а зима относительно теплее.

**Ключевые слова:** климатические факторы, геосистема, бассейн, верхний Ертіс, осадки, континент

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**DEVELOPMENT OF INFRASTRUCTURAL LINKS  
OF INNOVATIVE SYSTEM KAZAKHSTAN IN THE CONDITIONS  
OF FORMATION OF SCIENTIFIC ECONOMY**

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**Abstract.** Formation of the organization of innovation in the Republic of Kazakhstan is one of the leading places in the development of the country itself. In Kazakhstan, the last few years, interest in innovation has grown very significantly - even at the level of the government, measures to stimulate innovation have been taken. Innovation activity in Kazakhstan has not yet received the theoretical and practical level that would help overcome the technological gap, change the nature and production volumes in all sectors of the economy. This article identifies the functional role of NIS RK, as well as each of its subsystems in the formation of an innovation-type economy. The data on the development of the scientific and technical system, innovation infrastructure and innovation activities of the country are presented.

**Keywords:** infrastructure, links, innovations, system, knowledge-intensiveness, business.

**INTRODUCTION**

In order for Kazakhstan to enter, on the terms of an equal partner, into the world community, it is necessary to determine the range of macro-technologies by which it can become competitive in the international market for high technology products. Thus, the laid theoretical and methodological foundations of innovation activity require further development and generalization. In this regard, this article reveals the features of the introduction of advanced technologies, also in the work examines the experience of foreign countries in the implementation of innovations in practice.

For example, in the American business, focused on the creation of innovations and the introduction of innovations, two types of entrepreneurship are combined: financial and actually innovative. In accordance with this specialized activity in the production of promotion of new products to the market, venture (risk) capital companies and innovative firms are engaged. Specialized venture capital firms play the main role in financing innovations. Organizationally, such companies are a combination of managers of small firms and financial pools managed by them, each of which integrates the funds of several investors. In addition, companies often practice the so-called "distributed risk", the essence of which is that a large company invests its capital in a project of not just one small innovative firm, but distributes it among several projects. On the one hand, it significantly reduces the riskiness of investments, and on the other hand, it provides sources of financing not for one, but for several firms. However, projects for funding are selected very carefully and, on average, only 1-2 out of every 10 investment requests are satisfied. In recent decades, "quasi-risky" forms of their organization at the level of a corporation: internal ventures and svoyak programs have been recognized as the most effective methods for accelerating innovation processes in the United States. US specific form; The Svoryak program provides for the approval of special monetary funds, the funds from which are allocated to Slavs, representatives of internal corporate risk capital. Any employee of the corporation, who proposed the idea of a new product, can apply directly to the "brother-in-law" for financial support. If the proposal turns out to be interesting, funds can be allocated (up to several hundred thousand dollars) for the development and implementation of an innovative project. "Svayaki" participate in the income of the corporation, receiving money, securities, or a percentage of the profits for each successful innovative project. Thus, the restructuring of the organizational structure of a large American company General Motor in order to increase the effectiveness

of innovation management is indicative. Another example of foreign experience in innovation is Japanese companies. Innovation as a product of intellectual activity cannot arise spontaneously. For the generation and introduction of innovations into practice, certain conditions are required - the presence of all institutions that contribute to the implementation of innovations, as well as the degree of their development and interaction among themselves. The combination of participants in the innovation process and the degree of institutional interaction of institutions form a certain system with specific features from country to country. In economics, this system, inherent in a particular country, is called the national innovation system (NIS).

## MAIN PART

By the end of the twentieth century, it became obvious that the level of development of the science and technology sphere - science, education, knowledge-intensive industries, world technology markets - defines the boundaries between rich and poor countries, creates the basis for economic growth, is the most important factor in solving social problems.

Table 1 - Ranking of countries in the world according to the 2018 innovation index [4]

RATING	A COUNTRY	INDEX
1	Switzerland	68.40
2	Netherlands	63.32
3	Sweden	63.08
4	Great Britain	60.13
5	Singapore	59.83
43	Ukraine	38.52
46	Russia	37.90
59	Georgia	35.05
68	Armenia	32.81
74	Kazakhstan	31.42
80	Azerbaijan	30.20
86	Belarus	29.35
94	Kyrgyzstan	27.56

Table 2 - Costs of technological innovations in industry, mln. Tenge

	2016	2017	2018
The Republic of Kazakhstan	170174,3	168477,1	219263,3
Akmola	3626,8	6567,9	8891,4
Aktobe	29374,1	52788,3	43305,3
Almaty	1542,1	1780,3	5625,5
Atyrau	14265,6	14288,1	20488,1
West Kazakhstan	46888,2	1364,3	8203,1
Zhambylskaya	8244,9	16530,8	15041,7
Karaganda	6900,9	4989,7	25168,0
Kostanay	526,4	1884,0	13676,1
Kyzylorda	2673,5	3738,5	4325,5
Mangystau	414,9	9041,5	5962,0
South Kazakhstan	13912,6	3732,9	18388,5
Pavlodar	6995,0	4136,8	12064,9
North Kazakhstan	63,7	7675,6	5986,7
East Kazakhstan	30366,8	23211,2	24930,2
Astana	1218,4	12636,6	5807,6
Almaty city	3160,4	4110,6	1398,3

The state of the country's scientific and technical system depends on the characteristics and level of development of the country's economy, on the effectiveness of the scientific and technical policy pursued.

The main indicators used to analyze the state of the scientific and technical system of Kazakhstan are the standard parameters used in similar studies in the international community: the amount of expenditure on research and development, the number of scientific and technical organizations of the country, their material and technical support, number and qualification scientific personnel of the country, the effectiveness of research and development [2].

The most important indicators characterizing the state of innovative processes in industry are the volumes of innovative products sold and innovative services rendered during the year.

So it is known to distinguish between fundamental and applied research. There is no doubt that basic research is one that has no commercial value at the initial stage. Applied research is deliberately conducted with a focus on a useful (commercial) result. As a consequence, basic science is funded primarily by the state. Without fundamental science there can be no progress.

The most effective in innovation are enterprises with private ownership. At the same time, “pouring” into a private form of state or foreign ownership increases the entrepreneurial activity of organizations in the field of innovation. Entrepreneurial and innovative passivity in Kazakhstan of foreign-owned enterprises is evidence of the absence of an active market environment in the country;

The increase in the volume of sold innovative products and the volume of rendered innovative services indicates the demand for domestic innovative products on the market. It should be noted that domestic innovative products are in demand not only in the domestic market, but also in the foreign market, which is a positive circumstance from the point of view of further increasing the output of innovative products and the development of foreign markets.

The implementation of the Strategy also gave impetus to the formation and development of technology parks of national and regional scale.

One of the first and most significant objects of the innovation infrastructure is the free economic zone “Park of Information Technologies” in the Alatau settlement, Almaty oblast. The purpose of creating a national park is:

- development of the information technology industry;
- activation of the entry of the economy of the Republic of Kazakhstan into the system of world economic relations;
- creation of high-performance, including high-tech and export-oriented industries, mastering the release of new types of information technology products, attracting investment [8].
- It is important to ensure the economic freedom of economic entities in the Republic of Kazakhstan is the implementation in practice of the provisions of the legislative documents, in particular that guarantees the unity of the economic space, the free movement of goods, services, funds, support for competition, freedom of economic activity.
- Modern state legislation guarantees the freedom of economic activity of small businesses, with the exception of conducting illegal business, pseudo-business or illegal banking activities.
- It is independence and economic freedom, as obligatory characteristic features of small business and indispensable conditions for its development, that mean the following: autonomy of individuals in organizing their own business in any economic field other than prohibited by law, free choice of the subject matter and type of business rights and guarantees that allow them to organize and develop their business, use its results at their discretion in accordance with the constituent documents and regulations [6].
- At the same time, the independence and economic freedom of small businesses should not mean their willfulness, therefore, the legislation establishes measures of state regulation of entrepreneurial activity and the responsibility of entrepreneurs for violating relevant regulatory acts, which is economically and legally justified. Limits of restriction of economic freedom are established by the action of regulatory acts. As a fundamental principle, we note
- that entrepreneurship should develop on the basis of its decision-making by its subjects within the law, and the state should not interfere in the specific business life of entrepreneurs.
- We point out that even the classics of economic theory wrote about economic freedom as the main condition for the development of entrepreneurship, and mostly opposed state intervention in the economic activities of entrepreneurs.

- The history of the development of modern Western economies confirms the effective practice of free enterprise development, when freedom of production, independence of choice of activities, freedom of choice of the sales market and freedom of consumption become fundamental conditions for the development of free entrepreneurship.

## CONCLUSION

Undoubtedly, in a market economy there can be no absolute freedom, and the state, through organizational, legal and economic institutions, should establish, taking into account the interests of the whole society, the optimal limits of economic freedom for business entities, thereby forming a certain economic order.

- This procedure should be characterized by the division in a certain form between the state and individuals, between various state institutions and individuals, the rights to make economic decisions - especially the rights to manage production factors, the rights to make decisions regarding production (i.e., what, in what quantity and quality, where and how it should be implemented) and decision-making rights to meet needs. Revenues, and thus the actually existing degree of freedom of economic activities, should also be distributed in a certain way in society.

- Currently, in the Republic of Kazakhstan, the formation of a new economic order necessitates the granting of large economic freedoms to economic entities. This, in particular, is explained by the fact that in the process of the economic reforms carried out, the share of enterprises and organizations in state ownership was only 16.3%, and in private ownership already 79.4%. The share of other enterprises that are in other forms of ownership (including foreign), accounts for a small percentage. Thus, statistical analysis confirmed that in the economy of Kazakhstan

- The specific weight of enterprises and organizations is dominated by private property, the owners of which have the right to freely manage, in accordance with independent decisions, manage the results of their activities and enjoy broad economic rights.

УДК 330.341

Б. Б. Қорған

### ҒЫЛЫМИ ЭКОНОМИКАНЫ ҢНТАЛУЫ ЖАҒДАЙЫНДА ҚАЗАҚСТАННЫҢ ИННОВАЦИЯЛЫҚ ЖҮЙЕСІН ИНФРАҚҰРЫЛЫМДЫҚ СІЛТЕМЕЛЕРІН ДАМУЫ

**Аннотация.** Қазақстан Республикасындағы инновацияларды ұйымдастыруды қалыптастыру ел дамуының басты бағыттарының бірі болып табылады. Қазақстанда соңғы бірнеше жылда инновацияға деген қызығушылық айтарлықтай өсті - тіпті үкімет деңгейінде де инновацияларды ынталандыру шаралары қабылданды. Қазақстандағы инновациялық қызмет әлі де теориялық және тәжірибелік деңгейге ие емес, ол технологиялық тапшылығын еңсеруге, экономиканың барлық салаларында табиғат пен өндіріс көлемін өзгертуге мүмкіндік береді. Осы мақалада ҚР ҰҒА-ның функционалды рөлі, сондай-ақ оның кіші жүйелерінің инновациялық экономиканы қалыптастырудағы рөлі көрсетілген. Елдің ғылыми-техникалық жүйесін, инновациялық инфрақұрылымын және инновациялық қызметін дамыту туралы мәліметтер келтірілген.

**Түйін сөздер:** инфрақұрылым, сілтемелер, инновациялар, жүйе, білімнің қарқындылығы, бизнес.

УДК 330.341

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### РАЗВИТИЕ ИНФРАСТРУКТУРНЫХ ЗВЕНЬЕВ ИННОВАЦИОННОЙ СИСТЕМЫ КАЗАХСТАН В УСЛОВИЯХ СТАНОВЛЕНИЯ НАУКОЕМКОЙ ЭКОНОМИКИ

**Аннотация.** Становление организации инновационной деятельности в Республике Казахстан занимает одно из ведущих мест в развитии самой страны. В Казахстане, последние несколько лет интерес к инновациям вырос очень существенно – даже на уровне правительства стали приниматься меры по стимулированию инновационной деятельности. Инновационная деятельность в Казахстане пока не получила того теоретического и практического уровня, который способствовал бы преодолению технологического отставания, изменению характера и объемов производства во всех сферах экономики. В данной статье выявлена функциональная роль НИС РК, а также каждой из ее подсистем в формировании экономики инновационного типа. Представлены данные о развитии научно-технической системы, инновационной инфраструктуры и инновационной деятельности страны

**Ключевые слова:** инфраструктура, звенья, инновации, система, наукоемкость, бизнес.

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**MAIN DIRECTIONS OF OPTIMIZATION  
TAX SYSTEMS OF RK**

**Abstract:** The relevance of article is that the taxation system of RK operating today does not provide optimum performance of the functions, namely the sufficient level of taxation, for a covering of the main expenses of budgets and also does not promote normal functioning of economy of the state, economic growth and development of the enterprise environment. In such situation special importance is gained for the state and the enterprises by improvement, development new and realization of the existing ways of optimization of the taxation system. The purpose of article is identification and the analysis of the main directions of optimization of the taxation system of RK. Desire of the state and its subjects to optimize the taxation system became a natural stage of development of the tax relations in RK which began to be under construction with transition to market economy. High level of interest of the parties, lack of balance in tax legal relationship, a specific role of the enterprises in modern economy, the sequence of development of the domestic taxation system and some other smaller prerequisites caused high relevance of this direction for reforming.

**Keywords:** taxes, VAT, tax revenues, tax code, sales tax, tax concessions.

**Introduction**

Tax revenues are considered in modern conditions as the main source of formation of income of the budgetary system designed to provide implementation of public obligations for development of economic potential and the solution of the social problems assigned to the state and municipal units. Need of expansion of tax base for crisis conditions of intense execution of budgets of all levels causes strengthening of attention to issues of effective functioning of the taxation system which in many respects is defined by organizational and legal conditions of management of taxation and quality of tax administration.

Respect for tax discipline is the most important factor of the protection of financial interests of public educations provided with specialized institutes of control of realization of the tax relations (1). Tax administration, being based on legislatively established rules of collection of taxes and compulsory motivation to their execution, it is designed to realize strategic objectives of tax policy, using a complex of legal and economic tools, levers and incentives. The relevance of article is that the taxation system of Russia operating today does not provide optimum performance of the functions, namely the sufficient level of taxation, for a covering of the main expenses of budgets and also doesn't promote normal functioning of economy of the state, economic growth and development of the enterprise environment. In such situation special importance is gained for the state and the enterprises by improvement, development new and realization of the existing ways of optimization of the taxation system[1]. The purpose of article is identification of the main directions of optimization of the taxation system of Kazakhstan.

Achievement of the goal of stable gain of tax income requires the evidence-based solution of problems of interaction of the taxpayers and taxing authorities arising when forming means of the budgetary system by tax methods. Execution of the obligation for tax payment established by the law can be reached, including, due to improvement of institutional practice of creation of the relations between



taxpayers and supervisory authorities, activation of measures of counteraction of the illegal economic activity directed to obtaining unreasonable tax benefit, formation of the comfortable environment for conscientious taxpayers.

Despite a large number of researches in the field so far in the Kazakhstan tax practice there is no uniform understanding of the term optimization of the taxation system, is not presented and the unified taxation optimization mechanism is not approved, there is no coherence of positions regarding a procedure of payments of the tax load. There are tax disputes that caused not only by development of a conceptual framework, but also shortcomings of implementation of the existing "tax mechanism". Besides, creation of optimality criteria of the tax relations and taxation of economy in general is very difficult [2].

It is obvious that success of economic reforming in Kazakhstan to a large extent depends on in what directions transformation of the taxation system of the country how tax policy of the state will meet the time requirements.

### Methods

According to Ministry of national economy RK, change of ideology, introduction of stimulation and simplification of administration are provided in the new Tax code. The ideology will be directed to protection of interests of the conscientious taxpayer. All ambiguities and inaccuracies will be interpreted in favor of taxpayers. For development of small and medium business preservation of the operating special tax modes is provided [3].

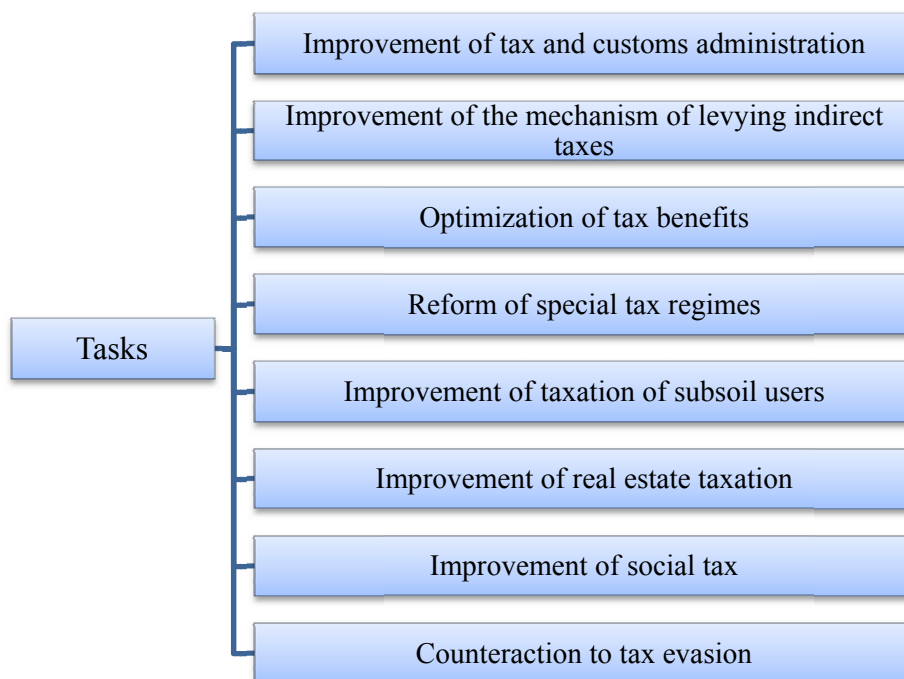


Figure 1 - Main objectives of the new tax code of RK

Thus, the new mode with obligatory conducting accounting of income and expenses is offered. At the same time, businessmen are granted the right to choose the mode. In the patent the rate from 2% decreases to 1%. According to "the simplified declaration" the requirement for legal entities and individual entrepreneurs will become identical.

In the mode on the single land tax the social tax for the head, members and employees of country farms is cancelled. From 2020 changes subject of taxation from the estimated cost of the earth on income. For stimulation of investments into geological exploration cancellation of a bonus of commercial detection, payment on compensation of historical expenses for new licenses is provided. For acceleration of investigation of solid minerals the mechanism of rent payments is entered. For investment attractiveness the excess profit tax for the mining industry with transfer of load of a rental tax on coal is

cancelled. For sea and deep oil fields simpler alternative tax on subsurface use which replaces special payments of subsoil users is offered[4]. For stimulation of processing of raw materials release from the corporate income tax (CIT) of dividends and gain of actions of the subsoil user on condition of processing more than 35% of the extracted raw materials is offered. Also reduction in the tax rate on mining (MET) on tin from 6% to 3% is offered.

For improvement of the financial sector the stimulating measures are also proposed. These are deductions because of transition to the new international standard of the reporting. For natural persons release from IPN at forgiveness of debt is provided. By transfer of problem assets to collectors' discount of the collector will be assessed upon later working off of an asset. Change of an order of taxation of IPN of accumulative insurance is offered.

Also privileges on the VAT for automotive industry and European Union within the special investment contract are offered. Distribution of investment preferences on the existing enterprises for new priority projects is offered. The privilege is provided on Corporate income tax for the term of no more than 3 years to operating plants under a condition if investments make not less than 5 million MRP.

Regarding modernization of privileges it is offered to increase their efficiency by pointed changes. In particular, on European Union provisions on separate accounting of income, the assessed taxes, and the social tax and on the exterritoriality mode will be specified. With introduction of obligatory social medical insurance financial load of business will increase. For preservation of the current load of business decrease in a rate of the social tax on 11% to 9.5% due to decrease in a rate of contributions to public foundation of social insurance is offered.

Also, within the draft of the new Tax code for creation of the international science and technology park of IT startups improvement of the mechanism of tax incentives of the organizations implementing investment priority projects and participants of special economic zones is offered(5).

One of the conditions of application of a privilege within the special economic zones (European Union) is the criterion according to which not less than 90% of cumulative revenue have to be income from the activity answering the purpose of creation of European Union (for European Union "Park of Innovative Technologies" – 70%).

At the same time in connection with increase in a share of passive income during construction the ratio of income "90/10" (70/30) is not observed.

In connection with the entry of Kazakhstan into the world trade organization the question of an exception of the privileges on the VAT since 2018 contradicting requirements and the principles of the world trade organization such as is considered: norm on reduction by 70% of VAT amount, paid to the budget by the legal entities which are carrying out processing of agricultural raw materials, and agricultural producers on separate types of activity, provided by Article 267 of the Tax Code (in connection with accession to world trade organization); cancellation of norm on reduction by 70% of VAT amount, paid to the budget by the persons applying special tax regime to producers of agricultural products, products of the aquaculture and agricultural cooperatives provided by Article 451 of the Tax Code of RK.

At the same time for prevention of increase in the tax load alternative norms on the VAT are offered. Along with it by the principle of cost efficiency taking into account experience of the countries of Organization for Economic Cooperation and Development (OECD) revision of the operating tax concessions in the form of cancellation of exemption from the VAT of turns is provided on: to the services made by authorized state agencies in connection with which the national duty is raised; to services of gaming machines without prizes, personal computers, game paths, carting, a pool table; implementation of lottery tickets; to services of notaries; implementation of the state signs of post payment; to import of stamps (except collection).

Now the OECD includes 34 states, including the majority of member states of the European Union. 88% (30 countries) from the countries of OECD apply the VAT. 9% (3 countries) from the countries of OECD apply the Tax on products and services. 3% (1 country) from the countries of OECD apply the Sales tax.

On improvement of tax administration within the draft of the new Tax code are offered: measures for counteraction to washing out of tax base and a conclusion of profit from under taxation (BEPS); transfer

of separate tax services to an electronic format; cancellation of granting some forms of tax accounts, in connection with transition to an electronic format of exchange of information by public authorities; improvement of appointment procedures of checks and also revision and reduction of the bases for purpose of unscheduled tax audits; the activity termination forcibly the taxpayers who are not carrying out activity within 5 years and more; increases in a threshold of cumulative revenue at the liquidated taxpayers up to 150 thousand MRP for a possibility of check by audit organization; distribution of the simplified order of the termination of activity of the natural persons who are engaged in private practice on the basis of cameral control (without conducting tax audit); introduction of articles by the rights and duties of the official and checked faces when conducting tax audits in the head "Tax audits" that will allow to establish and standardize rules within check, both for checking, and for taxpayers and also to reduce emergence of disputes over the procedure of check (6).

For improvement of mechanisms of collection of indirect taxes reforming of a system of administration of the VAT by introduction of the control account of a value added tax on a voluntary basis is offered.

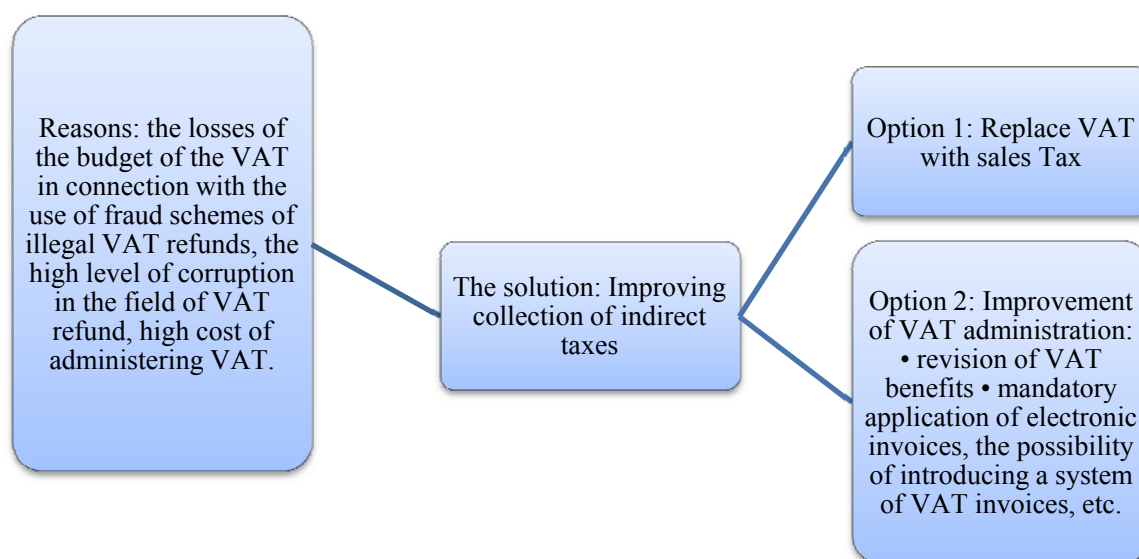


Figure 2 - Improvement of Collection of Indirect Taxes

The main directions of tax policy of RK for 2017-2019 are:

- Frequent changes in the tax legislation discourage business and investments
- Stability and predictability of fiscal policy of the state in the medium and long term has to be provided
- Changes of tax policy have to have system character
- Allocation in the separate act (Presidential decree) of "The main directions of tax policy of RK for 2017-2019" and the corresponding subsequent three-year periods (ONNP RK) is required
- Modification and additions in the tax legislation has to happen only within ONNP RK to preservation of the established branch levels of the tax load [7].

Also other questions connected with improvement of tax policy and tax administration such as will be provided: decrease in a rate of the social tax due to decrease in contributions to social insurance fund for decrease in load of wage fund; preservation of a threshold on a value added tax (30 thousand monthly calculation index).

### Mainpart

2018 was marked for Kazakhstan by noticeable increase in the general tax revenues and payments in the budget in comparison with 2017. So, the sum of such receipts increased by 14.5% – from 7.15 trillion tenge to 8.19 trillion tenge.

