



ISSN 2518-1998 (Print)  
ISSN 2663-5097 (Online)

# BULLETIN OF THE KARAGANDA UNIVERSITY

Changes in the activity



## № 2(98)/2020

ISSN 2518-1998 (Print)  
ISSN 2663-5097 (Online)  
Индексі 74624  
Индекс 74624

**ҚАРАҒАНДЫ  
УНИВЕРСИТЕТІНІҢ  
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**ВЕСТНИК**  
КАРАГАНДИНСКОГО  
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**BULLETIN**  
OF THE KARAGANDA  
UNIVERSITY

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**ЭКОНОМИКА сериясы**

**Серия ЭКОНОМИКА**

**ECONOMY Series**

**№ 2(98)/2020**

Сәуір–мамыр–маусым  
30 маусым 2020 ж.

Апрель–май–июнь  
30 июня 2020 г.

April–May–June  
June, 30<sup>th</sup>, 2020

1996 жылдан бастап шығады  
Издается с 1996 года  
Founded in 1996

Жылына 4 рет шығады  
Выходит 4 раза в год  
Published 4 times a year

Қарағанды, 2020  
Караганда, 2020  
Karaganda, 2020

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**ISSN 2518-1998 (Print). ISSN 2663-5097 (Online).**

Меншік иесі: «Академик Е.А. Бөкетов атындағы Қарағанды мемлекеттік университеті» РММ.

Қазақстан Республикасының Мәдениет және ақпарат министрлігімен тіркелген. 23.10.2012 ж. № 13112–Ж тіркеу куәлігі.

Басуға 29.06.2020 ж. қол қойылды. Пішімі 60×84 1/8. Қағазы офсеттік. Көлемі 16,37 б.т. Таралымы 200 дана. Бағасы келісім бойынша. Тапсырыс № 41.

Е.А. Бөкетов атындағы ҚарМУ баспасының баспаханасында басылып шықты.

100012, Қазақстан, Қарағанды қ., Гоголь к-сі, 38. Тел. (7212) 51-38-20. E-mail: [izd\\_kargu@mail.ru](mailto:izd_kargu@mail.ru)

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E-mail: [vestnikku@gmail.com](mailto:vestnikku@gmail.com). Сайт: [economy-vestnik.ksu.kz](http://economy-vestnik.ksu.kz)

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**Вестник Карагандинского университета. Серия «Экономика».**

**ISSN 2518-1998 (Print). ISSN 2663-5097 (Online).**

Собственник: РГП «Карагандинский государственный университет имени академика Е.А. Букетова».

Зарегистрирован Министерством культуры и информации Республики Казахстан. Регистрационное свидетельство № 13112–Ж от 23.10.2012 г.

Подписано в печать 29.06.2020 г. Формат 60×84 1/8. Бумага офсетная. Объем 16,37 п.л. Тираж 200 экз. Цена договорная. Заказ № 41.

Отпечатано в типографии издательства КарГУ им. Е.А. Букетова.

100012, Казахстан, г. Караганда, ул. Гоголя, 38, тел.: (7212) 51-38-20. E-mail: [izd\\_kargu@mail.ru](mailto:izd_kargu@mail.ru)

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**Bulletin of the Karaganda University. «Economy» series.**

**ISSN 2518-1998 (Print). ISSN 2663-5097 (Online).**

Proprietary: RSE «Academician Ye.A. Buketov Karaganda State University».

Registered by the Ministry of Culture and Information of the Republic of Kazakhstan. Registration certificate No. 13112–Zh from 23.10.2012.

Signed in print 29.06.2020. Format 60×84 1/8. Offset paper. Volume 16,37 p.sh. Circulation 200 copies. Price upon request. Order № 41.

Printed in the Ye.A. Buketov Karaganda State University Publishing house.

100012, Kazakhstan, Karaganda, Gogol Str., 38, Tel.: (7212) 51-38-20. E-mail: [izd\\_kargu@mail.ru](mailto:izd_kargu@mail.ru)

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### **Economic and statistical analysis of the dairy industry development in the Republic of Kazakhstan**

#### **Abstract**

*Object:* The article examines the main factors affecting milk production and dairy products in Kazakhstan in the current competitive environment.

*Methods:* The article uses quantitative data, mathematic-statistical methods of studying connections (correlation-regression analysis).

*Findings:* This study focuses on the dairy industry of Kazakhstan and its specificities. We have calculated the factors affecting the production of milk and dairy products using regression analysis using the example of the dairy industry of the Republic of Kazakhstan. The regression analysis showed that investment in fixed assets has a positive impact on the performance of this industry and is statistically significant. The results obtained can be used to study the influence of factors on the dairy enterprise production activities at any level and different ownership forms.

*Conclusions:* The article examined the key factors affecting the dairy industry in Kazakhstan. It also suggested priority necessary measures to improve the current development level of the dairy industry.

*Keywords:* dairy industry; milk and dairy production; trends and prospects for dairy industry.

#### **Introduction**

The economic potential of the country is the aggregate ability of the region's economy, its branches, enterprises, farms to carry out production and economic activities, produce high-quality products, goods, services that meet social needs, ensure the development of production and consumption. Based on this definition, the economic potential of a region depends on the availability of its natural resources, means of production, labor resources, scientific and technical potential, accumulated national wealth, the level of development of international relations. The economic potential can also be determined by the aggregate of the region's economic sectors, enterprises, institutions producing industrial, agricultural, construction products and providing various services for industrial and non-productive purposes. This principle is the basis for classifying the country's economic potential by area of activity. National food security depends on the accumulated economic potential of the aggregate of sectors and economic entities of the agro-industrial complex. One of the main branches of the agro-industrial complex is the dairy subcomplex, whose enterprises produce a wide range of products to meet the needs of the population.

The global dairy market is expected to grow significantly during the forecast period. Growing global population, rising per capita incomes, increased consumer awareness of the nutritional value of dairy products and changing consumer dietary patterns are key drivers of market growth. Besides, technological advances and innovations to obtain more milk from dairy animals are also estimated to contribute to market growth. Moreover, the dairy sector in most countries is complex, so clearcut strategies and interventions cannot be easily identified. No single strategy framework can be designed that fits the dairy sector in every country. Dairy production provides many non-marketed economic benefits, including manure for use on-farm as fuel or organic fertilizer (in several farming systems manure is the sole source of nutrients for crop production). Dairy animals are considered a means of safeguarding savings for sale in times of need (e.g., injury or disease of a household member), and a form of capital investment. However, there is the risk that dairy animals are stolen or die.

Increased adoption of sedentary lifestyles, unhealthy eating habits, and increased food awareness are also expected to increase market demand. Major milk and dairy producers have introduced new products with improved quality and nutritional value to meet growing market demand. These products include skimmed milk, low-fat energy drinks, and seasonal fruit yogurts (David et al., 2013).

### **Literature Review**

The food industry has been changing and evolving over the decades to meet customer needs and consumer behavior. This industry is characterized by a complex system of activities related to the supply, consumption, and delivery of food products around the globe. The global dairy industry, as its component, in turn, consists of many countries with unique production practices and consumer markets. Milk production is unique as an agricultural product because milk is produced daily and all year round. Dairy production is important to the economic development and sustainable development of communities in rural areas and the country as a whole. However, the necessary investment and the availability of local markets and labor is a constant challenge.

In the case of milk, we can identify four main causes of milk consumption. The first motive is its nutritional composition. In the population, milk is considered one of the most nutritious and balanced foods, «containing a wide range of essential nutrients needed for growth, development, and overall health and well-being throughout the life cycle» (The National Dairy Council, 2008, 65; The Dairy Council, 2014, 2015). The second one is a positive effect on health and the prevention of various diseases, such as the pleasant effects of milk consumption on the prevention of osteoporosis, lowering blood pressure and reducing the incidence of breast cancer, improving skin quality and texture (Dallmeier, 2012). The last two possible motives that may attract our local consumers to purchase dairy products such as milk are interrelated - tradition and breadth of use.

To date, the most popular type of milk is cow's milk, which accounts for 98% of Kazakhstan's milk consumption. This long-standing tradition has left its mark on our culture and especially in Kazakh national gastronomy. Several research and development activities have been carried out in the area of research and studies on the motivations for buying and consuming milk. They showed that the main reasons consumers bought milk tasted, healthy lifestyle, habit, availability of the product, and its use in the household (Saktaeva, 2010). A group of researchers (Alwis et al., 2009) analyzed factors affecting fresh milk consumption among consumers in Sri Lanka in 2009 and found that taste and nutritional value have a positive (stimulating) effect and vice versa, health problems, price levels, and product availability have a negative (scattering) effect on consumer decisions to buy fresh milk. Similar motives to those already mentioned came from other authors who identified taste, health, and price as the most important motives for choosing dairy drinks (Krešiu et al., 2010). However, there are also some discouraging factors that, conversely, create barriers to milk consumption and purchase. Consumers may be affected by some notes and articles in the media that present negative effects of milk consumption: excessive sputum formation, acne formation, digestive problems, lactose intolerance, allergies, or various other health problems caused by milk (Furindová, 2010). Nevertheless, all these negative views are now increasingly refuted by official statements of domestic and foreign doctors, nutritionists, and other experts in this field (Dairy Council of California, 2015).

### **Methods**

The following scientific methods were used in the study: the deduction method used to perceive the problems of the economic potential and determine the methods for assessing its level; analysis method for assessing the production of dairy products in Kazakhstan and identifying factors and reasons for changing its level; the synthesis method used to obtain generalized research results, to formulate conclusions and general conclusions on the diagnosis of the current state of the economic potential of the dairy industry; comparison method used to justify the main direction of growth and effective use of the economic potential of the dairy subcomplex of the agricultural sector.

### **Results**

The dairy industry is also considered one of the main industries providing a huge number of jobs around the world. According to FAOSTAT, the Food and Agriculture Organization Corporate Statistical Database, about 150 million households worldwide are involved in the production of milk and dairy products. Over the past three decades, total milk production has increased by more than 50%, from 482 million tonnes to 754 million tonnes.

World milk production (81% of cow's milk, 15% of buffalo milk and 4% of other milk) increased by 1.6% in 2018 to 838 million tonnes. India has the largest milk producer in the world, with production increasing by 3.0% to 174 million tonnes, although this was a minor impact on the global dairy market as India trades only small quantities of milk and dairy products (OECD/FAO, 2019).

The three main dairy exporters achieved increased production in 2018, the European Union (0.8 percent), New Zealand (3.2 percent) and the United States (1.1 percent), which were almost entirely driven by



higher yields per cow; in New Zealand, the favorable grass environment also played a role. As a result, the availability of fresh dairy products and processed products for export has increased. In the People's Republic of China, the world's largest importer of dairy products, milk production increased for the first time in four years by 1.1% in 2018. Official data on milk production in China were revised downward at the end of 2018 to 15% over the last ten years.

According to statistics from the UN Food and Agriculture Organization (FAO), India and Pakistan, important milk producers, are expected to contribute more than half the growth in world milk production over the next ten years, as well as more than 30% of world production in 2028. Production in the second largest milk producer, the European Union, is projected to grow more slowly than the world average as only a small proportion of production is exported and domestic demand grows slightly.

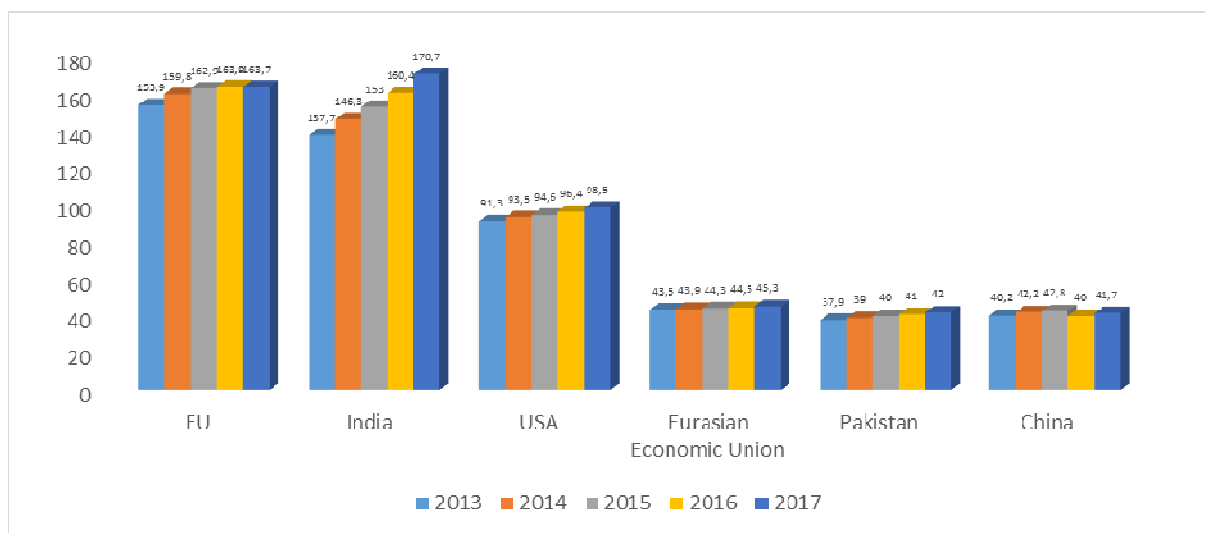


Figure 1. Dynamics of milk production in the world, million tons

Note — OECD/FAO (2019), “OECD-FAO Agricultural Outlook”, OECD Agriculture statistics (database) <http://dx.doi.org/10.1787/agr-outl-data-en>.

Asia and the Pacific are expected to be one of the fastest-growing regions for the forecast period. India accounts for about 20 percent of world dairy production. Population growth, high consumption of dairy products and accelerated economic growth in the region are factors contributing to significant growth (Nguyen, Hien, 2016).