Tax revenues, thanks to the continuing optimization (including growth of receipts from internal taxes on goods, works, services, the VAT), grew by 25.9% or 2,278.9 billion, to the level of 11,090.9 billion tenge. At the same time execution of taxes makes 102.1% of all receipts planned for 2018. Non-tax receipts were also higher planned for 26.9% or 50.2 billion tenge. Though their share in cumulative receipts of the budget remains at a low level; in 2018 they made 1.8%" - noticed in Joint stock Finance Corporation.

Analysts consider that so notable difference between the actual and planned income first of all is connected with high investment income. So, if it was planned that investment income from management of National fund for all 2018 will be 594.9 billion tenge, then earnings in 9 months 2018 already made 1,846.7 billion tenge. However we will note that the specified sum is not recorded investment income, and revaluation of portfolio value for reporting date (8).

Meanwhile budget costs in 2018 were reduced in comparison with 2017 by 1,127.8 billion to 11,364.1 billion tenge. "Let's remind, the government in 2017 carried out one-time target transfer in JSC Fund of the Problem Credits of 2.09 trillion tenge for support of the banking sector of the country and as a result an other expenses in the consolidated budget grew from 103.7 billion to 2,334.29 billion tenge in 2017. In structure of budget outlays of 2018 of 24.2% are come to the public assistance and providing (2.8 trillion tenge), to education – 17.1% (1.9 trillion tenge) and 10.3% for health care (1.2 trillion tenge)". - emphasized in Joint stock Finance Corporation (9).

587.7 billion tenge were spent for debt servicing last year (2017: 458.9 billion). The debt of the government of the Republic of Kazakhstan as of the beginning of October 2018 made 30.2 billion dollars or 10,971.7 billion tenge. Meanwhile, the limit of a government debt for December 31, 2019 is set of 13,000 billion tenge", - analysts of Joint stock Finance Corporation specified.

Clean budgetary crediting for the reporting period made 162.8 billion tenge at the plan in 156.8 billion tenges. "And the balance on operations with financial assets was 119.8 billion tenge. Summarizing, the surplus of CB RK for 2018 was 1,628.9 billion tenge whereas the budget for 2018 put surplus of 55.4 billion tenge", - noted in Joint stock Finance Corporation.

Let's remind, on November 30, 2018 the head of state NursultanNazarbayev signed the Law of the Republic of Kazakhstan "About the Republican Budget for 2019-2021". Income of the republican budget in 2019 is provided of 9,631.1 billion tenge, expenses – 10,335.0 billion, deficiency – 979.0 billion (1.5% of GDP). In 2019 the sum of the guaranteed transfer in the republican budget will be 2.45 trillion tenge of National fund.

For decrease in dependence of the budget on transfers from National fund since 2021 the size of the guaranteed transfer will be recorded at the level of two trillion tenge. For smooth transition to the new rule the size of the guaranteed transfer from National fund in the republican budget will be reduced step by step. So, the size of the guaranteed transfer in 2018 was equal to 2.6 trillion, in 2019 the size of a transfer will be 2.45 trillion, in 2020 at – 2.3 trillion, and in 2021 – 2.0 trillion tenge.

In 2018 cumulative tax expels of 300 large taxpayers which are subject to monitoring \* made about 6.26 trillion, whereas in 2017 the sum was much less and was equated to 4.1 trillion tenge. The indicator grew by 52%. The main sum in the budget of the country was brought by the enterprises which are engaged in oil extraction and associated gas. Following the results of last year the companies of the oil and gas sector of Kazakhstan provided to the budget 87% of all tax revenues from 30 largest taxpayers of the country.

Growth of level of production of oil for the above-stated period was the main factor which led to increase in tax payments by the largest companies in 2018, the CEO of Centre financial culture LLP considers.

Oil industry workers in our rating are followed by metallurgists, their share in total amount of the taxes paid in the budget equals 4.4% (211.6 billion tenge) against 7.6% (220.31 billion tenge) in the previous period. Two tobacco companies of the country provided the total amount of taxes of 159.4 billion tenge that made 3.3% of all taxes from top-30.

Banks of the second level, in particular only one People's savings Bank of Kazakhstan, filled up the budget of the country for the sum of 51.9 billion tenge whereas in the previous year representatives of the bank sphere paid 90.85 billion tenge.

The carried-out economic transformations in the country require the system solution, the measures for further optimization of taxation providing the institutional reforms in the tax sphere aimed at improvement of administration of all taxation system and stimulation of economic activity in our republic are necessary.

At this stage, during implementation of tax laws in RK there is a set of the burning issues concerning relationship of taxpayers and the state, responsibility of legal entities and individuals for implementation of the tax legislation, the rights and obligations of taxing authorities. The specifications brought in a course of an economic reform and addition inevitably affect need of correction of separate elements of a system of taxation. It is demanded also by the processes of inflation, chronic budgetary deficiency continuing in national economy and crisis.

Table 1 - Industry structure top-30 taxpayers of Kazakhstan in 2018

industry	tax	part
Extraction of crude oil and associated gas	4195,8	87%
metallurgical industry	211,6	4,4%
Production tobacco oil industry workers in our rating are followed by metallurgists, their share in total amount of the taxes paid in the budget equals 4.4% (211.6 billion tenges) against 7.6% (220.31 billion tenges) in the previous period. Two tobacco companies of the country provided the total amount of taxes of 159.4 billion tenges that made 3.3% of all taxes from top-30. Banks of the second level, in particular only one People's savings Bank of Kazakhstan, filled up the budget of the country for the sum of 51.9 billion tenges whereas in the previous year representatives of the bank sphere paid 90.85 billion tenges. Таблица 1. Отраслевая структура топ-30 налогоплательщиков Казахстана в 2018 году	159,4	3,3%
изделий		
Transport	72,5	1,5%
Financial sector	51,9	1,1%
Communication	40,2	0,8%
Mining industry and development of pits	31,6	0,7%
Construction	30,6	0,6%
Production of products of oil processing	30,1	0,6%
Total	4823,7	100,0

### The obtained results (conclusions)

Those are the changes at the moment in the tax code of RK. We are still expecting for further changes and hope that the new taxation system of our country will be carried out in the directions of creation of favorable tax conditions for businessmen, producers, stimulation of an investment of wage means in investment programs, providing attractive tax regime both for Kazakhstan, and for the foreign capitals promoting the solution of priority problems of development of the Kazakhstan economy [10].

Thus, one of main objectives of tax policy of the state is carrying out effective policy for sustainable economic development by decrease in the general tax load, creating favorable conditions for activation of foreign economic activity of economic entities of the Republic of Kazakhstan, stimulation of investment activity, improvement of administration of taxes and executions of state programs of development.

Taxes are potentially capable to create favorable conditions for the economic growth of the country in general that increases welfare of each specific person. Moving to stable market managing, the state has to create the taxation system adequate to it which would be equitable to the interests of each certain person. Therefore creation of the fair and effective taxation system and also ensuring its clarity, predictability, transparency and stability are an important condition of increase in enterprise and investment activity, economic progress of Kazakhstan and successful integration of our economy in world.

Reforming of the operating taxation system has to be carried out in the directions of creation of favorable tax conditions for producers, stimulation of an investment of wage means in investment programs, providing preferential tax treatment for the foreign capital attracted for the solution of priority problems of development of the Kazakhstan economy.

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### ҚР САЛЫҚ ЖҮЙЕСІН ОҢТАЙЛАНДЫРУДЫҢ НЕГІЗГІ БАҒЫТТАРЫ

**Аннотация.** Мақаланың өзектілігі мынада: қазіргі уақытта жұмыс істейтін ҚР салық жүйесі, функциялардың оңтайлы орындалуын қамтамасыз етпейді, атап айтқанда, салық салудың жеткілікті деңгейі, бюджеттердің негізгі шығындарын жабу үшін, сондай-ақ экономиканың қалыпты жұмысына ықпал етпейді мемлекет, экономикалық өсім және кәсіпорынның ортасын дамыту. Мұндай жағдайда салық салу жүйесін оңтайландырудың жаңа әдістерін жетілдіру, жетілдіру және іске асыру жолымен мемлекет пен кәсіпорындарға ерекше мән беріледі. Мақсаты – ҚР салық жүйесін оңтайландырудың негізгі бағыттарын анықтау және талдау. Мемлекеттің және оның субъектілерінің салық салу жүйесін оңтайландыруға ұмтылысы Қазақстандағы салықтық қатынастарды дамытудың табиғи кезеңі болды, ол нарықтық экономикаға көшу арқылы құрыла бастады. Тараптардың қызығушылығының жоғары деңгейі, салықтық құқықтық қатынастарда теңгерімсіздік, қазіргі заманғы экономикадағы кәсіпорындардың айрық шарәлі, ішкі салық жүйесін дамытудың кезектілігі және кейбір басқа да аз алғы шарттар осы бағыттағы реформаларды жүргізудің өзектілігін тудырды.

**Түйін сөздер:** салықтар, ҚҚС, салық түсімдері, салық коды, сатусалығы, салықтық жеңілдіктер.

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### ОСНОВНЫЕ НАПРАВЛЕНИЯ ОПТИМИЗАЦИИ НАЛОГОВЫХ СИСТЕМ РК

**Аннотация:** Актуальность статьи заключается в том, что действующая сегодня система налогообложения РК не обеспечивает оптимального выполнения своих функций, а именно достаточного уровня налогообложения, для покрытия основных расходов бюджетов, а также не способствует нормальному функционированию экономики страны. состояние, экономический рост и развитие предпринимательской среды. В такой ситуации особое значение для государства и предприятий приобретает совершенствование, разработка новых и реализация существующих способов оптимизации системы налогообложения. Целью статьи является выявление и анализ основных направлений оптимизации системы налогообложения РК. Желание государства и его субъектов оптимизировать налоговую систему стало естественной стадией развития налоговых отношений в РК, которая начала строиться с переходом на рыночную экономику. Высокий уровень заинтересованности сторон, несбалансированность налоговых правоотношений, специфическая роль предприятий в современной экономике, последовательность развития отечественной системы налогообложения и ряд других более мелких предпосылок обусловили высокую актуальность этого направления реформирования.

**Ключевые слова:** налоги, НДС, налоговые поступления, налоговый кодекс, налог с продаж, налоговые льготы.

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## **ACTUAL PROBLEMS OF LEGAL CULTURE**

**Abstract.** The article deals with the actual problems of legal culture, which have not yet been studied in the political science of Kazakhstan. The article examines in more detail the issues of system–political characteristics of Kazakhstan's legal culture, the principles and priorities of the legal culture of Kazakhstan society. The system of principles of legal culture of Kazakhstan can include only those provisions, which reveal the main, essential in its content. As the priorities of the legal culture of the Republic of Kazakhstan can be recognized only such fairly generalized guidelines that would be equally important for the law and policy, legal policy and legal culture of Kazakhstan as a whole, and for each of its separate areas of legal culture in the field of political and legal regulation. At the same time, the article focuses on the discussion issues.

**Key words:** politics, law, morality, legal culture, state, society, personality, rights, freedom, equality, principles, priorities, justice, ideology, responsibility, life, activity.

### **Introduction**

Political and legal culture and its problems have always worried mankind and the people of Kazakhstan. As it's known from history, in the XIX – XX centuries on the basis of political and legal contradictions there were about 200 wars, conflicts, uprisings, riots, putsch, in which, according to our calculations, were maimed and killed about 1.2 billion people. And in Kazakhstan only in the twentieth century were violated the rights and freedoms of millions of people.

All this shows that the problem of legal culture is a complex and multifaceted phenomenon that requires close attention and study. Therefore, scientists are faced with the task of a comprehensive study of new phenomena and processes of legal culture and theoretical generalization, which can contribute to the solution of urgent political, social and legal problems. It should be noted that the problem of legal culture in the CIS, including Kazakhstan, has not yet found sufficient coverage in the works of scientists, especially political scientists, as an independent study.

In this regard, it should be said that in the course of studying the legal culture or various discussions on political and legal problems, one has to face the incorrect approach or incompetence of certain scientists, publicists, lawyers, responsible employees, politicians who negatively affect the formation of the legal culture of the population of the Republic of Kazakhstan. It is important to see the real picture: achievements and shortcomings, difficulties and omissions, excesses and mistakes.

In our opinion, the prospects of our country depend on the scientific knowledge of legal culture and our understanding of the role of politics and law in the development of society. Therefore, a competent approach to the extremely important and unexplored issues of legal culture of the population of the Republic of Kazakhstan in the conditions of market relations and modernization of society is of huge importance.

Naturally, it is impossible to cover all the issues of legal culture of Kazakhstan in one article. Therefore, we will consider only the basic principles and priorities of the legal culture of Kazakhstan. To properly understand the principles and priorities of the legal culture of Kazakhstan, first of all, it is necessary to study the system–political characteristics of Kazakhstan's legal culture.



### **The system–political characteristics of Kazakhstan's legal culture**

As the scientific analysis of socio–political literature shows, the system–political characteristics of Kazakhstan's legal culture has not yet been the subject of a special study in political science. Therefore, based on the challenges facing our study, in Kazakhstan's legal culture should be revealed its concept, socio-political content, definition, etc.

In this regard, the question arises, what is the essence of the legal culture of Kazakhstan? Legal culture of the population of Kazakhstan along with the norms and values of Kazakhstan law is an element of the social culture of Kazakhstan society as a whole. This is a system of real and ideal elements related to the scope of Kazakhstan's law and their reflection in the minds and behavior of Kazakh people. The legal culture of the population of Kazakhstan is a set of all positive components of the legal, moral and political reality of Kazakhstan's society in its real functioning. The legal culture of Kazakhstan society embodies the achievements of legal, moral and political thought, legal policy and the level of legal, political awareness.

It should be noted that the legal culture of Kazakhstan acts as a political phenomenon with a pronounced target orientation, covering the whole set of the most important value components of the legal, socio-political reality in its functioning, genesis. It belongs to the system of Kazakhstan, universal values. This is an integral component of Kazakhstan's democratic society, the subordination of the rule of law to civil society, which guarantees the rights and freedoms of every citizen of Kazakhstan. Finally, the legal culture of Kazakhstan is a set of all components of the legal system of the country in their real functioning in the interests of the progressive development of socio-political reality of the country.

In this regard, we note that the legal culture of Kazakhstan as a socio-political phenomenon is structurally larger than the Kazakh law. It is determined by the diversity of socio-political, cultural and economic life of the Kazakh people. The legal culture of Kazakhstan reflects not only the socio-economic relations and material conditions of social life, but also the historical, cultural, religious, moral principles of socio-political activity and behavior of Kazakhstan in a particular society at a certain stage of its development. Abstract legal culture of Kazakhstan does not exist, as there is no abstract Kazakh law, abstract Kazakh legal consciousness and abstract Kazakh legal activity of the subjects of legal, moral and political relations in the country. We are talking here about the legal culture of a particular Kazakh society, a certain Kazakh society on specific historical and political layers of its development. Along with this, the lessons of the passed stages of Kazakhstan, as correctly noted by E. K. Aliyarov and Z. K. Ayupova, «can have a great influence on the correct understanding of the future path of our state» [1].

It should be emphasized that the legal culture of Kazakhstan is an extremely capacious concept, its social importance in many ways exceeds the boundaries of the normative impact of Kazakhstan's law on socio - political relations, since, being an integral part of the all-Kazakhstan, human culture, Kazakhstan's legal culture directly or indirectly affects the formation of consciousness and activity of the personality of Kazakhstan in various spheres of life of Kazakhstan's society. Therefore, it is no coincidence that the vast majority of Kazakhstan's problems of building a legal state and civil society issues of formation and development of Kazakhstan's legal culture are of direct relevance.

It should be noted that the legal culture of Kazakhstan can be fully disclosed only in the context of socio - political progress, as it is unthinkable without its progressive orientation. In this context, the legal culture of Kazakhstan is interpreted through the prism of the formation of the personality of Kazakhstan, which begins to realize, and then demand and create legal, political means to protect its emerging, developing freedom, rights and autonomy. Understanding of the legal culture of Kazakhstan as a socio-political phenomenon, reflecting the level and nature of the progressive achievements of Kazakhstan society in the legal, political sphere in relation to the subjects of political and legal regulation allows us to distinguish the concept of legal culture in relation to the personality of Kazakhstan.

Therefore, the legal culture of the citizen of Kazakhstan is characterized not only by the «available» level, but also by the internal potential [2]. From this point of view, the legal culture of the personality of the citizen of Kazakhstan is a certain character and level of creative activity. Thus, the level of legal culture of Kazakhstan reflects the degree of maturity, civilization of the citizen of Kazakhstan, his way of thinking and standards of behavior.

Legal culture of Kazakhstan as a complex system of education is a set of material and spiritual achievements in the legal, political life of Kazakhstan society. It acts as a meaning-bearing and meaning-transmitting aspect of Kazakhstan and human practice, as well as its results in the legal, political life of society. Therefore, in turn, the legal culture of the personality of the citizen of Kazakhstan is expressed in the views of citizens as subjects of law, policy on legal, political phenomena, which are embodied in practice as a style of their activities. At the same time, the legal culture of Kazakhstan both determines the forms of life of a citizen and is a way of realizing his / her creative abilities.

In this regard, it should be said that the process of formation of the legal culture of the personality of Kazakhstan is characterized by versatility, a large set of components, a variety of ratios of qualitative and quantitative, objective and subjective factors, a variety of forms and manifestations and dynamics of development. This inevitably leads to certain differences in the legal culture of specific Kazakh people, which allows us to talk about the levels and types of legal culture of the individual of Kazakhstan.

Legal culture of Kazakhstan serves as a channel of «interaction, mutual respect of the individual, society and the state» [3]. Its main purpose is not to remove, but to join the society and public activities of Kazakhstan. It is connected with such essential features as purposefulness, implementation of power functions in the state, the society ordering influence on all range of the social and political relations of the country. The legal culture of Kazakhstan becomes a real tool of social, political and economic reforms, modernization, which have a significant impact on the functioning of the political and legal system of our state and civil society as a whole.

Based on the results of existing research of legal policy and legal culture of Kazakhstan, it is possible to characterize the Kazakh legal culture as the degree of mastery of law, policy in action, in particular, self-consciousness, responsibility in the implementation of the requirements of law, policy, creative orientation to the General Kazakh, universal values and norms, as well as features of national culture in controversial political and legal situations, involving in its highest manifestation intuitive political and legal behavior, participation in law-making and in the development of the state policy of the country. Thus, Kazakhstan's legal culture as a socio-political phenomenon is a complex phenomenon, a certain unity of the universal, special and individual. The effectiveness of each element in the overall mechanism of influence on the citizen of Kazakhstan varies depending on a range of factors, including: time, socio-political space, economic situation, political situation. Each component of this mechanism can be a determinant element under the condition of influence on consciousness and legal consciousness of the personality of the citizen of Kazakhstan and Kazakhstan society as a whole [4].

It should be noted that the socio - political function of the legal culture of Kazakhstan largely exceeds the boundaries of the normative impact of Kazakhstan's law on public relations. It directly or indirectly influences the formation of consciousness and activity of different layers of Kazakhstan society, their social and political relations, directions and rates of development of social and political structures. Having an impact on the object of its application, the legal culture of Kazakhstan is in a dynamic state. The general direction of its development is progressive; however, this fact does not exclude the stages, the possibility of "backward" movement, a kind of regression. Then the legal culture of Kazakhstan becomes one of the levers of negative forces in society, constraining the process of progressive development. Thus, the legal culture of Kazakhstan, being the most dynamic part of the general culture of Kazakhstan's society, at the same time itself is most exposed to changes generated by the main trends of modernization of Kazakhstan's society. At the same time, the main priority factor in this process is the activity of the Kazakh people, concentrating the main trends of socio-political reality, and, consequently, the essential characteristics of the legal culture of Kazakhstan society, any institution of the political and legal system of Kazakhstan or an individual citizen of Kazakhstan. All this does not mean ignoring the spiritual aspects of the legal culture of the population of Kazakhstan. That is why thinking and activity form the beginning of the legal culture of the Kazakh society and personality of the citizen of Kazakhstan. At the same time legal culture covers «all spheres of society» [5].

In this regard, it should be emphasized that the political definition of the legal culture of Kazakhstan expresses, in essence, the socio-political relationship and interaction of the individual, the state and society, and in this capacity such an assessment acts as a system-political characteristic of legal culture in the context of political processes.

The legal culture of Kazakhstan is a political phenomenon, a certain character and level of activity of the personality of Kazakhstan citizen, in the process of which it acquires or develops its legal, moral and political knowledge, skills. In addition, the legal culture of Kazakhstan can exist as a result of cultural activities in the field of law, politics.

**Summarizing, we can say that, firstly, the Kazakh legal culture is an installation constituting a moral-social, the political basis of the maturity of the Kazakhstan society; secondly, the basic requirement of effectiveness of legal culture of Kazakhstan is the improvement of the quality and level of socio-legal and political life of the society and the individual countries. This can be expressed in ensuring guarantees of the status of citizens, in the coherence and predictability of the actions of the political power of Kazakhstan; thirdly, Kazakhstan's legal culture is essentially an expression, a reflection of the essence of the content and functions of the rule of law, and the result of the implementation of the legal policy of the Republic of Kazakhstan.**

### **The principles of the legal culture of the Kazakhstan society**

The concept of «principles of legal culture» entered into scientific circulation relatively recently. Therefore, the comparative «youth» of the concept of the principles of legal culture is manifested in the absence of a well-established, generally accepted approach to its interpretation and application, which in itself creates certain difficulties in the study of this issue.

It should be noted that the principles of legal culture of the Republic of Kazakhstan is what the formation and dynamics of its action is based on, which allows to determine the political nature of Kazakhstan's legal culture as such.

As has been the experience of Kazakhstan, legal culture, before to fit their purpose, to have a system of guidance that can be started in public and political life, that is system defined-governmental scientific principles, thanks to which it acquires the stability, orderliness, harmony and predictability. Consequently, the principles express the essence of the legal culture of the country. Without reliance on the system of guiding principles, the implementation of the tasks of the legal culture of the Republic of Kazakhstan becomes unreal.

The system of principles of legal culture of the Republic of Kazakhstan, in our opinion, can be attributed only to those provisions, which reveal the main, essential in its content. For example, the definition of priorities for the development of Kazakhstan's legislation, the grounds, nature, scope and limits of legal impact, etc.

In this regard, it should be said that the General principles of the legal culture of the Republic of Kazakhstan include: scientific validity; realism; objectivity; conditionality to the needs of the people, society; predictability; legitimacy; democratic character; fairness; social orientation; humanism; transparency; combination of the interests of the individual and the state, national and universal; priority of human rights, compliance with international standards. We think that these principles are quite clearly formulated requirements of the Kazakh society to the legal culture.

In this regard, the task is seen not only to clearly define the general principles of Kazakhstan's legal culture, but also not to simplify the issue of these principles, i.e. not to reduce it only to a simple list of these principles without substantiating their system, without relying on the theoretical basis of their allocation. Therefore, in consideration of the principles of legal culture of the Republic of Kazakhstan it is important to rely on developed by scientists – social scientists the concept of the unity and interpenetration of politics and law, of human culture and legal culture.

One of the principles that determine the implementation of the legal culture of the Republic of Kazakhstan of its socio-political role is a combination of persuasion and coercion. At the same time, the task of persuading Kazakh people will always be among the important tasks of state policy.

Note that persuasion and coercion in Kazakhstan are not legal phenomena and concepts. At the same time, they serve as a universal method of functioning of any kind of public power, the implementation of any socio-political management. They are used in all kinds of social and political regulators-customs, moral, corporate, religious and other social norms and rules.

It should probably be said that the distinctive feature of persuasion, coercion and their combination within the legal culture of the Republic of Kazakhstan is that they are related to the regulated political and legal norms of the state. Therefore, persuasion and coercion in Kazakhstan are the state legal policy and legal culture behind which the state apparatus stands. As a result, persuasion and coercion in our country have become political in nature and are therefore used as a means, method, principle of the implementation of legal policy and legal culture of their goals and objectives. At the same time, in this role, persuasion and coercion in Kazakhstan act as a means of protecting the norms formed by the action of legal policy and legal culture from violations.

In this regard, we note that an important principle – a requirement for the legal culture of the Republic of Kazakhstan is the principle of combining incentives and restrictions. It focuses on the paired use of such political and legal means as: powers, permits, protected prohibitions, suspensions, punishments and other types of liability. This principle permeates the entire political and legal matter of Kazakhstan, including its phenomenon of legal culture. This principle «can only be implemented in a state governed by the rule of law» [6].

It should be emphasized that in the legal culture of the Republic of Kazakhstan, legal incentives should be reasonably combined with legal restrictions, because it is important for the legislator not only to encourage socially useful behavior, but also to restrain socially harmful behavior that can cause damage to the interests of the individual, collective, people, state and society.

In the context of the General characteristics of the principles of legal culture of Kazakhstan it is important to note that the scientific validity can be attributed to the leading principles of legal culture as it is a mandatory requirement for the legal culture of the Republic of Kazakhstan, without which this phenomenon will not be able to fully function and achieve its goals and objectives. This requirement is due to the need to develop scientific knowledge in Kazakhstan about the legal culture and the objects on which it affects. In addition, the legal culture of the Republic of Kazakhstan is associated with the activities of the state, its power structures and governing bodies. Therefore, the requirement of scientific validity is mandatory for the formation and functioning of Kazakhstan's legal culture. In this regard, not every political and legal phenomenon requires mandatory and strict observance of such a principle. For example, the formation of the Kazakh legal system of the state assumes that the main elements included in it: ideas, legislation, political, legal practice bear a scientific basis. Therefore, the very construction of the Kazakh legal system already implies that there is a scientifically based system, thanks to its elements. As for the phenomenon of legal culture of the Republic of Kazakhstan, there is no Kazakhstan legal culture of the state without direct observance of the principle of scientific justification, and there are ordinary varieties of culture that do not always calculate and predict the results of their activities.

In this regard, it is important to emphasize that the principles of the legal culture of Kazakhstan, in contrast to the principles of Kazakhstan's law, which have great stability and remain unchanged for a long time, do not remain unchanged, once and for all data. On the contrary, they are dynamic and express the general state and development trends of the legal and political systems of Kazakhstan's society, as well as the impact of other social factors (economy, ideology, science). In addition, the principles of legal culture of the Republic of Kazakhstan can not be arbitrary and subjective, not corresponding to reality, i.e. that ideas about them depend only on the views of a particular person.

This approach is due, first of all, to the fact that the principles of legal culture of the Republic of Kazakhstan reflect, regardless of the subjective preferences of individuals, the objective requirements arising from the essence of this phenomenon and the specific historical conditions in which it develops and operates. In this sense, the task of political science is to form the principles that should form the basis of the Kazakh legal culture of the state on the basis of the analysis of these factors.

Thus, it is quite obvious that the principles in the legal culture of the Republic of Kazakhstan reflect the political, cultural and legal ideas embodied in it [7]. In this regard, the importance of the principles of legal culture of the Republic of Kazakhstan is seen, firstly, in the fact that the process of law-making should be refracted through the prism of the guiding ideas of legal policy and policy of legal culture, as the principles of legal culture of the Republic of Kazakhstan not only indicate the way of formation of legislation, but also keep it in the operational framework, providing the necessary stability and unity of society.

Secondly, the importance of the principles of legal culture of the Republic of Kazakhstan is that they act as a regulator of law enforcement and political activity. Practice, focusing on them, carries out law enforcement, political activity not only in strict accordance with the letter of the law, justice, but also in accordance with the spirit of political and legal requirements. The guiding principles here serve as a guarantee of the correct application of legal regulations and political, moral norms.

Thirdly, the effectiveness of the implementation of the legal culture of the Republic of Kazakhstan largely depends on the correct understanding of citizens of the basic political and legal principles. Thus, the results of political studies show that in the field of mass legal consciousness, political consciousness in compliance with political and legal regulations is much more important the assimilation of political and legal principles than the knowledge of specific rules.

As you can see, the principles of legal culture of the Republic of Kazakhstan are closely bound with the principles of politics, law, culture, but at the same time perform a different role, have a different orientation. The same idea can be expressed as follows: the unity of the principles of politics, law and legal culture does not mean their full coincidence.

In this regard, for example, it is possible to determine the following, the most important features of the principles of legal culture of the Republic of Kazakhstan from the principles of Kazakhstan law: firstly, they are enshrined not only in the law, but also in the policy documents; secondly, they determine not only the nature of the legislation, but also the practice of its application; thirdly, they are among the "components" of the principles of law; fourthly, they reflect the principles of law, represent the specification of the latter in relation to a specific field or activity.

Political analysis of the unity and differences of the principles of policy, law and principles of legal culture of the Republic of Kazakhstan through the prism of the nature of the latter, allows to identify specific requirements, manifested in other principles. Thus, since the legal culture of Kazakhstan is an activity, the most important principle for it is the principle of realism. The requirements contained in this principle encourage to make political and legal decisions strictly corresponding to the real and actual needs of Kazakhstan - the people, society and the individual. In other words, this principle obliges the subjects of legal culture of the Republic of Kazakhstan to adopt such programs and determine the strategic goals and tactical objectives that can be practically implemented, guaranteed to be achieved «for the stable development of independent Kazakhstan» [8]. And if you ignore the same principle – the requirements of realism make policy legal culture in utopia, negate the results of its activities.

The General characteristic of the principles of legal culture of the Republic of Kazakhstan is the important fact that the principles of positive law should be based on the principles of legal culture, but they concretize and detail them, saturate the last political and legal matter.

Thus, the above principles to some extent can contribute to the deepening of the existing understanding of the legal culture of the Republic of Kazakhstan. At the same time, taking into account the above judgments, it can be concluded: firstly, that the principles of legal culture of the Republic of Kazakhstan are the initial, defining ideas, requirements (settings) that make up the moral and organizational basis for the emergence, development and functioning of Kazakhstan's legal culture; secondly, that the main requirement for the effectiveness of the legal culture of the Republic of Kazakhstan is to improve the quality and level of legal life of society and the individual. This can be expressed in ensuring the security of the status of citizens, in the ability to plan their lives for the future, in the coherence and predictability of the political authorities, and in determining the priorities of the legal culture of Kazakhstan.

### **The priorities of the legal culture of Kazakhstan**

As in political science such question as priorities of legal culture of the Republic of Kazakhstan as a whole practically wasn't studied, and its problem, naturally, didn't arise. Meanwhile, the question is, with his obvious knowledge, it is extremely relevant and significant for both the theory and practice of Kazakhstan.

In every political document and law of Kazakhstan, claiming to take a worthy place in the advanced political, legal system and legal culture, there should be a kind of «highlight» - one or more interrelated

fundamental ideas that would give it a special meaning and socio-political significance, would give way to the solution of the urgent problem.

But the "highlight" of the political, legal reform, the whole legal culture in Kazakhstan is that there should be priorities in such a reform, in such a culture [9].

The study of the legal framework and political documents of Kazakhstan shows that in practice there is no uniform approach to addressing the issue of priorities of legal culture. Quite chaotically adopted at different levels of individual regulations, which are not subject to a single beginning, unifying the idea, not related to each other, and sometimes contradict each other.

In this regard, it should be said that the issue of the priorities of the legal culture of the Republic of Kazakhstan should be approached very carefully, especially since a balanced approach to the adoption of legal acts is implied by itself. At the same time, it should be remembered that certain areas of legal culture should be linked together, subject to common goals and focus on the same political and legal values.

On the issue of priorities of the legal culture of the Republic of Kazakhstan has not yet said its weighty words and political science. It is impossible not to see, for example, that some political scientists, investigating a specific problem, consider it with the most priority, without noticing other. They therefore propose an appropriate set of measures relating only to the problem under study, without linking it to other priorities. In addition, a number of researchers in Kazakhstan are trying to make unsubstantiated opposition of one priority to another.

It follows from this that the priorities of the legal culture of the Republic of Kazakhstan can be only such guidelines, which would be equally important both for politics, law, legal policy, legal culture in general, and for any branch of law, legal culture, for each type of policy, any sphere of political and legal regulation.

Without denying that at the present stage of development of Kazakhstan's society, the policy of legal culture of the state should focus primarily on the observance and protection of priority and inalienable rights and freedoms of the individual, it is important to consider this priority in a dialectical relationship with the processes and phenomena that arise in the country. Modern socio-political life of Kazakhstan is so complex and dynamic that it requires huge efforts of the state and society to streamline it. In order to really respect and protect the rights of Kazakhstan people, it is necessary to create the necessary conditions, i.e. not to put the «cart before the horse».

In this regard, it seems quite logical to consider the actions of the legal culture of the Republic of Kazakhstan in the sphere of formation of the rule of law and civil society as the most important priorities not as an end in itself, but in the name of real human rights and its legal development [10]. Therefore, the formation of the rule of law and civil society is among the most common priorities of Kazakhstan's legal culture.

It should be said that the political and legal life of Kazakhstan's society insistently requires that in the field of politics and legal culture on the formation of the rule of law were issues related to strengthening the interaction of state power and local self-government. At the same time, for the rule of law, as D. K. Kshibekov notes, «it is dangerous when a gap between the government and the people is formed. The strength of the state is unanimous support for government policy» [11].

Thus, the formation of the rule of law is a priority area of legal policy and legal culture of the Republic of Kazakhstan. In achieving this goal, this policy should strive to develop the idea of the rule of law, to search for the most appropriate and acceptable forms of its activities in those areas of life of Kazakhstan's society that need legal influence through its means. In this sense, the strength of the legal culture of the Republic of Kazakhstan is that it by its nature has the ability to take into account both the specifics of Kazakhstan as a whole, and the characteristics of each region of the country. Today, the task of combining theoretical views on the rule of law with the daily specific activities of the state and municipal institutions is put to the fore. Therefore, it is time to shift the center of gravity to the practical implementation of the tasks on the formation of the rule of law in Kazakhstan, without postponing it for the future. Otherwise, the belief in the possibility of such a state is undermined. For this purpose, we believe, first and foremost, you need to create at least some conditions. These include: development of market economy; implementation of the course of democratic development of society; strengthening of all

levels and branches of political power, improvement of the state mechanism; implementation of social obligations to society; improvement of living standards of the population; development of the spiritual sphere; increase of political, legal culture and political, legal consciousness of citizens.

These measures on the formation of the rule of law in Kazakhstan will be a necessary condition and an important prerequisite for the creation of civil society and the rights and freedoms of man and citizen in our country.

It follows that the transition to civil society in Kazakhstan promises to be long and difficult. In order to give this process stability and intensity, it is necessary to have an effective activity of the policy of legal culture aimed at the formation of civil society in Kazakhstan. As such, this culture can be a science-based, consistent and systematic activity of state bodies with the participation of public organizations, structures to create the necessary conditions and, above all, an effective mechanism for the functioning of civil society in our country.

Among the long-term objectives of the policy of legal culture of the Republic of Kazakhstan in the field of formation of civil society are: ensuring conditions for the free development of human; development of civil society institutions; building a system of legal interaction of the individual, society and the state. The immediate objectives of this policy are: to stimulate the development of social relations; to create legal conditions for the development of economic relations in society; improvement of legislation on public associations, local self-government and the media; development of policy in the field of formation of the institution of private law; determining the priorities of the state in the ideological relations of society aimed at respecting human rights and freedoms.

Therefore, in modern conditions, the main tasks and objectives of the policy of legal culture of the Republic of Kazakhstan should be the real protection of human rights, as well as the establishment of solidarity and consolidation of society on the basis of coordination of the interests of the entire population. However, the solution to these problems depends largely on the possibility of establishing a balance of freedom and equality as principles on which human rights are based.

It should be said that the system of guarantees for the protection of human rights in Kazakhstan begins with legislation based on political and legal culture. Since the protection of the violated right in Kazakhstan requires accessible legal procedures, the system of legal services, the legal policy and legal culture develop a broad system of protection of the rights of the individual, based on which each person could exercise their rights, bear legal responsibility [12]. However, in reality there is a discrepancy between the constitutional provisions and the practice of their implementation. This situation is of concern because it undermines the authority of the Constitution of the Republic of Kazakhstan, the credibility of the authorities and respect for the court. In this regard, it is necessary to increase public confidence in them «through democratic instruments» [13].

The peculiarity of the modern stage of development of society has allowed the Kazakh authorities to include corruption, along with crimes against the individual, society and the state, man-made disasters, etc.: first, among the main threats to the security of the country, and, second, the fight against it-one of the priorities of the state. In this regard, the policy of legal culture of the Republic of Kazakhstan as a special tool in the implementation of national policy and, first of all, such a variety as anti-corruption policy [14], which is a system of measures where the key role is played by the political will of the country and regions aimed at combating corruption and protecting the interests of people.

In this regard, we emphasize that corruption in all its forms causes great damage to the state, society and the individual. Moreover, for the first time in Kazakhstan, it has become a real threat to public and national security.

It is important to focus on the fact that corruption in Kazakhstan exists because there is an opportunity for officials to dispose of resources that do not belong to them, while the civil servant is obliged to make decisions based on the goals set by law and public policy. Corruption begins there and when these goals are replaced by the selfish interests of the official, embodied in concrete actions. Unfortunately, the terms «official» or «administrator» are associated in the minds of Kazakhstan people as «bureaucrat», «corrupted», and not as «employee».

In order to develop and implement an anti-corruption policy or a policy of legal culture of the Republic of Kazakhstan in the fight against corruption, it is necessary to have a deep understanding of the main reasons for the existence of this dangerous phenomenon for society, as well as ways to combat it.

Corruption in Kazakhstan's law enforcement agencies remains an important problem [15]. This is an extremely dangerous phenomenon, as corruption in law enforcement agencies contributes to the growth of corruption in the structures of power, and the formation of legal anti-culture.

So, since modern Kazakhstan's corruption has spread horizontally and vertically and seeks to capture new spheres of influence, the political will to fight it should be clearly and fundamentally expressed in a specially developed long-term policy of the state, which today has received in political, legal science its justification as a policy of legal culture. It may well take its rightful place in society as a national policy, together with its component - the anti-corruption policy of the state.

Summing up, it should be said that the priorities of the legal culture of the Republic of Kazakhstan is developed, implemented on the basis of the loan of all subjects included in the political and legal system of Kazakhstan society and receives a concentrated expression in the national target programs, doctrines, concepts of development, etc. Priorities of legal culture of Kazakhstan society is a complex, holistic and active system and, being implemented in all major areas of the policy of legal culture of the Republic of Kazakhstan, requires a comprehensive political approach to their definition and organization.

## **Conclusion**

Political analysis shows that the fundamental changes in the political, socio – economic, legal, spiritual, cultural and other spheres, the adoption of the policy of building a legal, social state in Kazakhstan at the end of the twentieth century predetermined the conclusion that in the new conditions any kind of state policy should be legal, moral and cultural. At the same time, it was understood that in addition to specific types of legal policy, a common Kazakh legal culture should be formulated as a reliable and effective means, based on which the planned transformations and modernization of society could be carried out. In this regard, in order to understand and comprehend the role of this culture in the socio – legal and political life of society, it is necessary to study the principles, priorities and identify its socio – political characteristics.

In this regard, we note that the legal culture of the Kazakh population is a factor of maturity of the legal policy of the Republic of Kazakhstan. The legal culture of Kazakhstan reflects the ideological and legal state of the Kazakh society at a certain historical stage, characterizes the level of legal awareness, knowledge of law, respect for the laws, etc. Therefore, the legal cultures of Kazakhstan express essentially the socio – political relationship and interaction of man, state and society, and in this capacity such an assessment acts as a systemic and political characteristics of Kazakhstan's legal culture.

The legal culture of Kazakhstan has its own principles. Its principles are what the formation and dynamics of its action are based on, which makes it possible to determine the political nature of legal culture as such. The General characteristic of the principles of legal culture of the Republic of Kazakhstan is the important fact that the principles of positive law should be based on the principles of legal culture of the country, but they concretize and detail them, saturate the latter with political and legal matter in the context of social and political progress. At the same time, the legal culture of Kazakhstan has its own priorities.

It should be noted that the priorities of the legal culture of the Republic of Kazakhstan can be recognized only such fairly generalized guidelines that would be equally important for law and policy, legal policy and legal culture of Kazakhstan as a whole, and for each of its separate areas of legal culture in the field of political and legal regulation.

Today, the Kazakh state and society face the task of reaching a new level of development of legal culture through the system modernization and reform of the political and legal system of the country. Therefore, today it is important that the solution of the urgent social and political problems of the principles and priorities of the legal culture of the Republic of Kazakhstan as a whole contribute to the progress and stability of society.



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**ҚҰҚЫҚТЫҚ МӘДЕНИЕТТІҢ ӨЗЕКТІ ПРОБЛЕМАЛАРЫ**

**Аннотация.** Мақалада саяси ғылымда әлі зерттелмеген құқықтық мәдениеттің өзекті мәселелері Қазақстанның материалдарында қарастырылады. Мақалада қазақстандық құқықтық мәдениеттің жүйелі – саяси сипаттамасы, қазақстандық қоғамның құқықтық мәдениетінің принциптері мен басымдықтары мәселелері егжей-тегжейлі зерттелген. Қазақстанның құқықтық мәдениеті принциптерінің жүйесіне оның мазмұнында басты, магистральды, Елеулі ашылатын ережелерді ғана жатқызуға болады. Қазақстан Республикасының құқықтық мәдениетінің басымдықтары ретінде тұтастай алғанда Қазақстанның құқығы мен саясаты, құқықтық саясаты мен құқықтық мәдениеті үшін де, оның саяси – құқықтық реттеу саласындағы құқықтық мәдениеттің әрбір жеке бағыты үшін де тең дәрежеде маңызды болатын жеткілікті жалпылама бағдарлар ғана танылуы мүмкін. Сонымен қатар, мақалада пікірталас мәселелеріне де назар аударылған.

**Түйін сөздер:** саясат, құқық, мораль, құқықтық мәдениет, мемлекет, қоғам, тұлға, құқ, бостандық, теңқұқықтық, принциптер, басымдық, әділдік, идеология, жауапкершілік, өмір, заң, белсенділік.

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**АКТУАЛЬНЫЕ ПРОБЛЕМЫ ПРАВОВОЙ КУЛЬТУРЫ**

**Аннотация.** В статье на материалах Казахстана рассматриваются актуальные проблемы правовой культуры, которые еще неизучены в политической науке. В статье более подробно исследуются вопросы системно – политической характеристики казахстанской правовой культуры, принципов и приоритетов правовой культуры казахстанского общества. В систему принципов правовой культуры Казахстана, можно отнести только те положения, в которых раскрывается главное, магистральное, существенное в ее содержании. В качестве приоритетов правовой культуры Республики Казахстан могут быть признаны только такие достаточно обобщенные ориентиры, которые в равной степени были бы важны как для права и политики, правовой политики и правовой культуры Казахстана в целом, так и для его каждого отдельного направления правовой культуры в сфере политико – правового регулирования. Вместе с тем, в статье уделено внимание и дискуссионным вопросам.

**Ключевые слова:** политика, право, мораль, правовая культура, государство, общество, личность, права, свобода, равноправие, принципы, приоритеты, справедливость, идеология, ответственность, жизнь, закон, активность.

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**IMPROVEMENT OF FOREIGN DIRECT INVESTMENTS  
STIMULATION MECHANISMS IN KAZAKHSTAN**

**Abstract.** The purpose of the article is to develop proposals for improving the economic mechanisms for stimulating foreign direct investment (FDI) for the economy of Kazakhstan.

The study is based on various methods of economic research: systemic and structural-functional analyzes, methods of statistical analysis, comparative and logical methods.

The paper analyzes the approaches of a number of countries to attracting FDI and identifies features of the practice of their stimulation in developed and developing countries. A detailed description of the three-tier system for monitoring the investment climate in Kazakhstan is given, and positive trends in improving the mechanisms for attracting FDI are identified. However, factors that hinder the active involvement of financial assets have been identified. The paper proposes measures that will facilitate investors to invest in the manufacturing and innovation sectors of the economy of Kazakhstan.

The results of the study can be used as a methodological basis for further deepening research on this issue.

**Keywords:** foreign investment, state regulation of investment, investment promotion, investment attraction tools, mechanisms to stimulate investment.

**Introduction.**

In recent decades the competition for global investments has been strengthening. In this regard, the enhancement of investment attractiveness of the country is a serious issue for the national governments and regional administrations, and requires from them the elaboration and implementation of new extensive measures of economic policy.

If correctly arranged, stimulated and placed the foreign direct investments can play a significant role in fundamental modernization of manufacture, in improving the manufacture modernization, improving of the international specialization of Kazakhstan and strengthening the positions of the national companies in the world market on this base. However, it is important to ensure favorable investment climate and effective structure of foreign direct investments and improve the mechanism of interrelations with investors, and bound the interests of Kazakhstan industry with interests of western partners. Under these conditions the elaboration of new forms and methods of foreign capital attraction into Kazakhstan economy and application of positive and elimination of negative experience of investment activity in our country is of special significance.

**Results and discussion.**

The regulation of process of FDI attraction into the countries' economy is conducted on the base of foreign direct investments attraction principles elaborated by the World Bank together with the IMF. The implementation of these principles in legislation of accepting countries is not similar. The developed countries do not have special laws on foreign investments; these are regulated by rules of the national legislation. In the developing countries having special laws on foreign investments, the common tendency of the national foreign investments legislation development is its liberalization.

The methods of the national regulation of FDI attraction include the following:

- Methods stimulating the foreign investments (Table 1);
- System of measures limiting the foreign capital inflow.

Table 1 – Methods and instruments on foreign investments stimulation

Method	Stimulation instruments
Mode of foreign capital functioning on the territory of the country-recipient	-National mode; -mode of largest favor.
Fiscal regulation	-Tax credit; -investment credit; -tax holiday; -accelerated amortization; -investment grants; -indirect taxation benefit
Currency regulation	-Administrative tools (currency control, currency restrictions); -market instruments
Customs regulation	-Customs tariff, import and export customs fees; -Non-tariff measures.
Financial regulation	-Subsidization of expenses; -subsidized loans; -guarantees for rendered credits and loans; -national insurance of export, -preferential national contracts.
Note: compiled by authors using [1]	

Table 1 shows that the practice of foreign investment stimulation includes different methods and instruments.

The developed countries apply mainly the financial stimulus as its application requires significant expenses, and tax benefits, in particular, accelerated amortization and discounted rate of tax. The instruments of FDI stimulation in the developing countries are discounted rate of tax and customs fees rates, reimbursement of paid tax, tax holidays, and benefits for especially important to develop the national economy of the investment projects.

In most countries the organizational structures interacting with governments are responsible for stimulation of foreign investments inflow. Countries select different forms of agencies for investments attraction (or stimulation): public, private, or mixed. For active investment policy it is necessary to consider not only legislative, resource, technical and economic, financial constituents of the implemented strategy, but also the types of institutional structure of the national agencies engaged in FDI attraction.

The stimulation of investments is connected with the following types of activity: project analysis, marketing, legal support and service of investors. The successful activities on FDI attracting stimulation requires to apply the advanced methods of management and quick adaptation to changing market conditions.

The experience of foreign countries on foreign capital attracting shows that establishment of special Agencies on foreign investments attracting (AFIA), its proper arrangement and policy favor not only attraction of foreign capital into the country, but is an important instrument for creation of positive image of the country in the international level and forming of business climate [2].

Table 2 shows the results of analysis of several countries approaches to foreign direct investments attraction [3].

Thus, the recipient country provides to foreign and local investors the financial, taxation and other benefits, therefore two trends can be outlined in the governmental policy on FDI inflow stimulation:

- 1) Enhancement of the investment attractiveness of the countries owing to distribution of information on the state of economics and potential opportunities of the country on FDI attraction;
- 2) Governmental provision of integrated package of services to foreign investors to support and develop its innovation activity.

Regarding Kazakhstan, we see that to activate the FDI inflow the organizational and economic mechanisms of FDI attraction are gradually improved. Within some mechanisms the investors can openly discuss the burning

issues, receive answers and definite solutions. Today such format assumes a three-level system of the investment climate monitoring (Figure 1).

Table 2 – Instruments of foreign direct investments attraction (stimulation) policy in different countries

Country	Instruments of FDI attraction (stimulation) policy
China	Creation of free economic zones; preferences for FDI: tax benefits for joint enterprises; free import of raw products, materials and equipment necessary for manufacture.
South Korea	Tax holidays, money awards for projects in R&D field, exemption from land rent for a definite period or its decrease, establishment of the Office of investment ombudsman in addition to Korean Trade-Investment Promotion Agency (KOTRA)
India	Facilitation and reduction of time for FDI approval procedures; establishment of organizations responsible for FDI attraction; preferences for FDI: tax holidays, tax benefits, approval for accelerated amortization
Japan	Subsidies for foreign companies having highly-profitable business; service of ombudsman in the field of trade and investments; tax benefits
USA	Tax benefits including tax credits, soft bank lending, innovation grants; the Program of stimulation of the national and foreign investments into the USA economics “Select USA” (stipulates the reduction of administrative barriers on the FDI way, rendering of informational support to foreign investors)
Brazil	Reduction or exemption from income taxes in the form of interests and dividends, sectorial, regional stimuli, creation of special export zones
Great Britain	Creation of “free zones” and “entrepreneurship zones” subjected to facilitated customs and administrative procedures and privileged tax rates, privileged terms of visa receive and residence permits for foreign investors
Ireland	Small tax for corporation income, awards for purchase of equipment, land, buildings, personnel training, R&D, tax benefits for foreign companies opening its branches in the country
Germany	Tax remissions, tax holidays, concession system of amortization deductions, receiving of credits on special beneficial terms
France	Creation and support of innovation clusters, creation of special economic zones – technological parks, support of foreign investors on the part of governmental services
Poland	Exemption from income taxes and from property in FEZ, investment grants, benefits related to purchase and creation of new technologies
Slovakia	Plane tax schedule for income, no tax on dividends and interest income, governmental support of foreign investors, participation of foreign companies in governmental R&D programs
Note: compiled by authors basing on source [3]	

Structurally, the three-level monitoring system is to ensure solving of the main strategic issues on the level of meetings of the Council of foreign investors under the President of RK.

Second level considers the issues of systematic character (implementation of customs and tax legislation, protection of intellectual property etc.). And third level is focused on solving the investors’ problems.

In addition, under the implementation of tasks on investments attraction, in 2015 the governmental council on investments attraction or the Investment Office was established. The Kazakhstan government has a task to transform the economy based on producing and exporting of natural resources into the innovative economy.

At the present time, the Ministry on Investments and Development of the Republic of Kazakhstan has the Investors Service Centre – one stop-shop service center operating for investors carrying out the priority investment projects. This mechanism minimizes the necessity of investors’ participation in collecting and preparing of documents. Their direct contact with the national authorities is limited.

To provide public services every national authority and mayor office designates responsible persons on interacting with investors implementing the priority projects. In addition, an investor can address to a call-center where he can receive an advice on any issue.

From January 2017 the visa-free regime was established for 55 countries. Some amendments were inserted into the acting legislation on FEZ, PPP, Entrepreneurship Code in the field of innovations, on issues regarding reduction of approval documents and facilitation of approval procedures, a new law on arbitration was adopted [5].