In modern conditions, the production of dairy products takes a leading place in the agricultural sector of Kazakhstan. Today, the most popular type of milk is cow's milk (which accounts for 95-98% of Kazakhstan's milk consumption). Such a long tradition has left consequences in our culture and especially in Kazakh national gastronomy. This can be proved by the fact that one of the main ingredients from which most Kazakh national dishes are made is milk and its products. Several research and development activities have been carried out in the area of studying and studying the motives for buying and consuming milk. Many authors have shown that the main reasons of purchase of milk by our consumers were taste, healthy way of life, habit, availability of the product and its use in the household (Khasenov et al, 2020; Taipov, 2018).

For Kazakhstan's dairy producers, operating in a market environment has been fraught with serious problems and significant risks. Even though agrarian sector traditionally played a significant role in the development of national economy, and thus, the development of dairy products industry, at first glance, should be brought at least a decent raw material base, the producers and analysts themselves state the slowdown in the growth of the industry and anxiously talk about the onset of imports. At the same time, the prices of dairy products can hardly be called democratic, and some consumers, who are not in the category of the affluent, today not every day can pamper themselves with buying curd or cheese, for example. Meanwhile, dairy consumption has a direct impact on the health of the nation and reflects the welfare of society. While in the first half of the prosperous 1980s, Kazakhstan's citizens consumed up to 600 tonnes of dairy products daily, during the crisis of the 1990s this figure dropped to 125 tonnes per day. The current world crisis has naturally affected the dairy products market, but analysts believe that in the coming years their consumption will not decline, but will increase. As for today, the production of milk and dairy products in the country is

one of the most promising areas of development in the agricultural sector. The dairy industry, which includes cheese and dairy subbranches, as well as the production of whole milk products, at the present stage is one of the leading in the structure of the food industry of Kazakhstan.

Despite in-depth research, today many problems in the production of milk and dairy products in Kazakhstan remain unresolved and require in-depth study. The purpose of the article is to study the current state of the milk and dairy products market in Kazakhstan, identify the main problems and trends in its development.

Today, milk production has become an integral part of national food security and support for socially vulnerable groups, as well as a major source of welfare and employment for rural residents.

At present, there are 148 milk processing enterprises in Kazakhstan, whose production capacity allows processing about 1.9 million tons of milk per year (34 enterprises produce cheese). The leader in dairy production in the Kazakhstan market is FoodMaster Company JSC. Since 2004, FoodMaster has been part of the international group Lactalis (France). It has two own dairy farms and 16 trading branches. All FoodMaster enterprises are high-tech dairy plants producing products that meet the general quality standards of the company.

The current state of milk production in Kazakhstan is accompanied by negative trends in comparison with other agrarian developed countries. The development of the milk processing industry is significantly affected by the situation in dairy cattle breeding. Gasoline and diesel fuel prices rise, underdeveloped harvesting networks in rural areas, the remoteness of raw material zones from processing centers. As a result, the processors found themselves in a difficult financial situation. Although, according to the Committee on Statistics of Kazakhstan, all key industry indicators, such as cattle numbers, milk production and consumption per capita on average, have been growing up since 2014 (Figure 2).

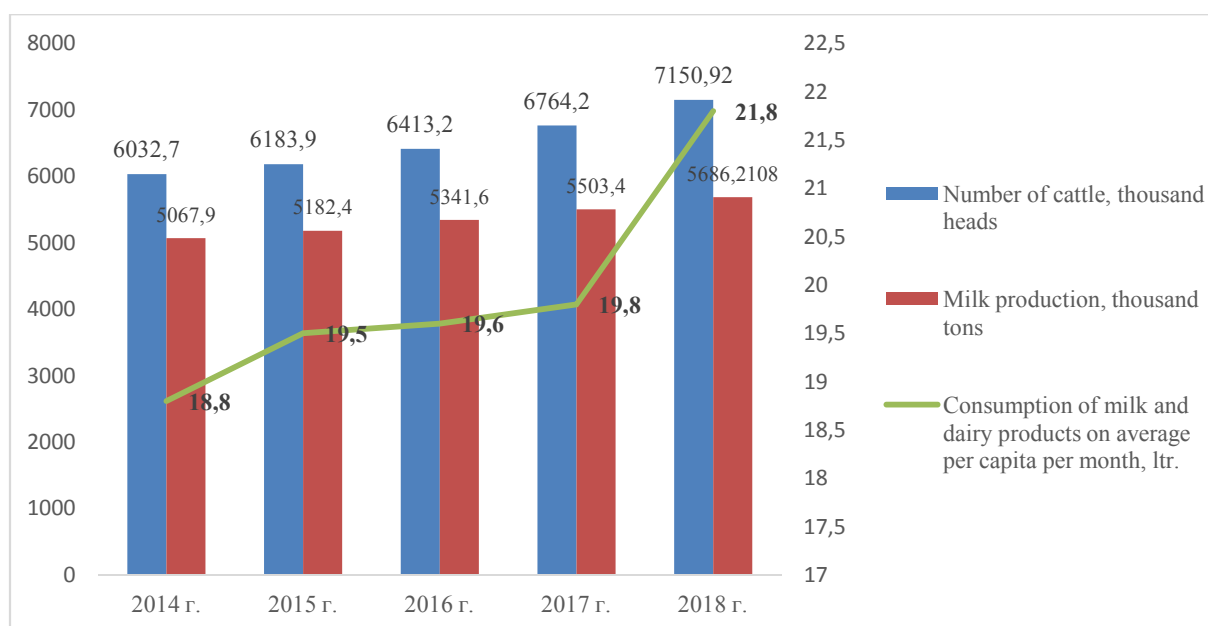


Figure 2. Key Dairy Industry Indicators of the Republic of Kazakhstan, 2014-2018

Note — compiled by the authors based on the data of the Committee on Statistics of the Republic of Kazakhstan.

Milk production is seasonal, but there is a demand for milk throughout the year, which causes fluctuations in procurement prices. The price of milk remains almost the only lever to influence the development, or vice versa, the curtailment of this type of business. However, while large enterprises can compete even with low purchase prices due to the scale of production and diversified nature of the economic activity, small peasant farms of the population suffer most from its fluctuations. In Kazakhstan, in 2018 the region produced 5,686.2 thousand tonnes of milk. At the same time, the bulk of raw milk was produced in private subsidiary farms of the population and by individual entrepreneurs and peasant (farm) farms. This fact testifies to the small commodity of dairy cattle breeding of the republic. The majority of experts and market analysts believe that one of the reasons for the persistence of negative trends in the milk market is a significant price fluctuation and their inconsistency with the costs that the producer spends on the maintenance of dairy herd.