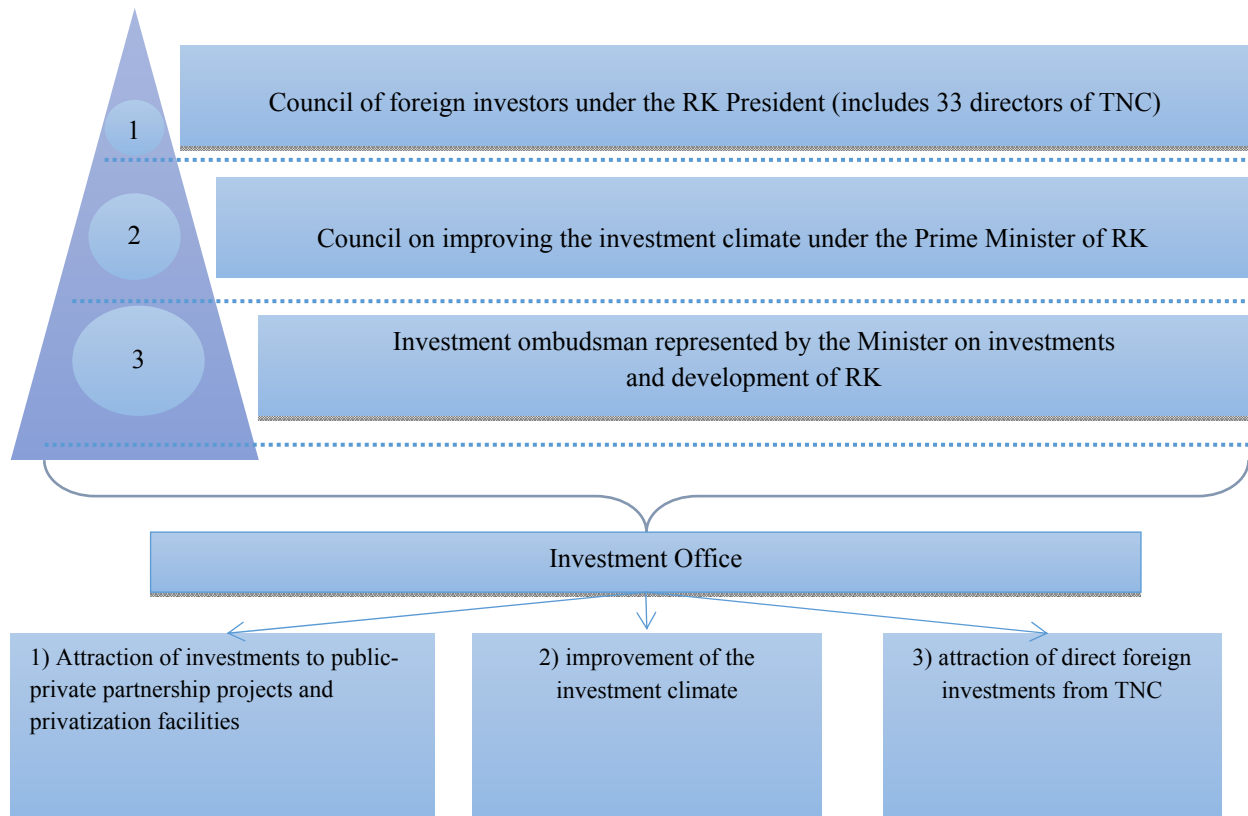


Figure 1 – Three-level system of the investment climate monitoring in Kazakhstan

Note: compiled by authors basing on source [4]

Maximum favorable and beneficial terms for investors were created within 10 acting special economic zones – SEZ.

For SEZ participants the following benefits are established:

- Exemption from corporate income tax;
- Exemption from land use tax;
- Exemption from property tax;
- Exemption from VAT while selling of goods on the SEZ territory consumed completely in the process of manufacture.

The SEZ participant receives free of charge a land site for 10 years to implement the project. In addition, there is a facilitated procedure on foreign labor force rent.

Talking about SEZ efficiency, it is possible to say that creation of such platforms already has positive results. Per 1 budget tenge of expenses for infrastructure, the participants invest 2.8 tenge, the quarter of which is foreign. The following transnational companies were attracted: “Alstom”, “Talgo”, “Eurocopter”, “ArselorMetal”, “Transmash Holding”, “Tenaris”, “Bemer”, “Keppel”, “IsoPlus”, “Aselsan”, “Paramount Group”.

In total, from the moment of SEZ creation, more than 150 projects were started, and 115 projects on IZ platforms, more than 19 thousands work places were created. This shows that SEZ confirmed its effectiveness and economic reasonability [6].

Despite positive tendencies in improving the mechanisms on FDI attracting, there are definite problems that influence on FDI inflow into the Kazakhstan economy. Investigating the reasons and factors of limited inflow of investments it is necessary to address to characteristics of interests of two parts: institutions attracting the investments and foreign investors. During the analysis of the main problems of investments attraction to Kazakhstan economy the main factors impeding the active attraction of financial assets were revealed. Among main factors it is necessary to note quite delayed solving of issue on free economic zones (FEZ).

Another factor is a problem of limited access to foreign currency or narrowing of foreign currency liquidity market. This factor, probably, became a result of solution on free forming of price on national currency in the market. It is obvious that underdevelopment of the financial sector of Kazakhstan, and lack of financing for the investment projects, problems with insurance receiving are also among the main factors. These cannot show its best for the investment image. The experts note that this was caused by delayed adoption of many banking laws and by underdevelopment of the banking system.

In addition, the investors encounter with the problem of frequent amendment of laws, i.e. with the problem of unstable legislative base in whole. They also note a problem of the land issue uncertainty. For instance, in the country, there is still no base of the institute of private property typical for foreign investors under which it would be easier for them to conduct their entrepreneurship activity.

At the RK government sessions with the participation of the head of the state, the unsolved issues on foreign investments attraction policy have been raised frequently. Among main shortages was the lack of effective mechanism focused on stimulation of foreign capital investments. At the same time, a special attention was paid to elaboration of necessary methodological base on estimating the volumes of foreign investments, its regional and sectorial distribution.

However, some experts suppose that the main reasons of foreign investments outflow from Kazakhstan and some other post-Soviet countries in addition to fundamental factors are decline of the state regulation of issues on the international entrepreneurship capital attraction and regular reorganization of central authorities. Moreover, the specialized national authorities engaged in foreign capital attraction issues have a problem of competencies dispersion, lack of responsibility on primary and secondary functions that does not add the assurance neither for them, but for foreign investors too. This was confirmed by investigation data of the Service on foreign investments. According to the received investigation result the investors have controversial views regarding the cooperation prospects and development of business relations. This, for sure, influenced on actual inflow of investments and its outflow.

At the same time, the polling conducted by the International Centre on Taxes and Investments among the largest western investors revealed the main reasons why Kazakhstan is of business interest for them: 1) availability of large market potential; 2) availability of rich natural resources; 3) strategically beneficial location of the country; 4) opportunity for competitive struggle at the region; 5) size of possible income from the investments. However, according to the polling results, the main reasons of high interest are the oil and gas reserves, and service sphere mastering. This implies that it is necessary to take measures that will favor the investments to processing and innovation sectors of Kazakhstan economy.

To solve the current problems and improve the mechanisms of FDI attraction, Kazakhstan has adopted the national Strategy 2018-2022. This Strategy was elaborated together with the World Bank.

The Strategy establishes the main target indicators, determines clear sectorial and country priorities. Also, considering economic capabilities 36 countries were determined, among them 11 countries are of the most priority for us (USA, Russia, Great Britain, Germany, France, Italy, China, Japan, South Korea, Turkey, UAE).

In whole, the Strategy is also focused on retaining the current investors and stimulating the re-investments.

To achieve the Program goals the work will be conducted in three fields:

1. Improvement of the investment climate in Kazakhstan
2. Implementation of effective measures and development of new approaches for investments attraction
3. Privatization and public-private partnership.

The Strategy stipulates the following measures:

1. Enhance the transparency and predictability of the investment policy.

In this regard, the new approaches to elaboration of the statutory instruments stipulating wide involvement of the private sector into the process of SI elaboration in the field of innovations by public polls and draft SI publication before its adoption will be implemented.

In addition, it is considered to provide a mechanism ensuring for investors the access to SI in the field of innovations by its publication in English, and transition to three-language rule-making activity.

The work on improving the visa and migration regimes will be continued as well as attraction of foreign labor force, tax and customs legislation.

In addition, the analysis of the current investment preferences effectiveness and other types of governmental support considering the international experience and priority sectors will be conducted to attract the investments.

2. Improvement of legislation in the field of investors rights protection.

Together with associations of investors the proposals on reforming the institute of investment ombudsman, improving of legal remedy of investors will be elaborated.

At the same time, the analysis on revealing local sectorial and regional limitations impeding the effective attraction of investments will be conducted.

From 2018 there will be annual detailed analysis of the Strategy implementation progress and public poll stipulating the participation of society and investors.

Also, for the effective work with investors there will be strong monitoring of the investment projects implementation and all agreements with investors achieved by the State Head and Prime-Minister visits. For this purpose, the new instrument will be adopted – information-monitoring system IRM (Investors Relationship Management).

Upon the agreement with the Ministry the sectorial national authorities and regional bodies will continue the work on elaborating the annual sectorial and regional plans on attracting the investments stipulating definite indicators, projects and system measures on improving the investment climate in this or that sector or region.

Second, to improve the activity of SEZ and IZ, and to reveal the system problems it is planned to adopt a law “On special economic and industrial zones” that stipulates to facilitate the allocation of land sites, provide benefits for investors, reduce administrative barriers, ensure legislative regulation of industrial zones activity.

By 2022 it is planned to achieve the following target indicators:

1. Increase the ratio of gross FDI volume to GDP up to 19% in 2022;
2. Increase the investment volume to the main capital of non-resource-based sector of economy by 1.46 times;
3. Increase of gross FDI inflow by 1.26 times;
4. Increase the volume of external investments into the main capital of non-resource-based sector of economy by 1.5 times [7].

Also, to make Kazakhstan economy more attractive for the foreign investors and has innovative character so it could have a chance to enter the list of 30 developed countries of the world, we propose the following measures on FDI stimulation (Table 3).

Table 3– Instruments of FDI stimulation policy to Kazakhstan economy

#	Key fields	Implementation plan	Necessary measures	Final result
1	New high-technological sectors of economy	Increase the volume of investments from 8% to 30% of total GDP volume	1) Exemption from customs fees 2) Visa-free entry 3) Exemption from VAT 4) Reimbursement of investment expenses 5) Ensure stability for concluded agreements under possible changes in RK legislation.	Move away from resource dependence and focus on main efforts for industrialization of the national economy
2	Strong processing industrial sector			
3	Innovative agro-industrial complex			
4	Infrastructural triad: agglomerations, transport, energy			
5	Small and medium business)			
Note – compiled by authors				

### Conclusion and suggestions.

Summarizing the stated above we consider it necessary, in continuation of the national programs, to study and adopt the foreign experience on investments attracting taking into account the following base provisions:

- first, on the base of measures taken by the State, it is necessary to mark the application of financial-credit, tax stimula and non-financial methods;



- second, for this mechanism operation to its full extent, it is necessary to create conditions for foreign and local investors. The foreign and local investors, like never before, need the assurance for their investments. The governmental measures should be focused on effective and rational application of insurance capabilities of foreign investments;

- third, it is necessary to take into account the important aspect that governmental provision of any benefits should not be automated, but differential. It means that a project should be important for the State in strategic view and be viable.

It is quite possible that while implementing such initiatives there will be problems related to establishment of artificial joint enterprises. Most probably, those will be established for the period of “tax holidays” as creation of such entities is aimed at receiving the non-tax profit. The way out in this case can be adoption of special amendments to the tax code that will impede the illegal financial operations.

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### **ҚАЗАҚСТАНДАҒЫ ШЕТ ЕЛДІК ИНВЕСТИЦИЯЛАРДЫ ЫНТАЛАНДЫРУ ТЕТІКТЕРІН ЖЕТІЛДІРУ**

**Аннотация.** Мақаланың мақсаты – Қазақстан экономикасы үшін тікелей шет ел инвестицияларын (ТШИ) тартудың экономикалық тетіктерін жетілдіру бойынша ұсыныстар даярлау болып табылады.

Қойылған мәселені зерттеудің негізі ретінде экономикалық зерттеулердің түрлі әдістері: жүйелік және құрылымдық-функционалдық талдаулар, статистикалық талдау әдістері, салыстырмалы және логикалық әдістер қолданылған.

Жұмыста түрлі елдердегі ТШИ тартудың амалдары талданып, дамыған және дамушы мемлекеттердегі ТШИ ынталандыру тәжірибесінің ерекшеліктері анықталған. Қазақстандағы инвестициялық климатты мониторинг ілеудің үш деңгейлік жүйесіне егжей-тегжейлі сипаттама берілген, ТШИ тарту тетіктерін жетілдірудегі оңтайлы үрдістер анықталған. Оған қарамастан, қаржы активтерін белсенді тартуға бөгет жасайтын факторлар анықталған. Жұмыста Қазақстан экономикасының өңдеу және инновациялық секторларына тікелей шет елдік инвестициялардың құюлуына ықпал ететін шаралар ұсынылады.

Негізгі қорытындылар мен тәжірибелік ұсыныстарды осы мәселе бойынша зерттеулерді одан әрі тереңдету үшін әдістемелік негіз ретінде пайдалануға болады.

**Түйін сөздер:** шет елдік инвестициялар, инвестицияларды мемлекеттік реттеу, инвестицияларды ынталандыру, инвестицияларды тарту құралдары, инвестицияларды ынталандыру тетіктері.

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### **СОВЕРШЕНСТВОВАНИЕ МЕХАНИЗМОВ СТИМУЛИРОВАНИЯ ПРЯМЫХ ИНОСТРАННЫХ ИНВЕСТИЦИЙ В КАЗАХСТАНЕ**

**Аннотация.** Цель статьи – выработка предложений по совершенствованию экономических механизмов стимулирования прямых иностранных инвестиций (ПИИ) для экономики Казахстана.

В основу исследования положены различные методы экономических исследований: системный и структурно-функциональный анализы, методы статистического анализа, сравнительный и логические методы.

В работе проведен анализ подходов ряда стран к привлечению ПИИ и определены особенности практики их стимулирования в развитых и развивающихся странах. Дана подробная характеристика трехуровневой системе мониторинга инвестиционного климата в Казахстане, выявлены положительные тенденции в совершенствовании механизмов привлечения ПИИ. Вместе с тем, выявлены факторы, препятствующие активному привлечению финансовых активов. В работе предлагаются меры, которые будут способствовать притоку прямых иностранных инвестиций в обрабатывающий и инновационный секторы экономики Казахстана.

Результаты исследования могут быть использованы в качестве методической основы для дальнейшего углубления исследований по данной проблеме.

**Ключевые слова:** иностранные инвестиции, государственное регулирование инвестиций, стимулирование инвестиций, инструменты привлечения инвестиций, механизмы стимулирования инвестиций.

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[zhmm1331@gmail.com](mailto:zhmm1331@gmail.com), [sabirovarysty@mail.ru](mailto:sabirovarysty@mail.ru)**THEORETICAL RESEARCH OF SOCIAL ENTREPRENEURSHIP  
IN THE REGION (ON THE EXAMPLE OF THE ATYRAU REGION)**

**Abstract.** Social entrepreneurship in modern society involves an altruistic business style that focuses on social benefits. This influence is considered by the social entrepreneur as a profit, since the success of a social enterprise depends on a number of factors related to social influence and not priority for traditional enterprises. Therefore, some authors believe that the difference between “entrepreneurship” and “social entrepreneurship” lies primarily in goal-setting: unlike classical entrepreneurs, social entrepreneurs do not seek to extract maximum profits, but aim at changing unfair social conditions, creating products or social change services.

**Keywords:** social entrepreneurship, social problems, altruism, social problems, social benefits.

**INTRODUCTION**

Social entrepreneurship is a special kind of activity located at the intersection of charity and business. It involves making a profit and reinvesting it in solving or mitigating the most pressing problems in society. Incomes are not distributed among the participants of business entities, but are invested in such areas as reducing unemployment, strengthening the protection of the rights of citizens, and the environment.

Social entrepreneurship has been steadily developing in recent years in many countries, and social entrepreneurs are becoming full-fledged actors in the economy. In the UK and France to the share of the social economy, or so-called. “Solidary economy” accounts for up to 10% of GDP. Kazakhstan has not stayed away from this entrepreneurial trend of the XXI century. However, the role of a social entrepreneur is still underestimated, and often simply incomprehensible. Who is he? What principles guides and what mission is able to entrust to itself. The relevance of the research topic is determined by the fact that in recent years entrepreneurship has been widely developed in Kazakhstan, which is an initiative, independent, carried out on its own behalf, at its own risk, under its property responsibility, the activities of individuals and legal entities aimed at making a profit.

**MAIN PART**

Social entrepreneurs, as a rule, deal directly with acute social problems, and tend to consider them in a broad context, at the intersection of various areas of knowledge, theories and disciplines. According to some estimates, such an approach gives a better understanding of the roots of social problems, allows developing innovative solutions and mobilizing the available resources on a global scale. Both private and public agencies around the world provide support to needy communities and individuals for a total of billions of dollars a year. Such support can contribute to the formation and wide dissemination of innovative ideas.

Our society does not fully understand both the terminology and the very idea of social entrepreneurship. Meanwhile, the main feature of this activity is simple and logical: it necessarily entails some kind of social transformation. If an entrepreneur invests money, knowledge, resources in a certain enterprise and expects profit, then a social entrepreneur is one who is able to see the problem in the social

sphere and solve it through entrepreneurial means. This is not a philanthropist in the classic sense. To realize oneself in solving social problems and at the same time “do business”, focused on value creation and making profit - the combination of these two entities distinguishes an entrepreneur from a benefactor.

Today, social entrepreneurs are becoming an active part of society and business, they are willing to take risks, open and develop new businesses, creating jobs, creating a culture of rejection of dependency, solving social problems. In Kazakhstan, this is quite a young phenomenon. By 2016, according to the profile association, there are about 120 such entrepreneurs in the republic. They mainly operate in Almaty, Astana, Shymkent, Atyrau, Kostanay, East Kazakhstan. The number is small, but the more noticeable are successful examples.

A journalist, the head of the public foundation “Sport Concept”, Anna Shelepova, a few years ago, began operations with arranging a sports field in the courtyard of her house.

Social entrepreneurship is also developed in the Atyrau region. The concept of a new direction for the region and for the country as a whole implies the solution of social, cultural and environmental problems through private business. In spite of the fact that the project is pilot, 72 applications submitted for the first competition, from which 6 best business ideas were selected. Winners will be provided with grants for their implementation. The projects are very different - in the field of education, health, culture and ecology.

We conducted monitoring, which showed the need and relevance of such a center. Today, only in the district center there are 635 such people, 8% of whom have a disability. ”

So far, among the projects are rehabilitation and educational centers, but many other ideas, expert’s state.

Recently, in the Makat district, they began to recruit special children to an educational institution. The project was implemented thanks to government support in the form of a grant.

In 2017 in the Atyrau region under the program "Business Road Map 2020" allocated 1 543.5 million tenge. In total, 312 projects were funded, and 1,210 jobs were created.

Another successful social business project was opened as part of the state program "Business Road Map 2020". Within the program, a novice entrepreneur received a grant in the amount of 711 thousand tenge. A massage room for children with disabilities appeared in the village of Almaly, Makhambet district, in a family medical clinic. Moreover, already throughout the whole year accepts all comers. In addition, within the framework of the project “Startup-Academy” of the Russian Federation JSC FRP “Damu” in the Atyrau region, Rayhan Khayrullina helped write a business plan and protect the project at the competition. As a result, the entrepreneur received 150 thousand tenge from businessmen of the region for the development of his business as a support.

Deputy of the Majilis of the Parliament of the Republic of Kazakhstan, a member of the Finance and Budget Committee Irina Smrnova believes that social entrepreneurs can become reliable partners of the state in solving social problems in the country. They will be able to qualitatively solve the social problems of the population, while saving budget funds allocated to the social sphere. This savings can be used again in the social sphere. The responsibility of the state is to create transparent and comfortable conditions for the development of social entrepreneurship. However, this responsibility is a mirror, social entrepreneurs should be ready to work at a high professional level, having, besides motivation, well-developed business models, applying modern social and business technologies.

According to a number of experts, participants in the discussion, there is a weak activity in the social sphere and on the part of the entrepreneurs themselves. The activity of some social entrepreneurs is more about finding not investors, but grant-givers, and does not resemble a business, but a non-governmental or charitable organization. It is important to take into account, experts emphasize, that for the development of this sector of entrepreneurship alone socially responsible motivation is not enough. The professionalization of social entrepreneurs, an understanding of the strategic importance of activities, a systemic vision, the use of international experience and best practices will make it possible to see in Kazakhstan the emergence of a solidary economy. Social entrepreneurship is an area in which activities are carried out independently of external funding. All work is carried out on the basis of proven business schemes. In this connection, it cannot be said that social entrepreneurship is such a form of amateur performance. In this area, not only time-tested, but also new, scientifically-based approaches to solving existing and relatively recent problems are being applied.

Therefore, Gregory Diez pointed out in one of his articles that the reason for the emergence of small business, socially-oriented non-profit organizations is the inefficiency of the work of individual public institutions. It is worth noting that in advanced countries with fairly progressive structures, the form of business in question is more common. In this regard, for the emergence of social entrepreneurship is the appearance of a subjective assessment of existing institutions as ineffective for an individual member of society.

Table 1 - Ideas Tested in Business

№	Name	Performance technique
1	Ecological packaging	In order to decompose the usual plastic bag, it takes up to two hundred years. And remember how many bags of kefir, juice, frozen vegetables and sausages we carry every day in the garbage (again) bag! All these packaged mountains will decorate our planet for decades if we do not stop. Similarly, eco-packaging manufacturers thought, deciding to use fundamentally different materials for this purpose. In principle, nothing new - most eco-friendly packaging consists of paper and cardboard. They decompose in just two years - unlike faster than polyethylene. So far, not all products have learned to pack eco-friendly - for example, the replacement of plastic bottles has not yet been found. However, this is a breakthrough.
2	Plastic recycling	Humanity annually consumes a huge amount of plastic products - bags, bottles, cans, films, boxes, etc. This problem concerns not only pollution, but also total consumption of resources. After all, while we throw tons of bottles into a landfill, enterprises use the same amount of material to produce new ones. So why not kill two birds with one stone? From plastic debris you can make a new package, a pile for brushes, building materials and much more.
3	Rural tourism	This entertainment today is quite popular among the inhabitants of big cities. Many citizens have already forgotten what an ordinary cow looks like and on which trees potatoes grow. For them, going to a rural village is a whole adventure. They are even willing to pay to help a rural grandmother dig a garden, milk goats and collect eggs in a hen house. Fresh air and occupational therapy have a beneficial effect on the psyche, at the same time such tourism contributes to the development of villages where it is common.
4	Educational computer games for children	Children love to play various gadgets, and the game development field is quite profitable. So why not combine business with pleasure? In the form of the game, you can learn languages and school subjects, master the ten-finger set. With the help of computer games, you can also conduct social training, simulating the behavior of characters so that children acquire useful skills to interact with society.
5	Children's developmental center or kindergarten	Another type of social business that helps kids develop their abilities. By the way, such a center can be combined with a private kindergarten, thereby helping parents free up time for work. Not everyone can get a child into the garden on time because of long queues, and the quality of child care is not so hot there. A private garden for 10-15 children is in many cases preferable - it is easier for caregivers to keep up with fewer babies, such gardens are better equipped, higher demands are placed on staff, and the development program always keeps up with the times. True, the payment there is more, but it's worth it.
6	Healthy lifestyle club	Many people dream of becoming slim, beautiful, start eating right, run in the morning and go hiking in the summer. But doing it alone is boring. So why not create an organization in which participants for certain money will be grouped together, advise, motivate, conduct classes
7	Crowdfunding (collective financing of projects).	On the Internet, you can find platforms where business is funded on a "world-wide" basis. Those who wish to realize their idea represent it on the page, and those who are interested - put on the account as much as they can afford. So good and useful startups rise to their feet. It is noteworthy that most of them relate to culture, art, journalism, cinema and the same social entrepreneurship.
8	Training, retraining and employment of people in difficult life situations	Many categories of our fellow citizens fall under this concept - people who have recently been released from prisons, single mothers, women who have experienced domestic violence, those who go through the process of rehabilitation after getting rid of drug and alcohol addiction, are disabled. They find it difficult to find a job. For them, you can open courses for simple professions and open a company that recruits only people with a difficult fate. Benefits for the entrepreneur? Those who got a second chance are mostly executive and diligent, holding tight to the workplace and at the same time do not require a large salary.
9	Singles club for single people	After 30 years it is more difficult to make friends and fall in love. But everyone wants warmth and love regardless of age –and at 40, and at 70. Therefore, any organization that helps older people find each other will be in demand. This may be a search agency for the second half, and a club of interests, and "quick dates", and dances for those who are a little over 20.

The idea of social entrepreneurship is markedly different from the basics of traditional entrepreneurship, but there are a number of similarities between these types of business activity.

Social entrepreneurship is a solution to tangible and specific problems of public life, contributing to positive sustainable change. It should be emphasized that this work is not charity. Assistance is provided on the principle of "giving not a fish, but a fishing rod."

The terms "social entrepreneurship" (English social entrepreneurship) and "social entrepreneur" (English social entrepreneur) are first mentioned in the 1960-1970s in English-language literature on social change. They became widely used in the 1980s, believed to be due to the popularization of American business consultant and manager Bill Drayton [ ], who is often called the "godfather of social entrepreneurship".

We can distinguish the following types of social entrepreneurship in terms of focus:

- improvement of the environmental situation;
- helping people in difficult times;
- employment of persons with disabilities;
- useful leisure;
- child development;
- rehabilitation after psychological and physical injuries.

There are a lot of ideas for social entrepreneurship, and some of them are quite unexpected. This niche is so new that it allows you to experiment endlessly. The main thing is not to flirt and do not forget about the key component - benefits for people. Here we look at the most common and already tested ideas.

In 1980, Drayton founded the Ashoka Foundation, which became the first organization dedicated to identifying and supporting social entrepreneurs around the world. By 2016, the number of scholarship fund members reached 3,000, among them representatives from 89 countries. The Ashoka Foundation does not use government funding - according to the fund itself, the organization receives all the funds from Western charitable foundations and large private donors. In 1987, Drayton's experience was first scaled: according to the model of the Ashoka Fund, investor Ed Cowan founded another large fund, Echoing Green.