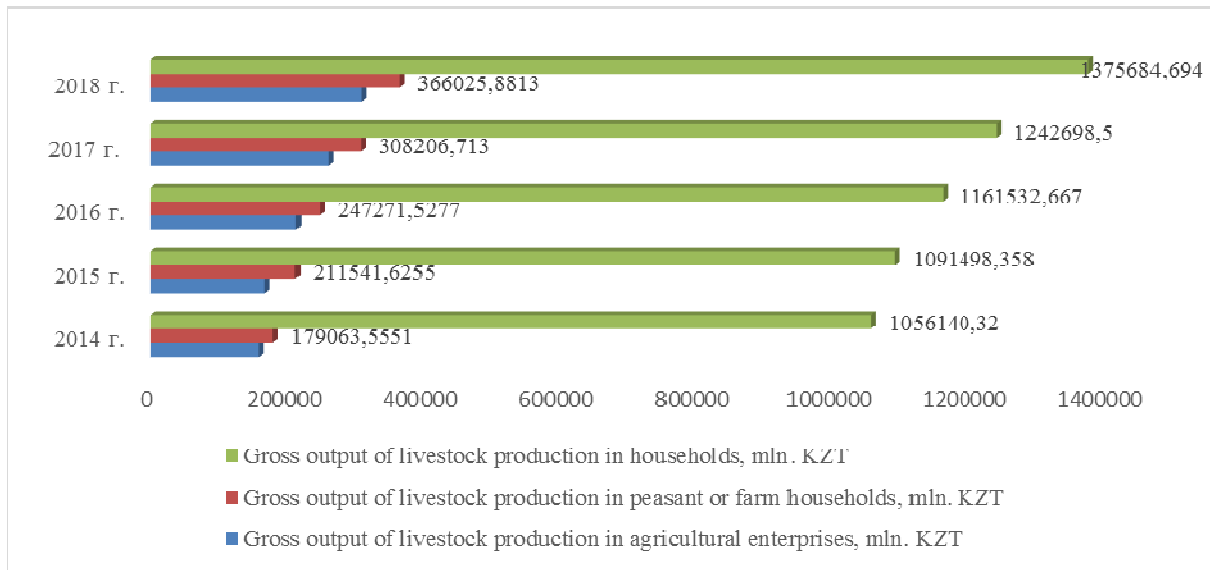


Figure 3. Gross output of livestock production by categories of farms, mln. KZT

Note — compiled by the authors based on the data of the Committee on Statistics of the Republic of Kazakhstan.

The main reasons for the high purchase prices of milk in Kazakhstan are its high cost and low productivity in the industry. Besides, the unfavorable situation is exacerbated by trade and intermediary structures, through which up to 30% of the dairy market goes.

In the current conditions of Kazakhstan's gradual progress towards achieving its main strategic goal - the integration of the national economy into the system of world foreign economic relations - the problem of effective development of individual industries and regions of the country, as well as ensuring the competitiveness of domestic products in both domestic and foreign markets is extremely urgent. It is known that the quality of milk also determines the quality of processed products. Poor quality of dairy raw materials in the country and, as a result, dairy products significantly narrows down its markets, especially concerning exports. Given the current quality of domestic raw materials, the main consumer of domestic dairy products is the country's population.

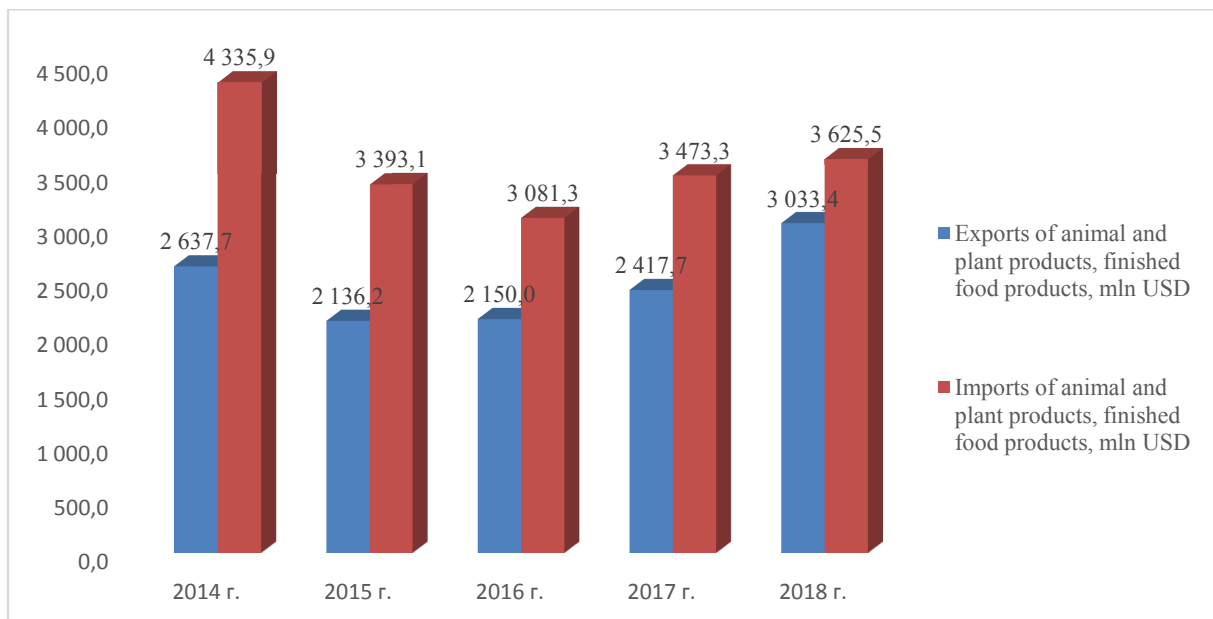


Figure 4. Volume of export and import of animal and plant products, mln. USD

Note — compiled by the authors based on the data of the Committee on Statistics of the Republic of Kazakhstan.

Thus, the sales volumes of domestic producers of dairy raw materials of own production in all directions and its import provided a solvent market of dairy products for the country's population and the corresponding export potential.

A method of regression analysis was used to determine factors affecting the production of milk and dairy products. Regression analysis shows relationships between variables that could be defined as causation. A variable whose variations need to be explained or predicted is referred to as dependent variables. The purpose of regression analysis is to determine how and to what extent dependent variables change or change as a result of a change in a fixed variable (MacDonald et al., 2007; Ackerberg et al., 2015). Correlation analysis tests the interdependency and regression analysis of causal effects among more than two variables. More than one variable can be assumed to be independent and assess their effect on only one dependent variable. The nature of statistical information allowed using a linear model of multiple regression. Data for 2004-2018 were taken for analysis from the official website of the Committee on Statistics of the Republic of Kazakhstan. As an independent variable, we will consider the volume of milk and dairy products and the factors affecting milk and dairy products that were originally selected: raw milk price index for the previous year; share of rural population; investment in agricultural fixed capital; milk production per capita; gross agricultural output (services); food retail volume; cattle stock; milk yield per cow. But, at the construction of the multiple regression equation the problem of multicollinearity of factors has arisen (André et al, 2007). After exclusion of the multicollinearity between the selected factors, the method of stepwise regression analysis remains as follows:

- capital investments (foxassinvest);
- food retailing volume (retailvol);
- share of rural population (agrshare).