The subjects of small business and socially-oriented organizations can work in various fields. They implement community-oriented programs in the framework of their main activities. This could be health care, agriculture, services, education, and so on. Currently, there is no precise definition of social entrepreneurship, since it affects many areas of human life and has a huge number of areas and facets. This activity can be described most succinctly with the following phrase: "Earn money by helping others."

## CONCLUSION

Despite obvious successes, there are often more barriers to such activities than opportunities. The sluggishness of government agencies and bureaucracy, legal subtleties, secrecy of information about tenders, difficulties in attracting sponsors and finding people who can, for example, make a business plan for a universal self-sustaining sports ground.

The development of social entrepreneurship in Kazakhstan is becoming an important activity for all interested parties - entrepreneurs, the state, society. And priority, as in any business, is the creation of fair and clear conditions for development by the state - the rules of the game.

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## **АЙМАҚТЫҢ ӘЛЕУМЕТТІК КӘСІПКЕРЛІКТІ ТЕОРИЯЛЫҚ ЗЕРТТЕУ (АТЫРАУ ОБЛЫСЫНЫҢ МЫСАЛЫНДА)**

**Аннотация.** Қазіргі қоғамдағы әлеуметтік кәсіпкерлік әлеуметтік жеңілдіктерге бағытталған альтруистік бизнес-стильді қамтиды. Бұл әсер әлеуметтік кәсіпкердің пайдасы ретінде қарастырылады, өйткені әлеуметтік кәсіпорынның жетістігі дәстүрлі кәсіпорындар үшін басым емес, әлеуметтік әсерге байланысты бірқатар факторларға байланысты. Сондықтан кейбір авторлар «кәсіпкерлік» пен «әлеуметтік кәсіпкерлік» арасындағы айырмашылық бірінші кезекте мақсатты белгілеуде: классикалық кәсіпкерлерден

айырмашылығы, әлеуметтік кәсіпкерлер максималды пайданы алуға ұмтылмайды, бірақ әділетсіз әлеуметтік жағдайларды өзгертуге, өнімдерді немесе әлеуметтік өзгерістер қызметі.

**Түйін сөздер:** әлеуметтік кәсіпкерлік, әлеуметтік мәселелер, альтруизм, әлеуметтік мәселелер, әлеуметтік жеңілдіктер.

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### **ТЕОРЕТИЧЕСКИЕ ИССЛЕДОВАНИЯ СОЦИАЛЬНОГО ПРЕДПРИНИМАТЕЛЬСТВА В РЕГИОНЕ (НА ПРИМЕРЕ АТЫРАУСКОЙ ОБЛАСТИ)**

**Аннотация.** Социальное предпринимательство в современном обществе предполагает альтруистическую манеру ведения бизнеса, сосредоточенную на общественных выгодах. Это влияние рассматривается социальным предпринимателем как выгодоприобретение, поскольку успех социального предприятия зависит от ряда факторов, связанных с социальным воздействием и не приоритетных для традиционных предприятий. Поэтому некоторые авторы полагают, что разница между «предпринимательством» и «социальным предпринимательством» заключается, прежде всего, в целеполагании: в отличие от классических предпринимателей, социальные предприниматели не стремятся к извлечению максимума прибыли, а нацелены на изменение несправедливых общественных условий, создание продуктов или услуг, способствующих социальным преобразованиям.

**Ключевые слова:** социальное предпринимательство, социальные проблемы, альтруизм, общественные проблемы, общественные выгоды.

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## **THE ROLE OF THE INTERSUBJECTIVE SOCIAL PARTNERSHIP IN THE REPUBLIC OF KAZAKHSTAN**

**Abstract.** Nowadays, approaches in the theory of social partnership and social responsibility of business are developing intensively. This is due to the ongoing processes in the country. Today, the second stage of social modernization is being implemented. Therefore, this article timely examines approaches to the problem of intersubject social partnership.

Since at present social management still poorly takes into account the resources of local communities, and above all the human, social and cultural potential, for the disclosure of these potentials, the priority is to transform the local community from an object of social policy into its subject.

This implies the involvement of its active members in the formation of partner interaction systems and thereby reinforces the intersubjective significance of social partnership, which is still interpreted primarily as intersectoral. Thus, in modern conditions, the sociological analysis of social partnership should be directed not to the study of the sectors, but to the subjects of this interaction.

The purpose of the article is to conduct a theoretical analysis of approaches to the formation of intersubjective social partnership, which allows to improve the foundations of local governance.

**Keywords.** Intersubjective social partnership, social business responsibility, collective bargaining agreement, industry agreement, labor code.

### **Introduction**

Foreign science began to study the problem of intersectoral social partnership only in the 1980s, when “in place of the old traditional tripartism, where the interests of society were exclusively represented by trade unions, arised a new tripartism, or new social partnership, where the public interests are no longer just as many trade unions as organizations and structures of civil society. ”

Taking into account the relatively short time period of the scientific study of the problems of social partnership, nowadays there is an existence of quite diverse methodological grounds for studying this phenomenon and its interpretations, as well as about different formulations of the definition itself.

The subject of the study was the direction of development of intersubjective social partnership.

### **Main Body**

The problem of social partnership is relatively recently raised in both domestic and foreign economic science. For example, according to the well-founded conclusion of one of the pioneers, and now one of the most recognized Russian authorities of scientific research of intersectoral social partnership, Professor V.N. Yakimtsov, who devoted his doctoral thesis to this problem, was a work in which for the first time in Russian science the main elements of the concept of intersectoral social partnership in Russia were identified and the important problem of interaction between government, business and non-profit organizations was raised a collection of articles by a group of researchers published in 1996. Up to this



point, i.e. from the beginning of the 1990s, when in Kazakhstan the study of social partnership became possible, this phenomenon was interpreted only from the traditional positions of tripartism, i.e. relations between the state, employers and workers, including those represented by trade unions.

For example, Ekaterinburg researcher N.V. Sobchuk believes that there are many terms in scientific works that are related to the term of intersectoral social partnership. In particular, these are “multilateral dialogue”, “multilateral processes”, “multilateral governance”, “global public policy networks”, “partnerships of three sectors”, “multi-sector partnerships”, “new social partnerships”, “public-private partnerships” and many others, and thus different terms are often used simultaneously [1].

The analysis of research undertaken by us reveals that, along with the above-mentioned nominations, the most frequently used are:

- “local-territorial social partnership” (S.A. Alekseev), “intersectional interaction” (A.S. Avtonomov, E.M. Osipov, E.N. Sidorova),
- “newsocialpartnership”,
- “competitive corporatism” (S.P. Peregudov),
- “state-public social partnership” (L.A. Ivanov), - “private-state partnership”(I.M. Borodachev),
- “social dialogue and social responsibility” (MP Sitkov) [2].
- In foreign science, as acknowledged by A.I. Plotnikov, adopted an excellent terminology base.
- So, social partnership is called:
- cross-sector partnership (cross-sector partnership),
- multi-sector partnership (multi-stakeholder partnership) (M. Jorgensen, J. Selski and B. Parker, R. Andrews and T. Entwessel).

In addition, one of the approaches to the analysis of the concept of social partnership in the western scientific tradition is its correlation with the popular term “public policy” (T. Birkland), which came from political and managerial theory and practice [3].

The reasons for the considered terminological difference, having a diverse and multi-level character, are caused, in our opinion, not only by the fact that the definition of the basic concepts of the phenomenon under study has not yet entered naturally into the “established” state and generally accepted interpretations for the theory and practice. The case, most likely, consists in the fact that in this case the factors of a theoretical-methodological or gnoseological nature prevail.

It is necessary to fully agree with the argumentation of the famous expert A.N. Mikheev, who convincingly proves that:

first, the types of intersectoral partnership differ from each other by goals, scope, complexity, level of activity (from local to global), size and diversity of partners;

secondly, they relate to a variety of problems that require the attention of interested target groups, not only related to the area of sustainable and balanced development of the territory;

thirdly, intersectoral partnership of various forms is included in the process of determining the perspective tasks of the development of territories and implementing the decisions taken, it can exist at the local, national and global levels, or at several levels simultaneously;

fourthly, the duration of the functioning of intersectoral partnerships is also different (from single events to processes that take place over several years);

fifth, various intersectoral partnership options may cover a different number of stakeholders and, based on this, vary in the degree of diversity, with an increase in diversity, on the one hand, opens up new opportunities, and on the other, is fraught with new challenges.

That is why, in our opinion, the summarizing conclusion of A.I. Plotnikov that “the study of the accumulated scientific reserve in the analyzed subject area indicates a significant variety of interpretations of the concept of “intersectoral social partnership”, caused both by the difference in disciplinary approaches from the standpoint of which it is considered and by the depth of scientific analysis of the phenomenon itself. At the same time, the authors single out various spheres of the social partnership and its essential characteristics. This indicates that the phenomenon under consideration has a complex nature, is multifunctional, polysubject, manifested in various spheres of social life”[3].

Based on the above, it becomes necessary to conduct a historical and scientific analysis of the main stages and leading scientific directions, as well as more “narrow” specialized approaches in defining the concept of “social partnership”, which creates theoretical prerequisites for identifying the functional characteristics of the phenomenon under study.

Despite the fact that the history of the study of social partnership in the CIS countries has more than fifteen years, in published publications and, especially, in separate articles, original systematization in the study of this phenomenon is already proposed.

One of the most detailed and reasoned classifications of the scientific study of social partnership was proposed in the fundamental work of S.A. Ivanov. This author not only singled out various approaches to the phenomenon under study for various reasons, describing each of the directions thus formed in detail, but also summed up the general results of systematization of the main interpretations of the social partnership category, identifying promising directions in this sense. So, S.A. Ivanov highlighted the definition of social partnership:

- a) by disciplinary affiliation;
- b) in terms of scope, coverage, coverage area;
- c) to assess the conditions and prerequisites for objectification;
- d) by subject, object and subject characteristics.

The author considers it necessary to single out philosophical, sociological, economic, political and other interpretations of social partnership.

The philosophical approach, in his opinion, interprets social partnership from the position of combining state and public principles in the categories of "solidarity", "progress", "social relations", "objective needs". As an example, the following definition is given: social partnership is “a specific type of relationship between social communities, groups, classes, and strata. This is the process of forming a common sociocultural space in which various actors function, being agreeable, not paying attention to the difference of interests, to follow the general “partnership rules, rules of the game”.

**Sociological approach** comes down to the consideration of primarily socio-structural components, sociocultural functional features of the phenomenon under study. S.A. Ivanov, for example, gives a definition given in a special textbook by V.A. Mikheev: “social partnership is a system of relations of its main subjects, institutions regarding the status, conditions, content and forms of activity of various social and professional groups, communities, and strata”. According to S.A. Ivanov, the researchers, who analyze the political aspects of the development of society, the processes of spreading democratic values, see in the social partnership a political institution, pointing to its greater role in maintaining the political stability of society, in reaching agreement among various social communities on political interests.

This context implies that social partnership:

a) or is interpreted as an institution that provides for the “granting” to various target groups of appropriate rights to participate in the processes of developing and adopting decisions on topical issues of territorial development;

b) either its indissoluble connection is declared, the internal interdependence of its functioning with political processes and political institutions [4].

The second basis for the systematization of interpretations of social partnership, as the above author believes, is its sphere, scope, and coverage area. It proceeds from the fact that in the scientific literature two superpositions are formed in this connection, opposing each other. First, it is a social partnership, understood as interaction within the whole society, a way of interaction of all its individuals and social communities.

In this sense, social partnership is considered as a condition for the sustainable development of society. With this approach, the field of partnerships is the entire social space.

Secondly, it is an interpretation implying a limitation of the range of subjects of social partnership.

In this context, there are two basic models of social partnership - the so-called trade unionism and intersectoral. At the same time, the trade union model means the system of “tripartism” that has developed in the social and labor sphere, i.e. relations between employers, employees and the state, and the

intersectoral model means the interaction of three sectors of society: government, business and non-profit organizations.

The third significant basis for systematizing the definitions of social partnership, according to S.A. Ivanova, serves as the subject, objective and objective characteristics of this phenomenon. On this basis in scientific works there are two main research positions. The first group of authors believes that homogeneous social groups can be subjects of social partnership. At the same time, the subjects of social partnership are not individual individuals, but community of people. For their part, individuals belonging to these communities recognize their social identity, which determines their unity within this group and distinguishes them from other similar groups of individuals. In most cases, this social identity is reinforced by the value unity, common needs and interests.

The second approach is that as partners, not the social strata or groups themselves are considered, but the institutions that represent the interests of these groups, i.e. institutions of power, civil society and others.

Despite the fact that, as noted above, the majority of dissertations defended in recent years have relevant sections, including attempts to systematize approaches to the analysis of intersubjective social partnership, and also, despite the involvement in this process of well-known scientific authorities in this field adequate models of scientific research of this phenomenon remains relevant for several reasons.

For the first time in Russia, in the another collective theoretical work of V.N. Yakimets, along with other authors, were directly involved in the activities of non-profit organizations, presented the results of a theoretical analysis of the third sector of the country, outlined the periods of formation and development of this sector, formulated and characterized four concepts: service, community of self-development groups, civil society building, social actions, led the empirical classification of the organization of the third sector, studied in detail the role of the third sector in the formation of human resources, organizational development, promoting the interests of society.

Finally, in another of his extensive publications V.N. Yakimets first leads author detailed definition, actively used subsequently. By social partnership, he means "constructive interaction of organizations from two or three sectors (government, business, nonprofit sector) in solving social problems, providing a synergistic effect from the "addition"of different resources and "beneficial"to each of the parties and the population.

As the author notes, the meaning of social partnership concludes in providing the constructive interactions between three forces that operate in the social space of a country, region, municipality, or other territory - government agencies, commercial enterprises and commercial organizations in transforming the social environment [5].

M.I. Liborakina and V.N.Yakimets in 1998, offered an original interpretation of intersectional social partnership B.S. Model and I.M. Model, arguing that the mechanism of partnership interaction between civil society and the state is a "new paradigm" and remains as a phenomenon still poorly studied in Russian sociology and political science, is a type of social interaction between various institutions of government, business and civil society, which allows them to defend their interests, selecting civilized ways of their harmonious realization as they move towards a common goal. The well-known Russian sociologist, one of the "patriarchs" of the Saratov sociological school A.I. Sukharev, who believes that the space of social partnership is "a joint activity of social actors to achieve their, but mutually overlapping interests, inevitably expanding all areas of social relations - economic, political, social, cultural, ethnic, etc."

Filenko, who determined that "social partnership acts as a process of interaction, as a catalyst for cooperation and mutual agreement more in the social sphere than in the sphere of social and labor relations, in which there are more grounds for conflict situations because it is here that the redistribution of economic resources of society" [6]. The action model received further logical development in the definition proposed by E.P. Chernobrovkina, which is based on the fact that "intersectoral social partnership is a constructive mutually beneficial interaction of state institutions and civil society, in which

each of the parties is interested". It is not by chance that the institutionalization of social partnership is seen as “the process of discovering, fixing and formalizing the system of norms, rules, statuses, roles and procedures that arise when using increasingly complex social partnership mechanisms, when solving socially important tasks by representatives of non-profit organizations and authorities”. The positively creative nature of the action model of social partnership is emphasized by E.N. Sidorova, who suggested that the intersectional interaction from the position of sociology is the sum of the relations between the authorities, business and public groups in the realization of their interests in the space of society. Conflict, which is understood in a functional way, serves as a condition for harmonizing relations, understanding intersectional interaction as an acute interaction of social subjects, to a certain extent independent and implementing independent interests and goals, aimed at meeting the needs that are due to the specifics of their life activities in society.

While an intersectoral social partnership must be understood as a constructive interaction of government institutions, entrepreneurs and public groups.

It is the behavioral approach that was recorded in the Labor Code, where social partnership is defined as “a system of relationships between employees (employee representatives), employers (employers representatives), government bodies, local governments, aimed at ensuring coordination of the interests of employees and employers on labor relations and other relations directly connected with them” [8]. This Labor Code limits the number of subjects whose interests are subject to coordination through social partnership, employers and employees. The authorities in this case are only intermediaries, guarantors of the implementation of the agreements reached.

By the way, in contrast to the legislative definition, fixed in the Labor Code, within the framework of the above-considered approach, V.A. Mikheev's authorities act not only as an intermediary between employers and employees, but also as independent carriers of interests in the system of interaction that are not limited to the interests of both workers and employers. So, in the definition of V.A. Mikheev emphasizes the whole range of issues of social development, not limited to the framework of social and labor sphere [7].

Table 1– The main approaches to the characterization of subjects of intersubjective social partnership

Authors	Highlighted by the subjects of the partnership
Yakimets V.N.	Power structures, commercial firms and enterprises, non-profit organizations
Lovkova L.L.	Local government institutions, business and public organizations
ChernobrovkinaYe.P.	Institutions peculiar to the state and civil society
Louhov N.V.	State authorities and associations of the non-profit sector
Alekseev S.A.	Municipalities, given that intersubjective social partnership has a local character
Fileenko V.I.	Government institutions and local governments
Akramovskaya A.G.	<ul style="list-style-type: none"> <li>• the first sector, including government bodies;</li> <li>• the second sector, which consists of corporate charitable foundations, business associations, companies and enterprises directly, etc .;</li> <li>• the third sector, which includes design, representative, service, supervisory, expert and infrastructure organizations.</li> </ul>
Borodina A.V.	State power, entrepreneurs and youth organizations, including youth commissions and councils in the composition of trade unions, youth policy bodies
Arcer T.V. [9]	In the narrow sense - social partnership in the sphere of social and labor relations. In a broad sense - intersectoral interaction of the business sector, government and non-governmental non-profit organizations, which constitutes complementary unity
Ivanova L.A.	Social technology of the end-to-end application of a program-target nature, which allows to realize promising tasks of ensuring cooperation between large social groups formed on the basis of economic interests, as well as the tasks of joint action of movements, parties, associations

Researcher A.A. Lovkova among the principles of intersectoral social partnership at the municipal level highlights the following [9]:

1. the principle of the development of network communications, the establishment of trust and social responsibility between the participants of the partnership;
2. the principle of constantly increasing the productivity of the system by increasing the level of professionalism of the participants;
3. the principle of matching the interests of the interacting parties with the social environment of the local community;
4. the principle of testing and applying a variety of partnership mechanisms, as well as approaches, technologies, procedures, methods and techniques of interaction;
5. the principle of synergy of resources;
6. the principle of complementarity and interdependence of factors

Let's consider a conceptual model of intersubjective social partnership at the level of local self-government (developed by the author)

The goal of such a partnership could be the harmonious development of local society and society as a whole.

Highlight the tasks of this tandem:

*economic*- attracting domestic and foreign investment, support and development of small and medium businesses, consolidation of financial resources;

*social*- improving the quality of life overcoming the problems of vulnerable groups of the population, youth, medical care, affordable education and housing, cultural spheres;

*political*- the formation of a dialogue relationship between the community, business and government, strengthening the institution of local government as the basis of modern civil society.

Table 2– Elements of intersubjective social partnership

Levels	Types	Priorities
state	Social programs State support for vulnerable groups of the population, State social order, Social incentives for sponsors, Stimulating social activity with direct funding	Socialmodernizationofsociety
interregional		Socialproblemsolving
regional		Proportionaldevelopmentofregions
localgovernmentlevel		UrbanDevelopmentProgram
entrepreneurshiplevel		Support for small and medium businesses
socialgrouplevel		Providing and supporting different social groups, pensioners, youth, gender policy
personalitylevel		Availability of medical care, education, housing

#### *Conclusion, research results, practical suggestions and recommendations*

It is important to emphasize that the model proposed by us is based on the neoclassical paradigm of social partnership, subject relations at the regional level. However, in order for the local community to become a subject of activity, a modern methodological substantiation of this phenomenon is necessary. If the non-classical paradigm of social partnership sheds light on the theory of the question, then the corresponding methodology is designed to answer questions of synthesis, dynamics, managerial, labor and social relations that objectively develop and develop at the local level.

- So, during the study, the following conclusions can be determined:
- the feasibility of using the category of intersubject social partnership in the framework of the paradigm of post-non-classical rationality to substantively increase the effectiveness of local governance was theoretically justified;
- the elements of the intersubject social partnership model in the system of local self-government are substantiated;
- identified the stages of the development of inter-entity social partnership in the Republic of Kazakhstan, the level of readiness of various subjects of the local community for partnership interaction.

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### **ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДАҒЫ СУБЪЕКТИВАРАЛЫҚ ӘЛЕУМЕТТІК ӘРІПТЕСТІКТІҢ РӨЛІ**

**Аннотация.** Қазіргі уақытта әлеуметтік әріптестік теориясымен бизнестің әлеуметтік жауапкершілігі қарқынды дамып келеді. Бұл елде болып жатқан процестерге байланысты. Бүгінде әлеуметтік жаңғыртудың екінші кезеңі жүзеге асырылуда. Сондықтан бұл мақалада пәнаралық әлеуметтік әріптестік мәселесіне көзқарастар дер кезінде қарастырылады.

Қазіргі уақытта әлеуметтік басқару жергілікті қоғамдастықтардың ресурстарын, ең алдымен адами, әлеуметтік және мәдени әлеуетті әліде нашар ескеретіндіктен, осы әлеуетті ашу үшін жергілікті қоғамдастықты әлеуметтік саясат объектісінен оның мәніне айналдыру басым болып табылады. Бұл оның белсенді мүшелерінің өзара іс-қимылдың серіктестік жүйелерін қалыптастыруға қатысуын білдіреді және сол арқылы әлеуметтік әріптестіктің субъектив аралық маңызын күшейтеді, ол әлі күнге дейін негізінен сектор аралық ретінде түсіндіріледі. Осылайша, қазіргі жағдайда әлеуметтік әріптестікті социологиялық талдау салаларды зерттеуге емес, осы өзара іс-қимылдың субъектілеріне бағытталуы тиіс.

Мақаланың мақсаты – жергілікті басқару негіздерін жақсартуға мүмкіндік беретін объективаралық әлеуметтік әріптестікті қалыптастыру тәсілдеріне теориялық талдау жүргізу болыпта былады.

**Түйін сөздер.** субъективаралық әлеуметтік әріптестік, бизнестің әлеуметтік жауапкершілігі, Ұжымдық шарт, салалық шарт, Еңбек кодексі

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### **РОЛЬ МЕЖСУБЪЕКТИВНОГО СОЦИАЛЬНОГО ПАРТНЕРСТВА В РЕСПУБЛИКЕ КАЗАХСТАН**

**Аннотация.** В наше время подходы в теории социального партнерства и социальной ответственности бизнеса интенсивно развиваются. Это связано с происходящими в стране процессами. Сегодня реализуется второй этап социальной модернизации. Поэтому в данной статье своевременно рассматриваются подходы к проблеме межпредметного социального партнерства.

Поскольку в настоящее время социальное управление все еще слабо учитывает ресурсы местных сообществ и, прежде всего, человеческий, социальный и культурный потенциал, для раскрытия этих потенциалов приоритетным является превращение местного сообщества из объекта социальной политики в его предмет. Это подразумевает участие его активных членов в формировании партнерских систем взаимодействия и тем самым усиливает межсубъективное значение социального партнерства, которое до сих пор интерпретируется преимущественно как межсекторальное. Таким образом, в современных условиях социологический анализ социального партнерства должен быть направлен не на изучение отраслей, а на субъектов этого взаимодействия.

Целью статьи является проведение теоретического анализа подходов к формированию межсубъективного социального партнерства, что позволяет улучшить основы местного управления.

**Ключевые слова.** Межсубъектное социальное партнерство, социальная ответственность бизнеса, коллективный договор, отраслевой договор, трудовой кодекс.

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## INNOVATIVE MANAGEMENT OF OIL AND GAS SECTOR AS A FACTOR OF ECONOMIC DEVELOPMENT OF RK

**Abstract.** Prospects for the development of the oil and gas industry are associated with new directions in technological development, including the use of new principles for the development of complex oil fields. In the future, production combinations of a new type, energy-gas and gas-chemical, in which the fuel scheme for the use of hydrocarbon resources will be auxiliary and chemical-technological, the main, can become effective. As for the work to improve the mining complex, it should be based on a new mineral resource strategy.

The actual problem of the complex use of hydrocarbons can be solved based on regional innovation systems and subject to the creation of alternative methods for processing raw materials, allowing reducing costs, intensifying basic operations, and expanding the range of products. The republic has a huge potential of research and innovation projects, the practical implementation of which could significantly change the nature of its productive forces.

**Keywords:** innovative management, energy and gas-chemical production combinations, diversification of economic sectors, oil and gas resources and potential.

### INTRODUCTION

Compared with other sectors of the economy of Kazakhstan, the oil and gas complex is financially quite prosperous, but here too there is a problem of an acute lack of investment. The same in even more acute forms is manifested in other branches of our industry.

Often there are not enough financial resources to solve the most urgent problems, the theoretical scheme does not work, according to which the market “should arrange everything automatically”. The motivation for investing in the development of innovation is too weak. Market forces alone are not enough to secure investments. The structural policy of the state is required, the state stimulation of capital investments and innovations is necessary. According to the development strategy of the republic, the stimulation of investment activity will be carried out in the field of development of related and related industries of the mineral resource complex, petrochemical industry, engineering and other priority sectors.

Thus, it is necessary to activate the scientific and technical policy, which will make the costs of modernizing production, increasing its efficiency and competitiveness more profitable for enterprises. To solve the problems of diversification and modernization of the economy of our country, it is necessary to actively involve large domestic businesses to implement large-scale investment projects.

The oil and gas complex is able to become a leader in solving these problems, it has the necessary material resources. It is easier than in other sectors of the economy, to work out the mechanisms of state regulation, which will increase the motivation for investment in scientific and technological development. In the hands of the state tax, credit, administrative levers and legislative measures. Legislative and executive authorities working in the extractive industry need to develop new approaches to solving the set tasks.



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## MAIN PART

The main task of the industrial policy of Kazakhstan is the innovative development of production, which is the basis for raising the competitiveness of the economy, raising the standard of living of the population and ensuring state security.

In order to boost economic growth, the Government of the Republic of Kazakhstan has developed an Industrial and Innovative Development Strategy, the implementation of which will enable to achieve sustainable development of the country through diversification of economic sectors, contributing to the departure from raw materials, preparing the conditions for the transition to a service-technological economy.

In this regard, the oil and gas sector is one of the strategically important sectors of the economy, since it ensures the energy security of the country. Oil production is the main and most dynamically developing branch of the country's economy. Tax revenues from the oil and gas sector account for a third of budget revenues.

Increasing oil production and implementing a large-scale resource base growth program is one of the priorities of the oil sector in the Republic of Kazakhstan. However, the raw material orientation of the Kazakh economy necessitates the development of innovative processes in this sector of the economy. The need to introduce innovation processes is caused by existing problems in the oil sector of the Republic of Kazakhstan, which include: dependence on market conditions; growth and improvement of the raw material base; reduction of costs in all parts of the production process; ensuring environmental safety; the creation of new industries; increase the market for products, etc.

The most important prerequisite for improving the competitiveness of the economy of the country is the innovative development of priority industries that provide high-value-added products. The natural resource potential, skilled labor, the existing production infrastructure determine the broad prospects for the development of the oil sector, with further access to the world market for petroleum products.

For this, the state needs to conduct a series of activities that stimulate the development of the oil refining and petrochemical complexes, the market of engineering and consulting services in the oil and gas complex, and promote the strengthening of mutually beneficial cooperation between scientific and educational organizations in the relevant profile and industrial enterprises of the oil complex of the Republic of Kazakhstan economy.

Of course, major projects implemented in Kazakhstan with the assistance of international oil, engineering and construction contractors, in accordance with contractual requirements, modern technologies are being introduced and used in all types of operations, ranging from geophysical, exploration and drilling, hydrocarbon production and including operations on their processing and transportation. Foreign investors pledged to transfer technology and experience to the Kazakh side, to train local workers and engineering personnel.

In our opinion, the most important areas of activity of oil producing enterprises specializing in the large-scale application of innovative technologies and equipment are the following:

- development of new oil fields;
- oil production using innovative technologies for enhanced oil recovery, integrated methods for the effective development of hard-to-recover reserves;
- development, production and introduction of technologies and reagents, modern oil field machinery and equipment.

The main criteria for innovation in oil production are:

- increase in oil production using new technologies;
- modern approach to the development of hard-to-recover reserves;
- environmental friendliness of production processes;
- increase the volume of oil refining through innovation;
- a wide range of enhanced oil recovery technologies;
- a high proportion of intellectual property;
- high standards of corporate governance.

The main priority areas of innovation are:

- development of projects of intellectual fields;
- the formation of banks of innovative technologies;
- development of innovative technologies based on the use of new materials and equipment;
- the creation of multi-fuel power plants.

The purpose of the mining companies should be a constant expansion of the base of the intellectual property objects belonging to it, including the rights to technologies and technical means protected by patents, certificates for a trademark, certificates for a utility model and a certificate for a database, as well as work on an independent assessment of its objects intellectual property.

The main goal of innovative technology projects is to improve the quality of oil field development management through the informed choice and optimization of management decisions and their implementation, which will allow:

- obtain high-quality information about the operation of the reservoir, downhole and surface process equipment in real time in order to reduce the time and improve the quality of management decisions;
- to diagnose on the basis of the information received and the address designation of operations for the management of reservoir operation modes, methods of well and underground well repairs;
- to increase the coefficient of oil recovery and production of wells by optimal control of the hydrodynamic regimes of the formations and wells, the selection of optimal methods and reagents for the effects on the formation;
- to stimulate the development of innovative technologies and programs in the field of oil field development management;
- to improve the ecology of the oil and gas producing region through the creation of a monitoring system and environmentally oriented technologies involving the use of waste and local raw materials for the implementation of basic technological operations for oil production.

Thus, it is necessary to activate the scientific and technical policy, which will make the costs of modernizing production, increasing its efficiency and competitiveness more profitable for enterprises. To solve the problems of diversification and modernization of the economy, it is necessary to actively attract large domestic businesses to implement large-scale investment projects. It is necessary to attract large companies to the creation and development of 5-6 clusters in the country, to stimulate their interaction with small and medium-sized businesses, while creating more sophisticated value chains.

In our opinion, the transition to a different development model based on the formula “domestic resources, technologies, equipment, services and specialists + foreign capital” is extremely relevant for our republic. But this can be achieved only if there is a reasonable and effective protectionist policy on the part of the state.

Confirmation of the estimated oil reserves in the industrial intelligence region determines the feasibility of creating an oil refining production and construction of a petrochemical complex on its basis at Mangystau. The basis of this approach to the use of oil and gas resources is the specific composition of the region's oil: its saturation with paraffins, asphaltenes, the presence of sulfur, vanadium and other components in it, the extraction of which is of considerable interest. The construction of a plant in Mangistau Oblast for the production of construction bitumen from highly viscous Karazhanbas oil, which is an ideal raw material for producing bitumens for various purposes, including road, insulation, seems to be relevant and timely.

In accordance with the government program, it is planned to reconstruct the Atyrau oil refinery and build a complex of plants for the production of lubricating oils at the Pavlodar petrochemical plant. It is planned to load the existing production facilities with raw materials and build additional plants to increase the production of petroleum products at the Shymkent refinery plant. The conditions of the FEZ in the port of Aktau will allow developing the production of petrochemical products.

In the future, it is planned to solve the problem of producing hydrocarbon products with high added value through large-scale modernization of the main oil and gas processing enterprises. Thus, in the next 2 years, the total amount of investments in the further modernization and reconstruction of the Atyrau refinery, which is part of NK Kazmunaygas, will amount to about \$ 1 billion, to the Shymkent refinery (RKOR) - \$ 600 million, and Pavlodar refinery - 40 million. Doll.

Table - 1 Oil and Gas Sector of Kazakhstan

Estimation of reserves, geological exploration	Production	Transportation	processing	Consumption
Factors for the formation of a strategy for the innovative development of the oil and gas sector in Kazakhstan		Требования для создания стратегии инновационного развития		
1. lack of replenishment of the resource base with new hydrocarbon fields 2. competition in the energy market 3. Kazakhstan's accession to the WTO 4. Unsatisfactory state of the refining industry in high-tech processes 5. creating clusters 6. adequate legislation		1. energy security 2. risk accounting 3. ecological reliability 4. budget profitability 5. social and economic development of regions		

At the Atyrau Refinery, the total refining depth will increase to 90%, the depth of extraction of light petroleum products will be 50%, gasoline will be produced that meets Euro-3 standards. will serve as raw material for gas chemical complex in Atyrau. After 2010, it is assumed that all three plants will switch to the production of Euro-4 and Euro-5 standard fuels.

Table 2 - Strategic Program for the Innovative Development of the Oil and Gas Sector of Kazakhstan

Strategic program for the innovative development of the oil and gas sector of Kazakhstan:
1. Exemption of companies from taxation; 2. Development of incentive taxation; 3. Development of production in old and new fields using innovative technologies; 4. Creating vertically integrated structures 5. Modernization of oil refineries with new innovative equipment 6. Development of modern innovative technologies for the processing industry 7. Improving the quality of exploration with the introduction of three-dimensional modeling methods 8. Creating a system of state support and incentives for the oil and gas sector

One of the main driving "locomotives" of industry development is the development of the Kazakhstan sector of the Caspian Sea (KSKM), in which, according to preliminary estimates, the total hydrocarbon reserves amount to 8.0 billion tons and which is expected to provide the most significant increase in hydrocarbon production in Kazakhstan.

The development of hydrocarbon production in the Caspian Sea will contribute to the formation of a domestic raw material base for the petrochemical industry. The deepening of oil and gas processing will allow to produce about 200 varieties of polymer products that are used in almost all sectors of the economy and in everyday life. The development of the CDC in this direction will create the conditions for the formation of a diversified transnational corporation.

The economically developed countries in the period of formation of their economies used the cluster method as the most effective approaches in the progressive and rational development of their productive forces. The benefits for innovation and productivity growth are more pronounced in a cluster than in isolated companies. Participation in the cluster benefits firms in accessing new technologies. Cluster firms quickly learn about the progress in technology, the availability of new components and equipment, new concepts in service and marketing, etc. They are helped by ongoing relationships with other members of the cluster, mutual visits and personal contacts.

In our opinion, one of such regions where there are all favorable prerequisites for the creation and functioning of such clusters is Western Kazakhstan. Potential geological reserves in subsalt deposits of the Aktyubinsk region, the Caspian shelf zone, the subsoil of Mangyshlak, the Buzachi peninsula and the near-Caspian lowland zone of the Caspian lowland allow us to consider Western Kazakhstan as one of the promising oil production bases of the country.

On the territory of this region there is the Atyrau Oil Refinery, Petrochemical Plant JSC Polypropylene, as well as Aktau Plastics Plant, gas processing plants in the cities of Zhanaozen and Zhanazhol. The creation of this cluster is also facilitated by the availability of personnel, scientific and technical personnel, production, communication and financial infrastructure.

The combination of factors of production of enterprises of the oil sector is a competitive advantage among other sectors of the economy and is the basis for the development of innovative processes in this sector of the economy.

In our opinion, the clusters “Oil and Gas Engineering” and “Transport Logistics” that are being formed on projects, in our opinion, should be combined into a single oil cluster. Combining the cluster “Oil and Gas Engineering” in the oil cluster is justified by the fact that the implementation of large investment projects will cause a great demand for high-tech equipment and engineering products for exploration, drilling of oil and gas fields, their transportation, storage and deep processing.

The implementation of innovative projects in the oil industry is associated with a certain risk. The nature of innovation risks is influenced by industry characteristics, which include: the nature of the production process; dependence of production on natural and climatic factors; the formation of organizational structures of companies; the formation of rental income; dependence on export size and structure; business conditions; taxation system.

One of the ways to implement this direction, as noted by the President of the Republic of Kazakhstan, is the creation and development of industries in the border areas (Russia and China). To do this, it is necessary first to conduct complex geological research in the border areas of Kazakhstan with neighboring countries, which will allow evaluating their mineral and raw material potential. This, in turn, will serve as the basis for rational and effective long-term planning in the creation of production capacities in border areas. In this direction, studies are already being conducted with China and Russia. It is necessary to expand them and give them a systemic character, bring them to the interstate level and give them the status of international studies.

State regulation of the economy is currently carried out in almost all countries. As world experience shows, government intervention is observed in those areas where the operation of market mechanisms is insufficient or conflicts with the interests of society. This primarily refers to innovation, which, according to the Concept of Interstate Innovation Policy of the Member States of the Commonwealth of Independent States (CIS), refers to the process aimed at implementing the results of completed research and development, or other scientific and technological achievements product sold on the market to a new or improved technological process used in practical activities, and also related additional research and development.

## CONCLUSION

In a modern market economy, the value of innovation has greatly increased. This is due to the fact that in a market economy, innovation is a powerful anti-crisis factor, since the use of new technologies, new types of technology, as well as new methods of organizing management and production, leads to lower production costs, lower prices, higher profits, to stimulate new needs, to increase the reputation (image) of the company, and finally to conquer new markets.

Innovations in the oil sector are the result of a social, techno-economic process aimed at changing the original structure of the production mechanism, i.e. the transition of its internal structure to a new state: for products, technology, means of production, professional and qualification structure of the labor force, organization ; in order to obtain both economic and environmental effects.

Under these conditions, the goal of the strategy of innovative development of the agro-industrial complex of the Republic of Kazakhstan for the period up to 2020 is to accelerate the growth rate of agricultural products based on increasing the effective use of resource potential and competitiveness of products, solving social problems in rural areas and reducing the gap in the standard of living of rural and urban population.

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### **ИННОВАЦИОННОЕ УПРАВЛЕНИЕ НЕФТЕГАЗОВЫМ СЕКТОРОМ КАК ФАКТОРОМ ЭКОНОМИЧЕСКОГО РАЗВИТИЯ РК**

**Аннотация.** Перспективы развития нефтегазовой отрасли связаны с новыми направлениями в технологическом развитии, включая использование новых принципов разработки сложных по составу месторождений нефти. В перспективе эффективными могут стать производственные сочетания нового типа - энергоугленефтегазохимические, в которых топливная схема использования ресурсов углеводородов будет вспомогательной, а химико-технологическая - основной. Что касается работы по совершенствованию горнопромышленного комплекса, то она должна базироваться на новой минерально-сырьевой стратегии.

Актуальная проблема комплексного использования углеводородного сырья может быть решена на основе региональных инновационных систем и при условии создания альтернативных способов переработки сырья, позволяющих снизить затраты, интенсифицировать основные операции, расширить ассортимент выпускаемой продукции. В республике имеется огромный потенциал научно-инновационных проектов, практическая реализация которых могла бы существенно изменить характер ее производительных сил.

**Ключевые слова:** инновационное управление, энергоугленефтегазохимические производственные сочетания, диверсификации отраслей экономики, нефтегазовые ресурсы и потенциал.

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### **ҚР ЭКОНОМИКАЛЫҚ ДАМУ ФАКУЛЬТЕТІНІҢ МҰНАЙ ЖӘНЕ ГАЗ СЕКТОРЫН ИННОВАЦИЯЛЫҚ БАСҚАРУ**

**Аннотация.** Мұнай-газ саласын дамыту перспективалары технологиялық дамудың жаңа бағыттарымен, соның ішінде кешенді мұнай кен орындарын игерудің жаңа қағидаларын қолданумен байланысты. Болашақта көмірсутек ресурстарын пайдаланудың отын схемасы қосалқы және химиялық-технологиялық болып табылатын жаңа типті, энергетикалық газ және газ-химия өндірісінің комбинациясы тиімді болады. Тау-кен кешенін жетілдіру бойынша жұмыстарға келетін болсақ, ол жаңа пайдалы қазбалардың стратегиясы негізінде құрылуы керек.

Көмірсутегін кешенді пайдаланудың өзекті мәселесі өңірлік инновациялық жүйелер негізінде шешілуі мүмкін және шығындарды төмендетуге, негізгі операцияларды күшейтуге және өнімдердің спектрін кеңейтуге мүмкіндік беретін шикізатты қайта өңдеудің балама әдістерін құруға негізделген. Республикада ғылыми-зерттеу және инновациялық жобалардың үлкен әлеуеті бар, оның практикалық іске асырылуы оның өндірістік күштерінің табиғатын айтарлықтай өзгертеді.

**Түйін сөздер:** инновациялық менеджмент, энергетика және газ-химия комбинаттары, экономикалық секторларды әрараптаңдыру, мұнай-газ ресурстары мен әлеует.

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## **CREATING SMART UNIVERSITIES AS A CHALLENGE TO MODERNITY**

**Abstract.** The main trends in modern society is the rapid development of information and computer technologies (ICT), communication channels and means of transmission and exchange of information, the integration of knowledge and technology, an increase in the number of open innovations, the transition to new forms and methods of organizational activity. This brings the world to a new “evolutionary revolution”, transforming the information society into what is commonly called the term smart society. In the era of the information society, the most competitive will be universities that can implement the ideas of creating a smart university.

The article discusses the international experience of foreign scientific communities in the study of the structure, properties and functions of smart universities. The problems of ensuring the competitiveness of universities by embedding the system of higher education in modern market conditions through the use of modern information and communication technologies and the transition from the traditional management structure to process management, as well as the conditions and nature of the introduction of changes in the educational system of the Republic of Kazakhstan are considered.

**Keywords:** Smart University, Smart Teachers, Smart Pedagogy, industrial revolution, innovative technologies.

**Introduction.** In the Message to the people of Kazakhstan of the President Kazakhstan N.A. Nazarbayev there is important point in which his told about reconstruction all spheres of life on the basis digital technologies, to be exact about transition to "the Industry 4.0" [1].

In present time in scientific community the concept of the fourth industrial revolution, based on these changes in the system preparation highly professional shots for progressive economy of Kazakhstan in the conditions transition to Smart society and digital technologies is actively discussed.

Relying on the international experience it is possible to tell that the educational institutions capable to embody the ideas of creation the Smart university would be the most competitive. They can provide base for realization in Kazakhstan a concept as Smart education, Smart economy and Smart society.

It is obvious that in the conditions of development society the educational paradigm will also change. The smart universities will perform new functions. Respectively, requirements to electronic training courses which provide needs of pupils for educational resources will change.

Objective of this research is theoretically to prove properties of the smart university, its structure and components and also for check it efficiency use experimentally.

**Materials and methods.** The retrospective analysis of foreign literature where researches problems of transformation digital technologies in an education system and their developments were described is carried out. Also character and conditions their influence on the structural macroeconomic processes in various innovative digital systems which are constantly in the center attention of scientific community. The significant contribution in the solution these problems are made such scientists as Vladimir L., Dzhefry P., Robert J., Lakhmi K., Palagin A.V., K.S. Malakhov and many others.

The scientific references, conclusions and recommendations which are contained in works of domestic and foreign scientists which researches were used in writing this work have huge value for studying the direction and the nature transformational changes in conditions of the fourth industrial revolution. Also it would be desirable to note how shows the analysis of literature, features development

and occurrence of crises in recent years, this question is studied not enough that does this theme relevant. Not so long ago various researchers and developers began to present the visions to SmU (smart university), SmC (smart class), SLE (smart learning environment), a smart campus, the smart teacher, smart pedagogics, etc.; the summary of several remarkable publications on these themes are the review of classical literature is given below.

**Results.** Smarts University (SmU) are the university at which combined the internet resources and technological innovations as in new quality processes and results of educational, research, commercial, social and other university activity.

Tikhomirov presented the smart education vision as follows: "The smart university is a concept which includes complex modernization of all educational processes. Smart education is capable to provide the new university where the ICT set and teachers lead to absolutely new quality results the university activity" [2]. Also it would be desirable to note what according to Tikhomirov can be understood that the concept Smart in education involves emergence such technologies as Smart Board (clever boards), Smart Screen (clever screens) and wireless Internet access from everywhere. It in the turn will result in availability of the necessary information to students, but follow to consider that with it the so-called "wave of information" which will need to be filtered and taken active users only a small part this mass of data will also come.

It should be noted that many authors consider that when determining the clever university it is also necessary to consider its components as: "Smart Learning Environments, Smart Education, Smart Teachers, Smart Pedagogy, and Smart Learner".

Smart Learning Environments (SLE) is using number digital technologies for support training, education and studying; they also give the visible index on how future educational environment can be created. Thus, while technologies continue to progress, SLE receive the growing attention from research community [3].

Mona Denden and Ahmed Tlili consider that for present generation the same schemes and processes training on which their fathers and mothers were engaged became outdated. Therefore they decided to change the program training, introducing Smart Learning Environments, thereby facilitating digestion material, without loss volume and quality of the provided information [4]. How did it at them turn out? The answer it was quite simple, and the decision quite clever. Though the most often used method for modeling to the identity the pupil is the self-report with use questionnaires, in the research they presented and checked recently developed basis for implicit modeling persons of pupils in the game educational environment with use their game behavior and innovative technologies. In particular, their research allocates several game Smarts environment which need to be collected for modeling the personality and also a way of collecting these Wednesdays with use of various game scenarios which researchers and practicing can use when developing the games. It can be considered as the training environment supported by technology which provides adaptation and provides the corresponding support in the right places and in due time depending on needs of certain pupils that can be defined by the analysis their behavior in the course training, progress, online and in real time. Authors compared 2 groups, the first are them studied by traditional methods training in traditional educational environments, other group gained knowledge in Smart environments with the same similar methods teaching. Results of their research were as follows: the 2nd group in comparison with 1 group, had 23% above than a GPA, the volume of the memorable information grew by 13% and for 28% rose total number persons interested to profound studying subject gone to SLE.

Scientists from the People's Republic of China Ri Ting Ru and MinggHua Yu marked out ten key features for smart educational environment for students to whom are necessary of improvement knowledge and skills training [5]:

1. Information on location: learn location of the pupil in real time;
2. Accounting a context: to investigate various scenarios and information on student activity;
3. Socially awareness: feeling the social relations;
4. Compatibility: to establish the standard between various resources, services and platforms;
5. Seamless connection: provides continuous service at connection of any device;
6. Adaptability: to advance an educational resource depending on access to training, preferences and demand



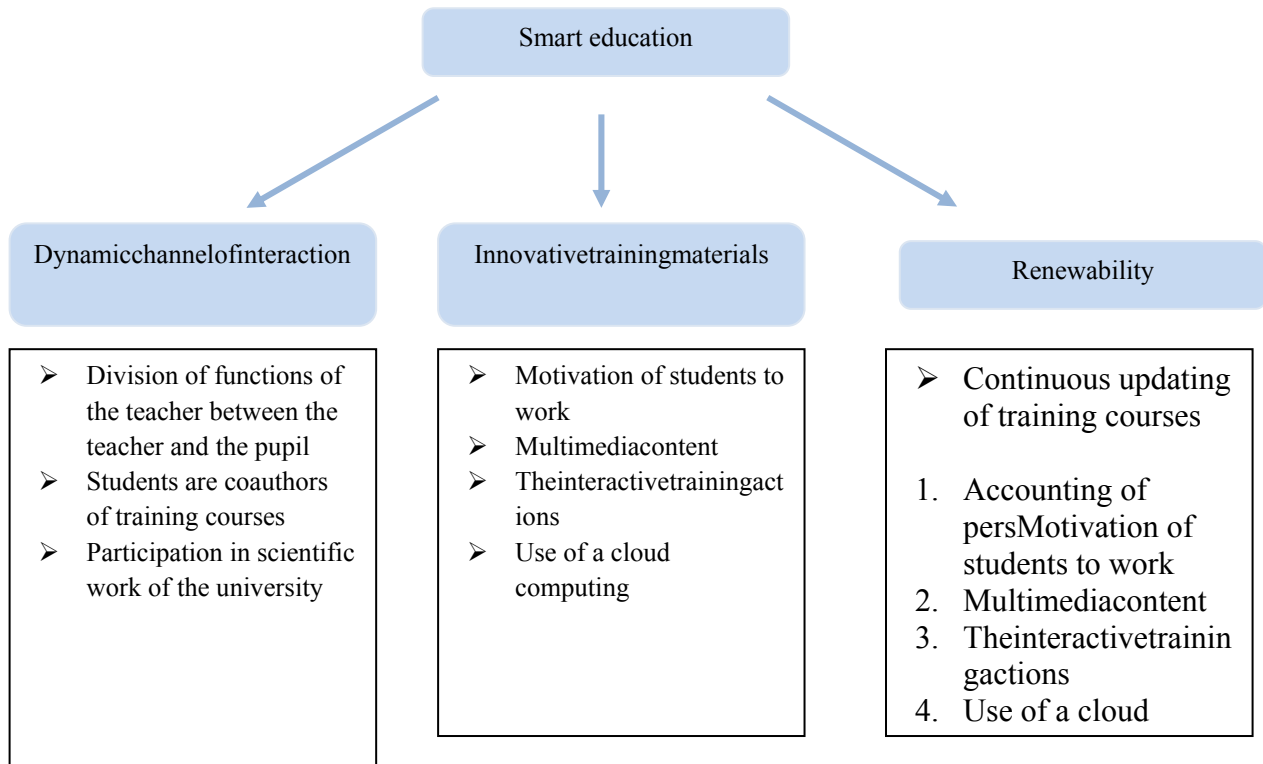
7. Distribution is universal: to predict pupils needs until they are not accurately expressed, to provide a visual and transparent way of access to educational resources and services for pupils;

8. Full record: to write down data on a way training and to deeply analyses then to give a reasonable assessment, the offer and to help on demand;

9. Natural interaction: transfer feelings of multimodal interaction, including recognition the situation and look;

10. High involvement: immersion in polydirectional experience training in Wednesday interaction with rich technology.

Smart Education (SmE) is main "Smart" process of the smart university.



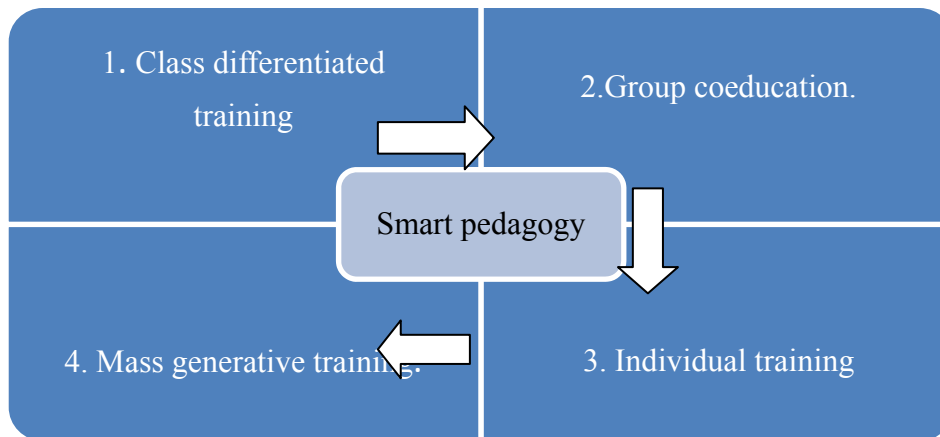
Scheme No. 1 - Three basic functions of smart training [6]

During in an era information society, development concept of the Industry 4.0, will appear the most competitive the higher education institutions capable to realize the ideas creation of smart university. They can make base for implementation in Russian conception of smart-education, smart-economics and smart society [7].