A description of the factors under consideration is provided in table 1.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
year	15	2011	4.472	2004	2018
milkprod	15	5132.281	298.133	4556.8	5686.211
foxassinvest	15	5450000	2550000	1700000	1.12e+07
retailvol	15	1210000	706000	370000	2690000
agrshare	15	44.142	1.491	42.118	46.916
rawmikpric~d	15	109.193	7.698	97.8	127.7

Note — calculated by the authors on the basis of data from the Committee on Statistics of the Republic of Kazakhstan.

The following statistical parameters were calculated for each variable: mean value, median, dispersion, standard deviation, minimum and maximum values according to the formulas. As a result, we can say that the average milk production volume is 5132.8 thousand tons. The rural population of 44.1 is the share of the rural population in the total number of the country's population, with an average of 44.1%.

To quantitatively estimate the relationship between the variables and to construct a model of the relationship between the factors, we will construct a regression model based on the following formula:

$$Milkprod_t = \beta_0 + \beta_1 foxassinvest + \beta_2 retailvol + \beta_3 agrshare + \varepsilon_t \quad (1)$$

Where:

- Milkprod - the production of milk and dairy products;
- t - years from 2004 to 2018
- $\beta_0$  – i-factor assessment;
- $\varepsilon_t$  – other factors not taken into account.

The method of least squares is used to construct the multiple regression equation. As a result of the least squares method estimation, the data presented in Table 2 are obtained.

Table 2. Results of regression to all variables

<b>Linear Regression</b>							
milkprod	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
foxassinvest	0.002	0.000	3.33	0.008	0.000	0.001	***
retailvol	-0.001	0.000	-2.56	0.029	-0.002	0.000	**
agrshare	-19.205	32.288	-0.59	0.565	-91.147	52.736	
rawmikpriceind	4.920	6.146	0.80	0.442	-8.774	18.615	
Constant	4609.404	1444.955	3.19	0.010	1389.844	7828.965	**
Mean dependent var		5132.281	SD dependent var			298.133	
R-squared		0.808	Number of obs			15.000	
F-test		10.548	Prob > F			0.001	
Akaike crit. (AIC)		197.675	Bayesian crit. (BIC)			201.215	

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Note — complied by the author in the statistical batch program STATA on the basis of data from the Committee on Statistics of the Republic of Kazakhstan

Regression coefficient  $R^2$  - 0,808; P-value = 0,000; F-criterion Fisher-10,548. According to the obtained results, with 80.8% probability, it can be stated that the model is reliable, the connection is statistically confirmed.

### Discussion

We have calculated the factors affecting milk and dairy production using regression analysis using the example of the dairy industry of the Republic of Kazakhstan. The conducted regression analysis showed that investment in fixed assets has a positive impact on the performance of this industry and is statistically significant. The availability of sufficient investments is a necessary condition for the effective and sustainable development of any sector of the national economy Agriculture, including the dairy sector of the country is no exception, although the sector remains a little attractive to the majority of investors. Therefore, the research on the improvement of mechanisms of attraction of investments into the agrarian sector of economy and methods of increase of investment attractiveness of agriculture for maintenance of its sustainable economic development and improvement of industrial activity of enterprises becomes especially urgent. The volume of retail trade in food products hurts milk and dairy production. In our case, we have taken the data for the whole retail trade and the share of milk and dairy products in this turnover is very small. The results obtained can be used to study the influence of factors on the dairy enterprise production activities at any level and different ownership forms.

### Conclusion

Studies have shown that the functioning of the milk and milk products market depends on market infrastructure, quality raw material base, production status and the solvency of consumers. The problems of the pricing of agricultural producers of milk have become much more complicated in recent years.

Milk production in Kazakhstan can become a profitable, competitive kind of agribusiness, but this process is long and requires significant investments in equipment for optimized feeding of animals, modernization and renewal of milking systems, reconstruction of farm premises, purchase of breed composition of a dairy herd. According to calculations, the profitability of dairy production is 7-9%, this indicator is low among the total mass of agricultural enterprises. In this situation, the government's assistance is extremely necessary. Firstly, it concerns ensuring an acceptable tax regime for livestock development. Secondly, the support of subsidies to the feed base, which will have a positive impact on the dairy sector in the future. We believe that these ways will allow us to accumulate money for the development of the technical base of dairy processing enterprises and improve the quality of products. All this is relevant, because, as noted earlier, the dairy industry is a strategically important sector of the country.

### Acknowledgment

I am grateful to all the scientific advisors who provided me with extensive personal and professional guidance, which taught me a lot about research and life in general. I also would like to thank my parents, whose love and guidance is with me in what I pursue.

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**А.Ж. Байгужинова, Л. Тылл**

**Қазақстан Республикасы бойынша сүт өндірісінің дамуын  
экономикалық және статистикалық талдау**

**Аңдатпа**

*Мақсаты:* Қазіргі бәсекелестік жағдайдағы Қазақстандағы сүт және сүт өнімдерін өндіруге әсер ететін негізгі факторларды зерттеу.

*Әдісі:* Мақалада сандық мәліметтер және байланыстарды зерттеу үшін математика-статистикалық әдістер қолданылған (корреляция-регрессиялық талдау).

*Қорытынды:* Зерттеу Қазақстандағы сүт өндірісі және оның ерекшеліктеріне арналған. Біз Қазақстан Республикасының сүт саласы мәліметтері негізінде, сүт және сүт өнімдерін өндіруге әсер ететін факторларды регрессиялық талдауды қолдана отырып есептедік. Регрессиялық талдау көрсеткендей, негізгі капиталға салынған инвестициялар осы саланың жұмысына оң әсер етеді және статистикалық маңызды. Алынған нәтижелер кез-келген деңгейдегі және әртүрлі меншік нысандарындағы сүт кәсіпорнының өндірістік қызметіне факторлардың әсерін зерттеу үшін қолданыла алады.

*Тұжырымдама:* Қазақстанның сүт өндірісіне әсер ететін негізгі факторлар зерттелген. Сүт өнеркәсібінің даму деңгейін арттыру үшін бірінші кезектегі қажетті шаралар ұсынылған.

*Кілт сөздер:* сүт өнеркәсібі, сүт және сүт өнімдері, сүт саласының даму қарқыны мен болашағы.

**А.Ж. Байгужинова, Л. Тылл**

**Экономико-статистический анализ развития  
молочной отрасли Республики Казахстан**

**Аннотация**

*Цель:* Изучение основных факторов, влияющих на производство молока и молочных продуктов Казахстана в нынешних условиях конкуренции.

*Методы:* В статье используются количественные данные, математико-статистические методы изучения связей (корреляционно-регрессионный анализ).

*Результаты:* Данное исследование посвящено молочной отрасли Казахстана и ее особенностям. Нами были рассчитаны факторы, влияющие на производство молока и молочной продукции, с помощью регрессион-

ного анализа на примере молочной отрасли Республики Казахстан. Проведенный регрессионный анализ показал, что инвестиции в основной капитал положительно влияют на результаты деятельности данной отрасли и статистически значимы. Полученные результаты могут быть использованы для изучения влияния факторов на производственную деятельность молочных предприятий любого уровня и разной формы собственности.

*Выводы:* Изучены основные факторы, влияющие на молочную отрасль Казахстана. Предложены приоритетные меры по повышению уровня развития молочной промышленности.

*Ключевые слова:* молочная отрасль, молоко и молочная продукция, тенденции и перспективы молочной отрасли.

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## **The study on employers' satisfaction with economics graduates in Karaganda region**

### ***Abstract***

*Object:* In modern social and economic conditions, to solve the problem of employment of graduates of higher education institutions it is necessary to develop approaches, organizational and methodical principles of creation and functioning of the system of assistance in the employment of graduates. This system of employment assistance should be integrated into the system of education of the university and should match modern social conditions. It is important to develop new mechanisms for interaction between the higher education system and the labor market.

*Methods:* To determine the set of competencies that a graduate should possess to be competitive in the labor market, the authors conducted a marketing study on employers' satisfaction with economics graduates and identified the competencies required by the labor market. The survey was conducted among managers of state enterprises and business organizations in Karaganda city. Intending to improve its representativity, the survey concerned the economics graduates, as the leading universities of Karaganda are generally focused on providing educational services in economic specialties.

*Results:* In the article, the authors show the regional specifics of the employment of graduates-economists of higher educational institutions. At the same time, the acquired competencies in the process of purchasing educational services should satisfy the needs of the labor market.

*Conclusions:* Based on the results of the study, the authors gave practical recommendations on the development of new organizational and economic mechanisms for integrating the labor market and educational services market.

*Keywords:* labor market, higher education services market, graduate's competencies, labor market need, labor market demand, higher education services market supply, employment.

### ***Introduction***

When training future specialists, the entities of the educational services market should take into account the prospects for their further employment based on the real needs of the national economy. Besides, a future graduate of a higher education institution should also be aware of employment opportunities after receiving an educational service. The share of graduates of higher education institutions employed and working in their specialty within the first year after graduation is an indicator of the national ranking of higher education institutions. Therefore, the increase of employment guarantee after graduation is an important competitive advantage of the higher education institution on the market of educational services, which attracts more applicants. The labor market and educational services market are the subject of serious scientific research in the modern economy; the search for ways to ensure their mutually beneficial functioning has been unsuccessful so far. In international practice, a sufficient number of modern scientific works are devoted to the interaction of the educational services market and the labor market, but the lack of effective modern interaction is recognized by all authors without exception.

### ***Literature Review***

The labor market and the educational services market are the subject of serious scientific research in the modern economy. The search for ways to ensure their mutually profitable functioning has collapsed. In international practice, a sufficient number of modern scientific works is devoted to interaction of the educational services market and the labor market. All authors without any exception recognize the absence of an effective modern interaction.

Study interaction of the labor market and the higher education market using automated data collecting systems related to the labor market and its saturation with certain specialists at the regional level determining a regional feature of the investigated markets interaction (Avdeyenko, Bakayev, 2014).

Ye.Yu. Kostina, N.A. Orlova do research based on an expert opinion analysis, career expectations and college students' intentions according to which the authors link further development prospects of labor mar-



kets and educational services with the fact that employers and other consumers of college services will participate in development of requirements for a future graduate that, in general, will have a qualitative impact on both markets (Kostina, Orlova, 2016).

Ye. Gushchina considers current problems of the higher education system highlighting the problems in absence of connection between the labor market and the educational services market, in decrease of intellectual potential of young people and commercialization of higher education (Gushchina, 2017).

The work of M.V. Borisenko is of particular interest where he holds the view and we support concerning this view, that, unfortunately, most often when providing a student with a full educational services package the educational services market completes his mission. And, with the acquired competencies, such a student moves to the labor market and there occurs interaction of the educational services market product with a subject of the labor market. At the same time, the assessment of student's competencies received shall be carried out by an educational institution, which, according to the university, provided one a high level. Such a situation excludes an objective assessment of acquired competencies quality of an applicant. In the result, the labor market receives a specialist who does not meet the requirements and expectations of an employer (Borisenko, 2017).

N.A. Perevozchikova, T.D. Vasilenko define in their work the conceptual foundations of the labor market and the higher education services market at the current stage of their interaction (Perevozchikova, Vasilenko, 2018).

Given that there is considerable competition in the educational services market, so, unfortunately, it leads not to an increase in the educational service quality, but to overproduction of specialists in certain areas. The problem is that such data should be provided by macroeconomic forecasts of the country's economic development. Partly, they have to be corrected by employers' applications on short and long term period, for this purpose the company shall have a developed planning system which is not entirely possible in economic realities, which generally indicates the need in development of certain mechanisms for integrating the labor markets and educational services. Thus, increasing of an employment guarantee after obtaining an educational service is an important competitive advantage of a university in the higher education services market which problems we have considered in previous studies (Sedlarski, Bezler, 2017; Borbasova, Bezler, 2018; Borbasova, Sedlarski, Bezler, 2019).

Interaction processes have become a special form of society formation. In the scientific community, there is no clear understanding of interaction which generally complicates perception of the investigated subject. This concept interpretation is extremely broad and is considered depending on the field of its application, at the same time, having a close interdisciplinary connection (Bosovskaya, 2013).

Digital technologies are intensively fallen within the scope of human economic activity, under their influence employment is transformed, workforce mobility and innovation increase which, in general, leads to change of an employer's requirements to specialist competencies. It poses new challenges for universities to meet the urgent needs of business – specialist training whose competences are characterized by the digital literacy, the ability to learn independently, the virtual interaction, and the ability to produce innovations.

Today, the competition between universities has shifted both domestically and between states, filled with new content. Academic globalization encourages universities to become more entrepreneurial and to take an active part in the struggle for more successful students, faculty, and competition for research grants, for which they must have administrative and academic autonomy in their activities (Tapenova, Bugubayeva, Kupalova, 2020).

The works devoted to the labor content changes, its organization, and personnel skills under the influence of informatics and computer technologies are made by Handel M. J. (Handel, 2008), Green F. (Green, 2012), Seo H. J., Lee Y. S., Hur J.J., Kim J.K. belong to (Seo, Lee, Hur, Kim, 2012), Frey C. B., Osborne M. A. (Frey, Osborne, 2013), Bulasheva A.A., Kusayinov T.A. (Bulasheva, Kusayinov, 2019).

Changes occurring in the labor market are closely interrelated and determine transformation of the higher education system were studied in the works of such scientists as Youssef A. B, Dahmani M. (Youssef, Dahmani, 2008), Sampath Kumar B.T. and Manjunath G. (Sampath Kumar, Manjunath, 2013), Castillo-Merino D., Serradell- Lopez E. (Castillo-Merino, Serradell-Lopez, 2014). However, relationship between the digital segments of labor markets and higher education, as well as their mutual influence, is poorly studied and requires a profound research – Spencer-Oatey H., Dauber D., Jing J. (Spencer-Oatey, Dauber, Jing, 2017). Professional competency issues are widely discussed by the international scientific community (Velasco, 2014).