In scientific works from South Korean scientists Cheyon Ha and Cu-yong Li is specified that the research and implementation intellectual training in the state education is a significant step on the way to improvement the process and quality of training. During the research they studied the different variables connected with teacher's views of intellectual training. Though the persons responsible for development policy invested heavily in schools for creation the best technological infrastructure, intellectual training is not completely implemented at real schools. Schools and classrooms made changes in process of development technologies. Nevertheless, all promises which intellectual training tries to give in classrooms are not quite noticeable because one technology cannot lead to changes in pupils training. Therefore, to create a stable basis for the successful smart educational environment at schools, politicians and administrators should support teachers and encourage them to use computers and others new technologies in a class. This support includes change of training programs from traditional lectures on the interactive classes which were more oriented to students. Also their research shows how psychological variables teachers are closely connected with successful implementation of smart training in concrete classes [8].

Smart teacher (SmT) is the teacher who is keeping up to date, able to use innovative technologies in the course of the pupils training, actively improving the professionalism and skills. The smart university depends on comprehensive strategy, including people, objects and continued support teachers and also effective using technologies. SmU encourage clever teachers and provides them smart tools and continued support for performance work, at the same time estimating their pedagogical efficiency by means the clever forms of assessment.

With fast development of technologies more and more flexible and effective training methods for students develop. Researches in the field of cognitive science showed that knowledge and skills are closely bound [9]. Training processes have to be adapted according to educational pupils needs including requirements, experience, interests, preferences, etc. [10]. Change of traditional training methods and the students environment led to emergence "Smart pedagogy" (SmP). The intellectual pedagogics system includes differentiated training at class level, group coeducation, individual training and mass generative training.



Scheme №2 - Four-level structure of SmP [5]

1. The differentiated training is the process of approach to teaching and training for pupils with different abilities in one class.

2. Group coeducation is a situation when two or more persons study or try to study something together.

3. Individual training is the personalized training defined as adjustment of speed (individualization), correction approach (differentiation) and connection to interests and pupils experience for satisfaction pupil needs and support for development abilities to training among certain pupils [11].

4. The fundamental concept of generative training includes creation and improvement personal intellectual constructions about the environment. The purpose consists in allowing pupils to participate in creation the transferred content and to form contexts training and transfer for creation the intercontextuality. When students study online, they can connect new information with old, acquire significant knowledge and use the metacognitive abilities [12].

At integration all these aspects and processes leads not only training process, but also process of storing large volumes to the obtained information improvement.

The 21st century demands from people skills and competence effectively to function at work and in free time. Education has to prepare labor for demand. Thus, the purpose of clever education consists in bringing up clever pupils for satisfaction requirements work and life in the 21st century. From here also the concept about Smart Learner (clever pupils (SmL)) is the persons trained in the conditions the smart university competent of the disciplines with competitive qualities in labor market follows. Based on China researches scientists [13], they allocated four levels of clever abilities which students have to seize to satisfy requirements in modern society.

1. Basic knowledge and main skills. The basic knowledge and the main skills relating to knowledge and skills of the main objects, such as STEM, reading, letter, art, etc. Possession of these main objects is important for student's success.

2. Comprehensive abilities. Comprehensive abilities are understood as abilities to critical thinking and the solution for real problems. These abilities allow the student to use the corresponding reasoning's and complex thinking in various difficult situations.

3. Individually experience. This ability demands that students seized information and technological literacy, creativity and innovative skills on personal experience.

4. Collective thinking. The mode work which demand communication and cooperation. Collective intelligence belongs to knowledge which is accumulated by group people to communication and collaboration.

Above-mentioned abilities are grouped in knowledge, skills, the relations and values. If the student seizes all these abilities, then he will be considered by right as "the clever pupil".

Scientists of the East Kazakhstan State University named after S. Amanzholov designed the transition to the university into the Smart-University model in the main areas:

- changing the organizational structure of the university, the network management and the formation the electronic network interaction system between the teacher and the student, including through the active use the Internet resources with the transition to process management and resource renewal;

- the use in the educational process innovative information and communication technologies that allow the transition from the traditional system to distance education for a flexible system in the formation of individualized educational trajectories using educational content from the best world and domestic universities, which is in the public domain;

- the use of modern management and analytical information systems and related infrastructure in the management of the scientific and educational process, ensuring the implementation the ideas Industry 4.0.[14].

Currently in East Kazakhstan State University named after S. Amanzholov makes the transition from the classical model university to the model Smart-university. The basis for such a transition was the creation single information and educational space of the university on the basis digital technologies, i.e. high school environment.

Smart universities are the key to creating an intellectual nation; it is foundation for our country's smart cities, which will eventually create smart Kazakhstan.

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**Conclusion.**Today development innovative technologies leads to change in education that corresponds to transition to the fourth industrial revolution. Based on the international experience our foreign colleagues, this transition will lead to introduction of Smart industry. For successful introduction and function such processes as in the Republic of Kazakhstan, it is required to create a stable basis for successful SLE in educational institutions, and politicians and administrators to have to support SmT and encourage SmL for strengthening the principles and features the SmE. A key element for the concept SmU is smart learning, which is impossible without accumulated e-learning experience. The main task for smart learning is to create conditions to obtaining new efficiency in the educational process. New efficiency is achieved by students studying in the university program, teachers and the university as a whole. The use of smart learning requires an integrated approach, including an organizational approach, technological and pedagogical. At the heart of smart learning is a strategic decision for the leadership to create and maintain conditions to the development of smart learning, which is ensured by the adoption a university strategy or roadmap. The technological approach should solve the problem of interaction participants in the educational process, both of them in the educational environment and beyond. Successful implementation and operation the smart universities require support from the state, which can lead to the expansion and prosperity the educational system in the Republic of Kazakhstan.

Also we reviewed the strategic management of universities, their competencies and missions.

The development strategy of the research activity in Narxoz is aimed at positioning the university as a Innovative Economic University, strengthening the scientific potential the University of Narchosis, occupying worthy places in world rankings, obtaining international accreditation, enhancing the research competence teaching staff and students, providing impact on solving social and economic problems in our country and Central Asian countries through research and development.

Kazakh Ablai Khan University is a modern innovation-oriented university of internationally-adaptive type as a single scientific and educational complex that provides training for competitive high-quality specialists to ensure the multi-vector international cooperation of the country in implementing the development strategy of the Republic of Kazakhstan.

The Turan University being an innovative entrepreneurial university, will prepare specialists focused on entrepreneurship, innovation, able to adapt to changing socioeconomic conditions, and secure a leading place among domestic universities and competitive positions in the global market for educational services and research programs using innovative technologies in the learning process.

KazNMU named after Asfendiyarov being an innovative medical university participates in the formation a new generation of medical workers with a level professional training, technological skills and competitiveness that meet modern priorities and future challenges for Kazakhstan and world health in the 21st century.

It should be borne in mind that for the successful implementation innovatively progressive technologies in the education system of Kazakhstan, it is necessary to generalize the concepts of smart universities and smart education for the best functioning in various fields of activity and education.

Thus, the presence higher quality education is a necessary condition for the adaptation a young person to the solution a wide class of vital tasks. SMART education allows expanding the personal possibilities development in solving these problems in situations a changing world. It is this, in our opinion, which forms the creative potential to the future specialist, so necessary in modern conditions.

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#### **ҚАЗІРГІ ЗАМАННЫҢ ШАҚЫРУЫ РЕТІНДЕ SMART УНИВЕРСИТЕТЕР ҚҰРУ**

**Аннотация.** Қазіргі заманғы қоғамдағы негізгі үрдістер ақпараттық және компьютерлік технологиялардың (АКТ), байланыс арналарын және ақпарат алмасу және ақпарат алмасуды, білім мен технологияны интеграциялауды, ашық инновациялар санының артуын, ұйымдастырушылық қызметтің жаңа нысандары мен әдістеріне өтуді жедел дамыту болып табылады. Бұл бүкіл әлемді жаңа «эволюциялық революцияға» айналдырып, ақпараттық қоғамды әдеттегі «ақылды қоғам» (ақылды қоғам) деп атайды. Ақпараттық қоғамның дәуірінде ең бәсекеге қабілетті университеттер болады, олар ақылды университетті құру идеяларын енгізе алады.

Берілген мақалада шет елдердегі ғылыми қоғамдардың ақылды университеттер қызметі, құрылысы мен ерекшеліктерін зерттеудегі халықаралық тәжірибесі қарастырылады. Қазақстан Республикасының білім алу жүйесіне өзгерістер енгізудегі шарттары мен өзгешеліктері.

**Түйін сөздер:** Smart University, Smart Teachers, Smart Pedagogy, өндірістік революция, инновациялық технологиялар.

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#### **СОЗДАНИЕ SMART УНИВЕРСИТЕТОВ КАК ВЫЗОВ СОВРЕМЕННОСТИ**

**Аннотация.** Основными тенденциями в современном обществе становится стремительное развитие информационно-компьютерных технологий (ИКТ), каналов коммуникации и средств передачи и обмена информацией, интеграция знаний и технологий, увеличение количества открытых инноваций, переход на новые формы и методы организационной деятельности. Это подводит мир к новому «эволюционному витку», трансформируя информационное общество в то, что сегодня принято обозначать термином smart-общество (smart-society). В эпоху информационного общества наиболее конкурентоспособными окажутся вузы, способные воплотить идеи создания smart-университета.

В статье рассматривается международный опыт зарубежных научных сообществ в изучении строения, свойств и функции умных университетов. Рассматриваются проблемы обеспечения конкурентоспособности

вузов путем встраивания системы высшего образования в современные рыночные условия через применение современных информационно-коммуникационных технологий и перехода от традиционной структуры управления к процессному управлению, а также условия и характер внедрения изменений в образовательную систему Республики Казахстан.

**Ключевые слова:** Smart University, Smart Teachers, Smart Pedagogy, промышленная революция, инновационные технологии.

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## **ANALYSIS OF THE DEVELOPMENT OF THE SKI TOURISM**

**Abstract.** Tourism as an aggregated sector of economic development is a socially oriented innovation complex of directions that ensures the replenishment of the state budget, the growth of employment and self-employment of the population, the creation of conditions for the restoration of efficiency, maintenance and strengthening of people's health in the maximum environmental safety regime.

The tourism industry is one of the largest and fastest growing industries in the world. The global tourism industry forms 10% of world GDP and creates every 11th working position. Even in times of crisis, tourism gives an annual increase of about 4-5%.

According to forecasts of the World Tourism Organization, by 2030, international tourism will grow by 3.3% per year and will reach 1.8 billion tourists.

Ski tourism is a very important segment of today's highly profitable domestic and foreign tourism market. The corresponding data indicate that about 2,000 ski resorts operating in about 80 countries around the world have about 6 million housing bed spaces for those who are engaged in winter sports.

The article analyzed the distribution of ski resorts, ski visits at developed ski resorts, the number of international skiers who entered, also it contains the comparative analysis of the level of development of the ski industry in Central Asia, as well as an overview of the development of ski resorts.

**Keywords:** tourism, ski resort, ski resorts, analysis, distribution.

### **Introduction**

As a rule, cross-border winter tourism is practiced at major ski resorts located in tour destinations that have long-standing tradition in winter sports, and small ski resorts depend mainly on domestic demand. Quite a lot of mature ski tours are concentrated in Western Europe, the United States and Japan. Competitive development of the ski resort and its effective management is associated with high costs, both in terms of investment and maintenance.

Since the practice of ski tourism and the establishment of ski resorts began to develop around the world, quite a lot of time has passed. Soon this sport in such a developed form, which implies the presence of well-equipped bases for training, will turn into a whole century. So alpine skiing tourism is already a familiar, traditional form of recreation and sports, which for some regions of the world and Europe has become something of a national product. The national product, which contributes to the improvement of living standards in some areas, refreshes the situation, attracts investors and tourists, enhances local prestige, and makes a significant jet of additional financial flows into national economies. Of course, ski tourism itself and love for it are not capitals that could be seen with the naked eye against the background of the state budget of any country. However, this type of recreation and sports is indirectly capable of influencing state and local prestige, attracting investments and giving new impetus to the development of certain administrative and geographical areas. So, for example, it was the development of the field of ski tourism that led to the emergence and development of such industrial and commercial industry as a service of ski tourism in a number of countries. And this is really an industry in the full sense of the word, not just a few tourist bases or factories for the production of special equipment.

### General part

This article analyzed the distribution of ski resorts and ski-lifts around the world with an emphasis on the regions of Central Asia, including the following countries: Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, Pakistan, Iran, Georgia, Armenia and Azerbaijan[1].

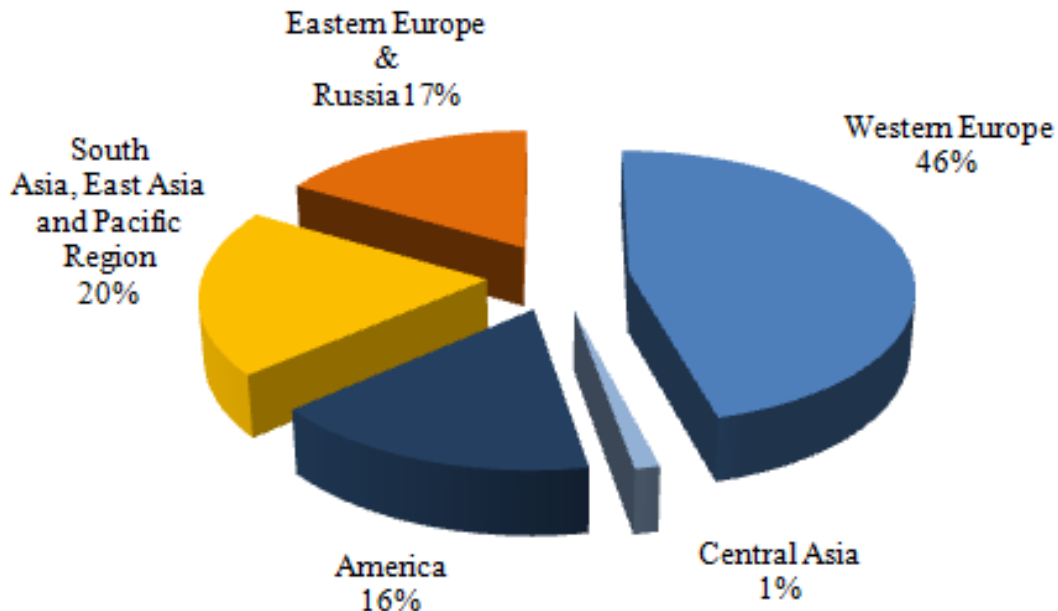


Figure 1 - Analysis of the distribution of ski resorts by region

Table 1 - Comparative analysis of the level of development of the ski industry in the world

Country	Number of zones for skiing	Number of zones with 4 ski-lifts	Number of large ski resorts (> 1 million skiers)	Number of ski-lifts	Number of skis visits	Skiers ski-lift	Local participation rate (% of population)	Share of foreigners	Foreign visitors
Austria	254	199	12	3,028	52,382,000	17,299	36.0%	66.0%	1.62
Canada	288	73	1	922	18,987,600	20,594	15.0%	14.3%	0.17
Finland	76	30	0	374	2,240,000	5,989	24.0%	17.0%	0.11
France	325	233	14	3,685	55,539,200	15,072	19.0%	28.0%	0.21
Germany	510	82	0	1,827	11,460,000	6,273	14.0%	10.0%	0.05
Italy	349	216	4	2,127	23,460,000	11,030	8.0%	15.0%	0.08
Japan	547	280	0	2,422	28,996,589	11,972	9.0%	3.0%	0.13
Sweden	228	69	1	820	6,430,800	7,842	20.0%	8.0%	0.10
Switzerland	240	102	7	1,774	27,276,371	15,376	37.0%	50.0%	1.64
USA	481	354	7	2,970	57,745,399	19,443	4.3%	5.6%	0.06

Analysis of the distribution of ski resorts around the world showed the following [2]:

- By the number of ski-lifts, the ski industry is concentrated in the region of Western Europe, followed by America, South Asia, East Asia and the Pacific Region, Eastern Europe and Russia. The largest number of ski-lifts is concentrated in the Alps (almost 40% of the total number of lifts around the world), while France and Austria have the largest numbers (25% of the total number of ski-lifts around the world);

- South Asia, East Asia and the Pacific Region have a significant share in the total number of ski resorts (20%), while Japan has the largest number of ski-lifts (65% of all ski lifts in the region), followed by China. China has a significant number of ski resorts, but most of them are small areas for skiing, on which there are only a couple of ski-lifts, and which cannot be considered as ski resorts;

- Central Asia has an inappropriate share in the total number of ski resorts / ski-lifts, with the largest number of ski-lifts concentrated in Iran, Kyrgyzstan and Kazakhstan;

The countries with the largest number of ski-lifts in the world are France, Austria, USA, Japan, Italy, Germany and Switzerland;

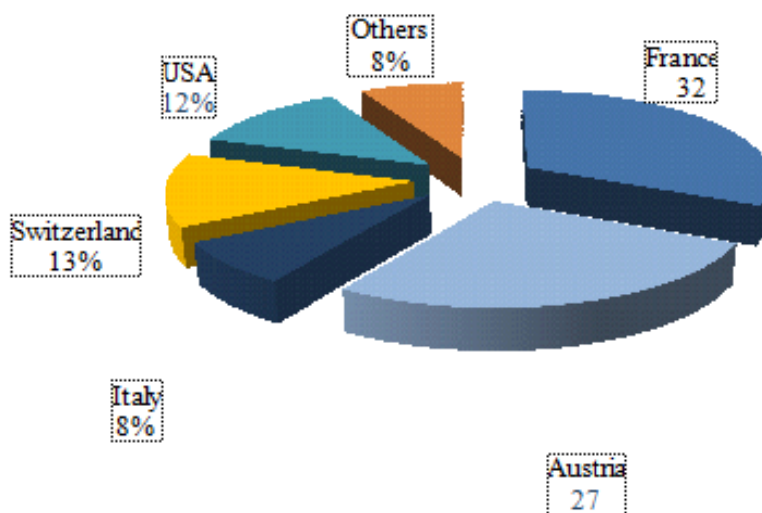


Figure 2 Distribution of major ski resorts (over 1 million skiers)

Large ski resorts (with more than 1 million ski visits) are located in France, Austria, USA, Switzerland and Italy;

- Major ski resorts (TOP 10 leading ski resorts by number of ski visits per day) are located in the Alpine region, mainly in France and Austria (La Plagne (France), SkiWelt Wilder Kaiser (Austria), Les Arcs (France), Courchevel-Meribel-Mottaret (France), Kitzbühel (Austria), Ischgl (Austria), Saalbach (Austria), Alped'Huez (France), Val Thorens (France)) and one ski resort in Canada (Whistler Blackcomb) [3];

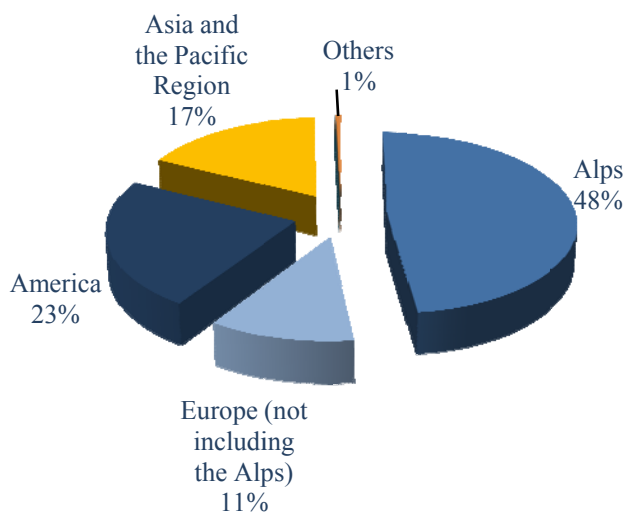


Figure 3 The structure of skiers visits (on average over the past 10 years)



- The leading region in the world, in terms of ski visits per day, is the Alpine region (Austria, France, Switzerland, Italy), which accounts for almost half of the total ski visits;
- An analysis of the number of international skiers who have entered shows that Austria, France, Switzerland and Italy (the Alpine region) attract the largest number of foreign skiers. However, the majority of foreign skiers are tourists coming from other European countries;
- There are data on the number of international skiers who arrived in the United States, but most of them came from Canada, and only a few percent are foreign visitors. Most of the foreign skiers arriving in North America are skiers whose visit is determined by the status of the ski resort - they visit famous ski resorts such as Aspen, Vale, Whistler, etc. Similarly, international skiers arriving in Canada mostly come from the United States, and only a small percentage are foreign visitors;
- Japanese ski resorts account for up to 5% of international skiers, with most of them coming from China, South Korea and Australia. South Korean ski resorts have a higher percentage of international skiers compared to Japanese ski resorts, with most of them coming from China;

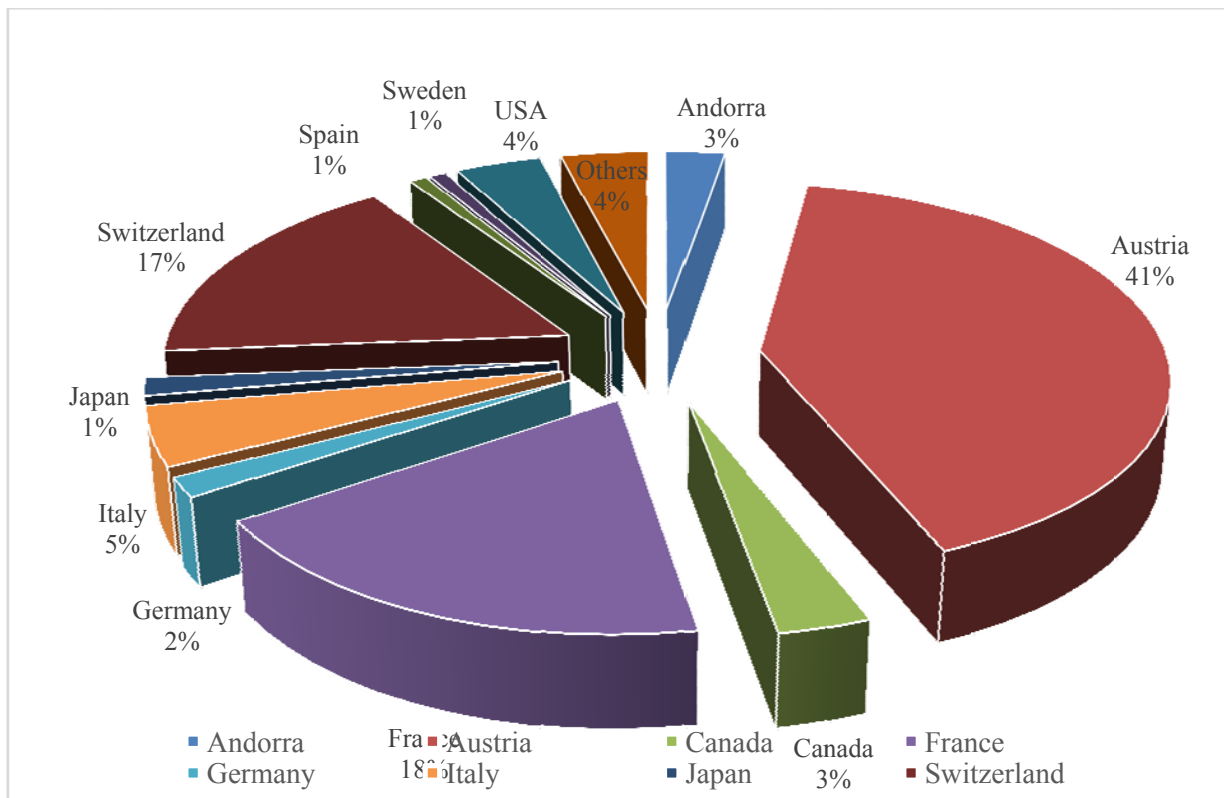


Figure 4- Estimated number of foreign skiers entered

The majority of international departing skiers are in European countries, with the largest number of departing skiers in the UK and Germany. Despite the fact that most of the international skiers choose places for skiing in other European countries, which are mainly concentrated in the Alps, there are also those who choose new developing ski resorts in Central and Eastern Europe [4].