Having studied a certain vast literature in science we can conclude. The interaction is a form of subjects' association; mechanisms and methods of combination; coordinated development; deepening of interaction, cooperation, and partnership. Therefore, "interaction of the labor market and the higher education services market" is such an interaction of the organizational and economic mechanisms of the studied markets when the supply of vocational and qualification structure of personnel coincides with the demand thereof, despite the multifactorial impact.

### **Method**

To determine the set of competencies that a graduate should possess to be competitive in the labor market, the authors conducted a marketing study on employers' satisfaction with economics graduates and identified competencies required by the labor market. The survey was conducted among managers of state enterprises and business organizations in Karaganda city. Intending to improve its representativity, the survey concerned the economics graduates, as the leading universities of Karaganda are generally focused on providing educational services in economic specialties. At the time of the study, 7 higher education institutions of Karaganda city and Karaganda region train specialists in the economic and business fields, including Karaganda State University named after Academician Ye.A. Buketov, Karaganda State Technical University, Karaganda State Industrial University (in Temirtau town), Karaganda Economic University of Kazpotreboyz, Bolashak Academy, Central Kazakhstan Academy, Zhezkazgan University named after A.O. Baykonurov.

The survey was conducted using a pre-designed questionnaire. To calculate the number of respondents of the representative sample, the authors used an online calculator, which showed that the sample volume of the whole population of 23.7 thousand enterprises (the average number of enterprises in Karaganda region for 2013-2017) should include 96 enterprises (online sample calculator <http://socioline.ru/rv.php>). The whole population is 23,700 enterprises. Confidence probability (confidence, reliability) is 95%. Confidence interval of error -  $\pm 10\%$ . Thus, the management of 96 enterprises (among them: directors, heads of departments, heads of state institutions, law enforcement agencies, banking and financial organizations, private enterprises, service sectors, as well as individual entrepreneurs, managers, leading experts, etc.), where graduates work, took part in the survey. The number of employees in these organizations varies from 3 to 1200 people.

### **Results**

The results of the employers' survey showed the following.

The need of the labor market for economics specialists is a certain element of its integration mechanism with the educational services market. Based on the expert evaluation, the need of the labor market is distributed as follows: 25% of employers ticked the response "finance", 19% of employers ticked the response "economy", 15% of employers ticked the response "accounting and audit" (Figure 1). The need for financial experts on the labor market is superior due to the high density of financial enterprises in the region under study.

The involvement of graduates of higher education institutions of the region in the activity of the state enterprises and small and medium-sized businesses is an important indicator. In the next question, respondents were asked to indicate whether economics graduates who had graduated in recent years worked in their enterprise (Figure 2). Employers who indicated the largest number of graduates working in their enterprises (61%) mentioned that the graduates mainly worked in the following departments: financial and economic departments, legal departments, departments of small and medium-sized businesses, departments of organizational and personnel service, information department, etc.

Such an indicator as "time spent on finding a job" is a rating and significant indicator of interaction between the market of educational services and the labor market. The authors were interested in the answer to the following question: "How many graduates (those who graduated within the last 1-2 years) do you employ per year? Based on the analysis of the experts' answers, Figure 3 shows that per year the largest number of enterprises employ only 1-2 graduates per without work experience.

However, the number of employed graduates depends not only on work experience but also on the number of employees in the organization.

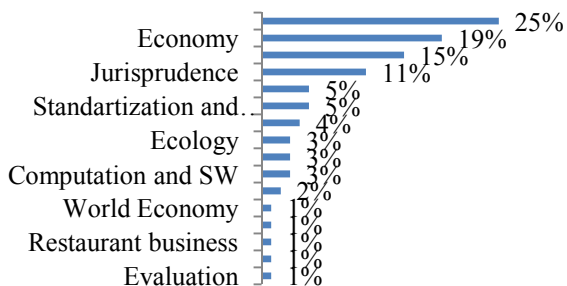


Figure 1. Need for economics graduates

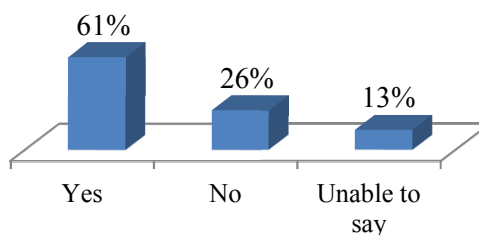


Figure 2. Demand in economics graduates

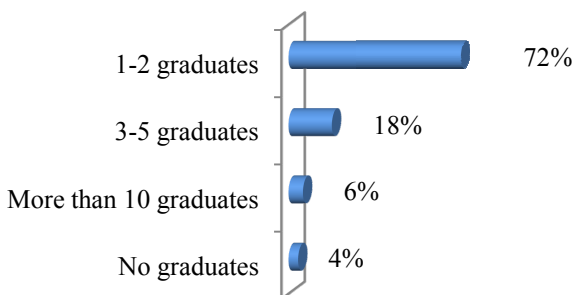


Figure 3. Need for graduates without work experience

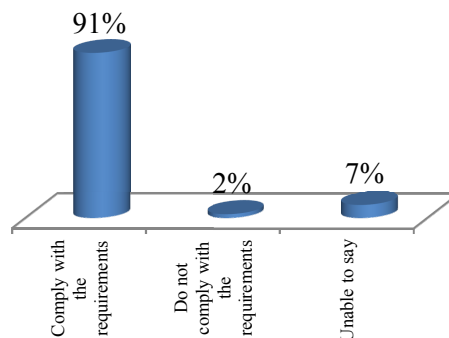


Figure 4. Compliance of graduates' competencies with the employers' requirements

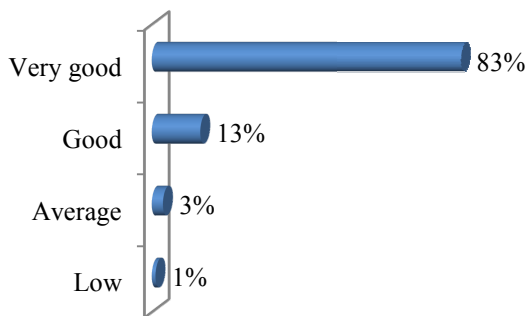


Figure 5. Dynamics in training level of economics graduates

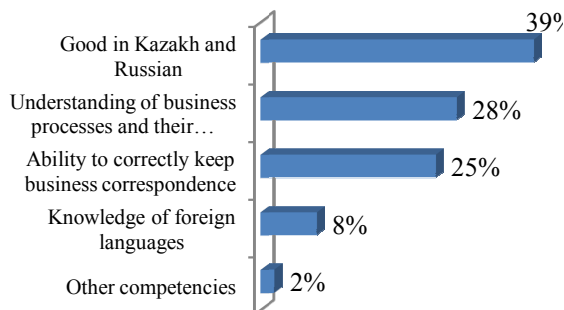


Figure 6. General professional competencies of a graduate

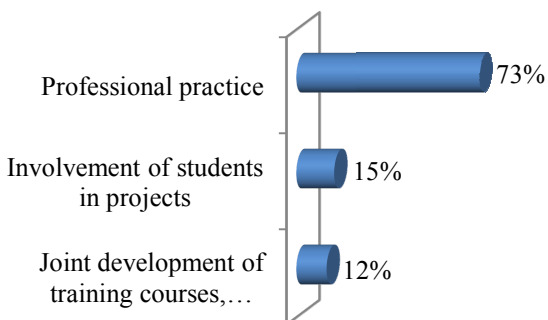


Figure 7. Organizational mechanisms for integrating the labor market and educational services market