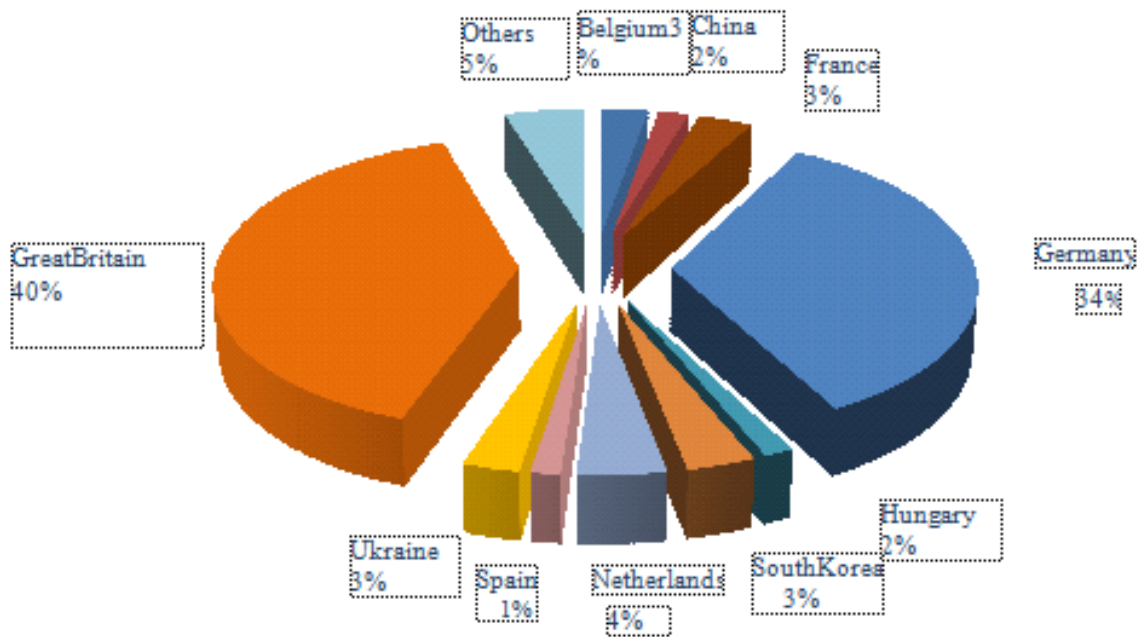


Figure 5- Estimate of the number of departed foreign skiers

Only a few percent of the total number of European international skiers choose the USA / Canada for skiing. Also, a small number of European international skiers choose ski resorts in Asia; In addition, international skiers from Asia (primarily from South Korea and China) choose other Asian countries for skiing (Japan, South Korea). At the same time, there are a small number of international high-income skiers from Asia who travel to famous ski resorts;

Table 2 - Comparative analysis of the level of development of the ski industry in Central Asia

Country	Number of zones for skiing	Number of zones with 4 ski-lifts	Number of large ski resorts (> 1 million skiers)	Number of ski-lifts	Number of skisits	Skiers / ski-lift	Local participation rate (% of population)	The proportion of foreign skiers
Armenia	3	1	0	7	50 000	7 143	2.0%	2.0%
Azerbaijan	2	1	0	7	50 000	7 143	0.5%	0.0%
Georgia	5	2	0	14	100 000	7 143	2.0%	10.0%
India	15	1	0	22	200 000	9 091	0.1%	1.0%
Iran	19	4	0	51	500 000	9 804	1.0%	1.0%
Kyrgyzstan	16	1	0	24	100 000	4 167	1.0%	20.0%
Pakistan	2	0	0	8	80 000	10 000	0.1%	5.0%
Tajikistan	3	0	0	2	20 000	10 000	0.2%	0.0%
Turkey	25	6	0	102	1 000 000	9 804	1.0%	15.0%
Ukraine	41	8	0	98	800 000	8 163	2.0%	5.0%
Uzbekistan	2	1	0	8	80 000	10 000	0.2%	15.0%

A comparative analysis of the level of development of the ski industry in Central Asia (including Turkey and India) shows that Ukraine has the most developed ski industry, including 8 ski resorts with more than 4 ski-lifts, followed by Turkey and Iran. The skiing zones in Kyrgyzstan (one of the ski resorts has more than 4 ski-lifts) have a relatively high proportion of foreign skiers, due to the large number of foreign skiers coming from Kazakhstan and Uzbekistan due to the competitive prices offered [5];

In Central Asia, there are no major ski resorts with more than 1 million ski visits. The largest number of ski visits is in Turkey, followed by Ukraine and Iran. However, due to lack of data and consistent methodology, the exact number of ski visits cannot be counted in quantitative terms;

It should be noted that the Central Asian region is a developing market for the development of the ski industry. Due to the limited supply and growth of the economies of the countries of Central Asia, developers and operators in the ski industry are increasingly considering commercial opportunities in the Central Asian region.

The following criteria were analyzed for the following criteria [6]:

- Sizeandscale
- Profitability
- Methodologyofdevelopment
- in order to identify the most successful ski resorts around the world.
- Sizeandscale

The size and scale of the ski resorts is determined according to the following criteria:

- Capacity of the ski arena (capacity of the ski-lifts uphill, skiers contemporary capacity - SCC, length of the slope, surface of the ski slope)
- Generating capacity of the base area (number of sleeping accommodations in public and private hotels)

The criteria considered are some of the success factors, but should be considered relative to other key factors. We found that both "large" and "small" ski resorts can be profitable and unprofitable. Thus, it is impossible to determine whether a ski resort is "successful", based on its size and scale. However, it should be noted that the balance of size and scale with other factors is important.

Profitabilityratio

Due to the wide range of commercial activities carried out by different ski resorts around the world and which are not consolidated at the ski resort level, unless they belong to the same legal entity, it is not possible to compare the financial results of different ski resorts. Comparative analysis should be carried out by analyzing companies operating in the same field of activity. The resort business includes a number of business / profit centers, the most important of which are [7]:

- Activities related to skiing (primarily the sale of tickets for ski-lifts)
- Provision of housing (ownership / management of hotels and other accommodation facilities)
- Real estate (ownership, rent, sale of real estate)
- Other resort businesses include riding schools, retail, rental, transportation, food and beverages, etc.

When analyzing the financial data of various ski resorts, special attention was paid to activities related to skiing, including the following indicators:

- Income from activities related to skiing, as a function of the number of ski visits
- EBITDA indicator related to skiing (operating income from skiing - operating expenses from skiing)
- Actual ticket price (skiing revenues divided by total number of ski visits)

Development methodology, time needed for development and business modelмодель

- These criteria are closely related, given their strong influence on each other.
- There is no single formula to indicate which development methodology and business model should be used. This formula should be developed specifically, because historically it happened that the most successful ski resorts have adapted their development strategy for a specific market, conditions and context. Even within the same national market, one can observe various methodologies and business models for the successful development of ski resorts.

With regard to development and business models, a general distinction can be made between the development model of the Alpine ski resorts and the North American development model [8].

The development model of the Alpine ski resorts is characterized as follows:

- Large Austrian and Swiss ski resorts are characterized by a gradual development - organic growth, where skiing started, and some of the most famous ski resorts developed from traditional ski resorts such as St. Moritz, Zermatt, Wengen, Verbier (Switzerland) and Kitzbuehel Lech, St. Anton (Austria);

- For the French model of development of ski resorts, expansionary and functional development was characteristic, which led to their rapid growth and becoming the largest ski resorts in the world. On the other hand, one of the controversial issues concerning the French model is the architecture of the ski resorts, which is considered functional but unattractive [9].

- Ski resorts in Austria have a long history of their development and have played an important role in the development of skiing. Skiing is one of the most popular sports in Austria, deeply rooted in the culture and lifestyle of society, which is one of the most distinctive characteristics of ski resorts in Austria. The share of skiers (as a percentage of the total population) is 36%, which is one of the highest participation rates in the world. This fact is reflected in the development model of the Austrian ski resorts, which are characterized by the organic growth of villages and cities in the mountainous areas and the further development of the ski infrastructure and additional housing / real estate for tourists. Thus, it can be said that whole villages and cities are considered ski resorts in Austria, and there are not so many examples of specially built ski resorts [10]. The ski business in Austria has been developing very slowly over more than 100 years. Ski runs and ski-lifts are in most cases located on private lands and communities or municipalities of small villages very often take part in the ownership structure of the ski infrastructure. The proposal for the placement of skiers is very fragmented by various types of accommodation facilities and belongs to a number of individuals, most of whom are represented by families that own and operate a business [11].

- A strong influence on the development of ski and other winter sports in the Alpine region was supported by the government in the form of large investments in the infrastructure of ski resorts - roads, water supply systems, sewage systems, and also provision of incentives for private investors. Most ski-lift operators belong to local communities, and reinvest profits into lift upgrades and snowmaking.

North America is the second largest ski area in the world, including the USA (primarily the states of Colorado, Utah, New York, Vermont, California, New Hampshire, Montana, etc.) and Canada (primarily Quebec Province, British Columbia and Alberta). There are many world-famous ski resorts in North America such as Sun Valley, Sundance, Lake Tahoe, Jackson Hole Hunter Mountain (where many movies were shot), Aspen, Vail and Beaver Creek (for the "rich and famous"), Whistler Blackcomb, Salt Lake City, Lake Placid (ski resorts that hosted the Olympic Games) [12].

The North American model of development of ski resorts is characterized as follows [13]:

- Improving the concept of building ski resorts, which involves the construction of specialized resort towns in order to create bright places for gathering guests and locals. The concept takes into account the principle of the optimal ratio of "warm beds" against "cold beds" and new management models (condo hotels / condominiums), designed to maintain interest in the ski resort, and at the same time optimize the financial model of the ski resort project;

- New real estate development models introduced due to the need for sustainable financial management and risk management;

- Unlike in Europe, most ski resorts are owned by private entrepreneurs / companies, which is the reason why bankruptcies of ski resorts in North America occur more often than in Europe;

- Improvement of standards for planning ski resorts and development to ensure a balance between the offer of accommodation and the capacity for skiing, optimal circulation of vehicles and visitors, diversification of the offer, optimization of the development of the resort center - with parking / without cars, maximizing the ski-in / ski out principle (easy access to the ski-lifts), small buildings, etc.

## **Conclusion**

Based on the above information, it can be concluded that, despite the fact that traditional ski resorts were developed for the first time in Europe, the planning and development of ski resorts continued to evolve in North America in connection with the development of integrated planning and design of ski resorts.

In conclusion, it should be noted that the Central Asian region is a developing market in terms of the development of the ski industry. Due to the limited supply and growth of the economies of the countries of Central Asia, developers and operators in the ski industry are increasingly considering commercial opportunities in the Central Asian region.

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### ТАУ ШАҢҒЫ ТУРИЗМІНІҢ ДАМУЫН ТАЛДАУ

**Аннотация.** Туризм, экономикалық дамудың біріктірілген саласы ретінде барынша жоғары экологиялық қауіпсіздік тәртібінде мемлекеттік бюджеттің толтырылуын, халықтың жұмыспен қамтылуының өсуін және жұмыспен қамтылуын, адамдардың жұмысқа қабілеттілігін қалпына келтіру, қолдау мен нығайту үшін жағдайдың жасалуын қамтамасыз ететін, бағыттардың әлеуметтік бағдарлы инновациялық кешенінен тұрады.

Туризм саласы әлемде ірі әрі серпінді түрде дамып келе жатқан салалардың бірі. Туризмнің әлемдік индустриясы әлемдік ЖІӨ-нің 10% қалыптастырып, әрбір 11 жұмыс орнын құрады. Тіпті дағдарыс кезінде де туризм жыл сайын қатарынан 4-5%-ға өсіп отырады.

Дүниежүзілік туризм ұйымының болжамы бойынша, 2030 жылға қарай, халықаралық туризм жылына 3,3%-ға өсіп, 1,8 млрд туристке жетеді. Тау шаңғы туризмі бүгінгі күні туризмнің кірісі жоғарышкі және сыртқы нарығының аса маңызды сегменін құрайды. Тиісті деректер бойынша, қысқы спорт түрімен айналысатындар үшін әлемнің 80-ге жуық елінде жұмыс жасайтын шамамен 2000 тау шаңғы курортында 6 миллион төсек-орын бар.

Мақалада тау шаңғы курортын үлестіру талданған болатын, дамыған тау шаңғы курорттарына шаңғымен барғандағы санына талдау, келуші халықаралық шаңғышылар санына талдау, Орта Азия елдеріндегі тау шаңғы индустриясының даму деңгейіне салыстырмалы талдау, сондай-ақ тау шаңғы курорттарының дамуына шолу жүргізілді.

**Түйін сөздер:** туризм, тау-шаңғы туризмі, тау-шаңғы шипажайы, талдау, бөлу

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### АНАЛИЗ РАЗВИТИЯ ГОРНОЛЫЖНОГО ТУРИЗМА

**Аннотация.** Туризм как агрегированная отрасль экономического развития представляет собой социально ориентированный инновационный комплекс направлений, обеспечивающий в режиме максимальной экологической безопасности пополнение государственного бюджета, рост занятости и само занятости населения, создание условий для восстановления работоспособности, поддержания и укрепления здоровья людей.

Туристская отрасль является одной из крупнейших и динамично развивающихся отраслей в мире. Мировая индустрия туризма формирует 10% мирового ВВП и создает каждое 11 рабочее место. Даже в период кризисов туризм дает ежегодный прирост порядка 4-5%.

По прогнозам Всемирной туристской организации, к 2030 году международный туризм вырастет на 3,3% в год и достигнет 1,8 млрд. туристов.

Горнолыжный туризм составляет весьма важный сегмент сегодняшнего высоко прибыльного внутреннего и внешнего рынка туризма. Соответствующие данные говорят о том, что около 2000 горнолыжных курортов, функционирующих в примерно 80 странах мира, располагают порядка 6 миллионами койко-мест для тех, кто занимается зимними видами спорта.

В статье были проанализированы распределение горнолыжных курортов, проведен анализ лыжных посещений на развитых горнолыжных курортах, анализ количества въехавших международных лыжников, сравнительный анализ уровня развития горнолыжной индустрии в странах Центральной Азии, а также обзор развития горнолыжных курортов.

**Ключевые слова:** туризм, горнолыжный туризм, горнолыжные курорты, анализ, распределение.

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5352189@mail.ru, dina.kz.72@mail.ru, indra.janimkhan@bk.ru**NEW OPPORTUNITIES FOR THE USE  
OF DIGITAL TECHNOLOGIES IN ACCOUNTING**

**Abstract.** Technology accelerates all the industries to which they relate. Most accountants already use digital tools and streamline processes to make them paperless. However, as technology continues to evolve and automate even more numerous functions, conversations are transformed into the prospect of accounting without human participation. In the real world, technologies that transform the financial industry in no way make the human factor redundant.

Instead, technologies such as cloud, artificial intelligence (AI), and blockchain will enable accountants - and the entire financial services industry - to reduce manual data entry and improve the speed, accuracy, and quality of data.

**Keywords:** accounting, digitalization, technology, optimization, blockchain.

**INTRODUCTION**

Thanks to cloud-based accounting and software-as-a-service (SaaS) applications and the ability to access financial data from any device connected to the Internet, virtualization has become the new norm.

Among the areas of development of the world economy stands out the transition to digital technology, where the main resource is information. This resource is of great value and acts within organizations as an intangible asset. By accumulating specific information, we gain knowledge about the object being accumulated. Hence, the idea of the digital economy is not to present the finished product (product) or service to the consumer, but to create customization tools (customization) by partially or completely changing the product based on a specific request, complementing the product with some improved or additional parts. So, the consumer becomes a producer, as he fully participates in the process of creating a consumed product.

**MAIN PART**

At the same time, in the model of the digital economy the consumer envisages to produce exactly as much as he needs and, importantly, at the time - when he needs it. Consequently, the production will consume only the required amount of resources, the minimum time spent. In the digital economy, it is impossible to produce more than it should, and to promote the extra to the next in the chain, thereby increasing its costs, as well as the extra links of the product creation chain that produce themselves are impossible.

One of the most important parts of the accounting system is the information component of the two subsystems - financial and management accounting. There is a reorientation from the control function to the informative one, based on the organization of points of digital transformation of the enterprise. It requires the development of new indicators, methods for collecting and processing not only financial information, but also the sufficiency of its integration with information about other aspects of business and the external environment. Analyzing the content of literary and scientific sources devoted to this problem, it can be argued that the development of the theory and improvement of accounting practices is

metaphysically associated with the expansion of the information potential of the existing economic space. At the same time, IT-technologies cause significant modifications, both in the methodology and in the applied direction of the science of accounting.

Many researchers believe that the main directions of transformation, in terms of improving the theory of accounting and reporting in a digital economy, are shown in Fig. 2. Particularly, it is possible to single out a study of the possibilities of evaluating new accounting objects, which are intellectual human capital, customer base, innovative products, R & D results, etc. [1] The inclusion of non-financial information in the accounting system (quality of the client base, state or realization of social responsibility, existence of economic security risks, degree of application of energy-saving technologies, etc.) is observed. There are modern developments of new information technologies, such as cloud technologies, open technology platforms, electronic reference information systems, the creation of a single international format and content of financial statements in electronic form XBRL [2]. It seems that this will create the possibility of building such a national accounting system, where the indicators characterizing the state of the organization's internal business processes and the external environment, indicators of integration of various types of accounting are integrated.

It is necessary to change the model of education, since "knowledge, skills and abilities (ZUN) are also relevant in competence-based learning. Without ZUN, competences are not formed, and without competences, knowledge does not manifest itself" [3]. At the same time, the influence on the development of science and education - the external environment, in particular - the level of informatization of society, should be considered and taken into account. The current state of the informatization of society requires: the technologization of educational and evaluation processes; development and use of software tools for the automated processing of materials for assessing the educational achievements and competencies of students; ensuring the statistical processing of results and their presentation in formats available to students, teachers and university administrators.

Ensuring these requirements implies a multiplicity of activities affecting traditional and innovative methods for assessing learning outcomes, in particular, the procedure and methodology for assessing subject and over-subject competencies [4]. And here the problems are the achievement of independence, consistency, reliability and validity of the boundary and final assessments by the teacher to improve teaching. In this aspect, it is necessary that real or quasi-realistic conditions are created for students in the assessment of competencies, and the results of assessment are available, transparent, reasonable and objectively interpreted.

Another major problem is the imperfection of the coordination of the integration processes of professional and educational standards of the higher education system [5]. The combination of the requirements of professional and specialized educational competencies that university graduates should have can be represented as a process of their formation in the framework of intermediate stages. Staging indicates a link between competency assessment processes and student learning [6]. They include: the development of university standards, indicators, gauges, criteria, norms and rating scales; compilation and testing of end-to-end procedures and standardized methods for independent assessment of learning outcomes, allowing to organize the accumulation of valid results in the portfolio of each student during his study.

Today, each organization maintains accounting, and the list of duties of an accountant most often depends on each particular firm. An accountant has a wide range of responsibilities, in particular, he is responsible for drafting primary documentation, monitoring its accuracy, preparing for counting processing, and participating in the development and implementation of measures aimed at maintaining financial discipline and rational use of resources. The accountant is also responsible for the calculation of wages to employees, payments under civil contracts and personal income tax, tax and management accounting, he prepares and submits tax reports to the funds of the Russian Federation and the tax inspectorate and minimizes tax payments. Among other things, an accountant often performs duties that are not prescribed in a job description, sometimes they impose on him the work of other accountants, saving on workplaces. In addition, an accountant is required to provide the necessary comparable and reliable accounting information for internal and external users of financial statements. It is believed that soon it will be possible to fully automate the accounting and tax accounting, which will free the accountant from part of the above described type of work, however, it will still be necessary to analyze the



financial condition of the company independently, but then it will be much longer and the quality of the analysis results will be higher [7].

Proper organization of accounting is important for improving production efficiency. Therefore, national accounting standards are being developed and introduced, which basically rely on international standards and take into account the specifics of the accounting system of our republic. Today it is impossible not to notice the trend towards automation and modernization of systems. This also affected accounting - almost all organizations need to automate this process. Huge volumes of ledgers and endless bills, and invoices that are constantly lost, are now a thing of the past. An important condition for the development of the country is reasonableness, soundness and training. The transition to multi-level higher education should improve the quality of training. In the concrete nature of today's tasks of the republic, training of personnel for the real sector of the economy plays a special role. Currently, in the real sector of the economy, there is a growing demand for specialists of chief accountants, their deputies, senior accountants, and accountants in charge of account and expense transactions. Moreover, there is a tendency to expand the specialization of employees in the accounting sphere. Today, a qualified accountant should know not only the accounting methodology, but also various taxation schemes, tax planning methods, civil and administrative legislation, and also have practical experience as an accountant in one or several industries (production, construction, wholesale and retail trade, services, entertainment business, catering, insurance business, etc.). It is necessary for the accountant to know one or several specialized accounting programs [8].

An example is more mobile management accounting. He not only uses traditional accounting methods, but also actively implements the methodologies used in related areas of management (planning, forecasting, analysis, modeling). The main advantages of the multivariate use of tools in management accounting:

- assessment may be based on various approaches (market, investment, insurance, book value, liquidation value may be used);
- for the calculation can be used a variety of techniques and management accounting, which helps in determining different cost for different accounting purposes;
- it is possible to choose whether to use double entry and the system of accounts;
- the frequency of the preparation and content of the balance sheet and statements are determined on the basis of the principle of efficiency. It is possible to compile prognostic, segmental balances using various techniques.

The development of the basic components of accounting is influenced by the emerging environment of the digital economy. Among the experts in the field of accounting, there are proposals to include perspective accounting, differential, control accounts, accounts for non-financial information in the system of accounts.

Also, it has been talked about for a long time about the possibility of using alternative double-entry systems. In addition to the digraphic and unigraphic recording methods, there are systems of triple and quadruple recording. Changes and other elements of the accounting method are possible under the influence of the progress of data processing technologies, as well as due to significant changes in accounting objects.

Accordingly, logical and expedient is the multilateral development of the methodological base of accounting, covering both the elements of the accounting method and related management activities, and ensuring the adequacy of its information product to existing and new tasks. In the conditions of development of the digital economy are subject to significant changes and accounting objects. The explanation for this is the increasing number of indicators characterizing, not only the economic side of business, but also social, environmental responsibility, systematic and quality corporate governance, the presence of non-financial objects, such as: organizational, human, innovative, reputational capital, which provide the basis for value creation.

It is also necessary to note the expansion of the range of objects due to the emergence of new hybrid and modifiable forms of assets, liabilities and capital: cryptocurrency, smart assets, smart contracts, mixed investment tools, new forms of financial transactions, electronic funds flows, virtual monetary and non-

monetary units of value, etc. Their reflection in accounting requires the formation of new principles of systematization and taxonomy of objects of accounting, highlighting recognition criteria, metrics and principles of reflection in economic information.

In terms of digitalization, in order to maintain its relevance, accounting should be positioned as an element of the system for receiving, processing and transmitting economic information. It is necessary to clearly represent the place, role and functionality of accounting in the ecosystem. Otherwise, it will be at risk of “dissolving” in modern technological and multifunctional digital information systems, since these systems are developing dynamically and rather aggressively expand their sphere of application.

Important is the internal structure of accounting. It is necessary to highlight its new and sought-after species. In this regard, the main trends are: the convergence of existing types of accounting, attempts to highlight new ones, such as strategic, adaptive, multi-purpose, creative, intellectual, etc.

The convergence of external and internal accounting will help to include in corporate reporting information on development strategies and social responsibility, the creation of economic value added in the context of business segments and the factors of its creation, the effectiveness of the management system. Separate consideration is required for ideas related to the separation of types of accounting due to the formation of specific information systems (strategic, social, actuarial, behavioral, etc.). Questions of the expediency of their allocation are debatable, but deserve consideration in connection with the impending changes.

One of the most important parts of the accounting system is the information component of the two subsystems - financial and management accounting. The reorientation from the control to the informative function, which is based on the organization of the digital transformation of the enterprise, is noted. It is necessary to develop new indicators, methods of collecting and processing financial information, as well as the sufficiency of its integration with information about other aspects of the business and the external environment.

It is also necessary to note the expansion of the range of objects due to the emergence of new hybrid and modifiable forms of assets, liabilities and capital: cryptocurrency, smart assets, smart contracts, mixed investment tools, new forms of financial transactions, electronic funds flows, virtual monetary and non-monetary units of value, etc. Their reflection in accounting requires the formation of new principles of systematization and taxonomy of objects of accounting, highlighting recognition criteria, metrics and principles of reflection in economic information.

## CONCLUSION

For the time being, cloud technologies are beginning to be used by those enterprises whose management is striving to use the latest achievements in the field of IT technologies to increase their competitiveness in the modern market. At the same time, we note that cloud technologies have a great future, which today is beyond doubt. In the near future, software companies will face the need to choose an acceptable degree of cloudiness and implement a cloud strategy in accordance with their needs and the requirements of their customers.

In the conditions of “digital economy”, “knowledge economy”, the possibilities of an accountant and auditor expand, and the range of competencies required by these specialists is growing. The needs of employers determine the need to strengthen the orientation of the preparation of accountants to solve actual problems of accounting, analysis and auditing. This requires not only the harmonization of educational programs of universities and professional standards, but also the use in the educational process of the latest achievements of economic science, systematic professional development, as well as perfect adherence to the norms of professional ethics.

The development of the theory and improvement of accounting practices is associated with the expansion of the information potential of the existing economic space, the digitalization of the economy. At the same time, information technologies cause significant modifications both in the methodology and in the applied area of accounting science. In this regard, the transformation of accounting in accordance with new needs is a necessary step in its development. Changes and improvements of this method of accounting will help not to lose its relevance in the era of universal digitalization.

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**БУХГАЛТЕРЛІК ЕСЕПТЕ САНДЫҚ ТЕХНОЛОГИЯЛАРДЫ  
ҚОЛДАНУДЫҢ ЖАҢА МҮМКІНДІКТЕРІ**

**Аннотация.** Технологиялар олар жататын барлық салаларды жылдамдатады. Көптеген бухгалтерлер сандық құралдарды пайдаланады және олар қағазсыз болу үшін процестерді оңтайландырады. Дегенмен, технологиялар дамып, көптеген функцияларды одан әрі автоматтандыруды жалғастырғандықтан, әнгімелер адамның қатысуынсыз есепке алудың келешегіне айналады. Нақты әлемде қаржы индустриясын өзгертетін технологиялар ешқандай да артық адам факторын жасамайды.

Оның орнына бұлт, жасанды интеллект (ИИ) және блокчейн сияқты технологиялар бухгалтерлерге - қаржылық қызметтердің барлық индустриясына - деректерді қолмен енгізуді қысқартуға және деректердің жылдамдығын, дәлдігін және сапасын арттыруға мүмкіндік береді.

**Түйін сөздер:** бухгалтерлік есеп, цифрлау, технологияны оңтайландыру, блокчейн.

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**НОВЫЕ ВОЗМОЖНОСТИ ПРИМЕНЕНИЯ ЦИФРОВЫХ ТЕХНОЛОГИЙ  
В БУХГАЛТЕРСКОМ УЧЕТЕ**

**Аннотация.** Технологии ускоряют все отрасли, к которым они относятся. Большинство бухгалтеров уже используют цифровые инструменты и оптимизируют процессы, чтобы они стали безбумажными. Тем не менее, поскольку технологии продолжают развиваться и еще больше автоматизировать многочисленные функции, разговоры превращаются в перспективу учета без участия человека. В реальном мире технологии, преобразующие финансовую индустрию, никоим образом не сделают избыточным человеческий фактор.

Вместо этого такие технологии, как облако, искусственный интеллект (ИИ) и блокчейн, позволяют бухгалтерам - и всей индустрии финансовых услуг - сократить ручной ввод данных и повысить скорость, точность и качество данных.

**Ключевые слова:** бухгалтер, цифровизация, технологии, оптимизация, блокчейн

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