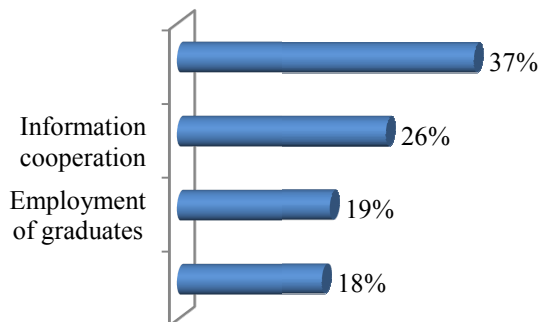


Figure 8. Readiness for social partnership with higher education institutions

Note - prepared by authors based on the study

86% of surveyed employers are satisfied with the level of training of economics graduates (for example, professional training, ability to build relationships in a team, analytical skills, independence, initiative, etc.). Employers pointed out the following strong aspects of graduates' training:

- good adaptability to new conditions;
- initiative;
- good professional training;
- the organization, communication skills;
- independence;
- ability to build relationships in a team.

14% of employers consider that they are not satisfied with the level of training of graduates, as the graduates lack practical knowledge.

The level of professional competencies that a graduate received during his/her studies at the higher education institution and self-education is the most important indicator of his/her competitiveness in the labor market. The employers answered positively to the question: "In your opinion, does the level of graduates' knowledge meet the needs of your company (organization)?" (Figure 4). The absolute majority (91%) of employers answered that the level of knowledge of graduates fully meets the needs of their organization or company. Only 2% of respondents consider that the level of knowledge of graduates does not meet the needs of their organization, and 7% of respondents were unable to answer. These answers allow concluding that employers are generally satisfied with the level of training of economics graduates in Karaganda region.

As for the analysis of changes in the dynamics of the qualitative level of graduates' training, according to the answers, most employers note a noticeable increase in the level of graduates' training, especially in specialties: "finance", "economy" and "state and local government". Thus, 83% of employers note that the level of graduates' training is "very good", 13% – "good", 3% – "average" and 1% – "low". Employers also note that every year the level of graduates' training increases and meets the standards and requirements of their organization (Figure 5).

According to the respondents' answers, the most widely used system for selection of candidates for a job is as follows: sending a CV – an interview (or testing) – internship – probation period – recruitment. In most cases, during the selection of candidates for a job, not only knowledge of specialty but also the personal qualities and skills of graduates are taken into account (Figure 6).

According to respondents, the main general professional skills that a graduate should possess are "good knowledge of Kazakh, Russian languages", "understanding of business processes and their interrelations in the organization" and "ability to correctly conduct business negotiations and keep business correspondence". When choosing the "other" option, employers note professional competence, ability to improvise, desire to work and study, knowledge of professional disciplines, knowledge of English, analytical skills, and stress resistance. Employers also note that in many cases, good knowledge of languages enhances prospects for career and personal growth.

Employers were asked to give the main reasons for employment and employment rejection. Reasons for employment and employment rejection are presented in Table 1.

Table 1. Employer's main criteria for employment graduates of higher education institutions

Reasons for employment	Reasons for employment rejection
focus on professional and career development; stable company in the labor market; compliance with qualification requirements; stable salary; interesting work; the successful professional practice of a graduate.	noncompliance with qualification requirements; failure to pass exams, tests prescribed by law; lack of work experience; lack of vacancies; lack of a diploma; slow learning; insufficient level of professional competencies.
<i>Note – prepared by authors based on the study</i>	

Readiness and mechanisms for integrating the labor market with the educational services market are quite primitive at the moment (Figure 7). The chart shows that the main form of cooperation between organizations and higher education institutions is "professional practice" (73%), while other mechanisms of cooperation between higher education institutions and enterprises are underdeveloped.

Afterward, employers were asked the following question: "Are you interested in developing educational programs and in planning vocational training for young people in professions which are important for your

enterprise (institution), if yes, in what form?". 87% of respondents answered positively, and 13% of respondents answered "no", noting the lack of free time for developing educational programs and lack of interest in the development.

To the question "Are you interested in accepting students for professional and pre-graduation practice in the specialties of your enterprise, institution? Specify the conditions under which (without paying a salary to students, with partial or full payment, for how long)" respondents unanimously answered positively. They note that they are ready to accept graduates for training (professional practice and pre-graduation practice) without pay. Employers noted that the period of practice should last from 20 days to 6 months.

The social partnership between labor market enterprises and higher education institutions is a very efficient organizational and economic mechanism for integrating the labor market with the educational services market. Respondents gave quite different answers to the question: "In what form of the social partnership are you ready to cooperate with higher education institutions?". It generally indicates that respondents are already working in this direction or have thought about it (Figure 8). The distribution of respondents' answers shows that the main form of social partnership with higher education institutions remains "provision of jobs for professional and pre-graduation practices" and "information cooperation", which involves placing information on their resources (in the organization and at the university), banner exchange, etc.

In conclusion, employers were asked to give in a free form any additional wishes and remarks regarding the quality of personnel training at higher education institutions. The majority of respondents (98%) answered that they did not have any remarks and wished success in personnel training, further development, and prosperity of higher education institutions. 2% of employers noted that graduates lacked practical experience.

### ***Discussion***

As the analysis of respondents' answers showed, in the region, there is a need for specialists in economics who are trained at the universities of the region. All respondents are unanimously satisfied with the level of training of university graduates. This is confirmed by their positive answers. This fact indicates that university graduates are in demand in the labor market and show the necessary knowledge.

According to respondents, graduates are selected for employment mostly through interviews or testing. Competitive interviewing remains one of the most important elements in the selection process. When employing a graduate, the employer wants to know as much information about the applicant as possible and the more detailed information its, the easier and faster this graduate can be employed. Different employers are interested in different professional competencies. Such requirements of employers result in a large number of different parameters necessary for the description of applicants and their requirements.

Representatives of the enterprises and organizations of different branches – state organizations, manufacture, services sectors, wholesale and retail trade, tourism, agriculture took part in the study, but despite the difference of types of the enterprises, their spheres of activity and corporate cultures, the requirements to employees are surprisingly similar.

According to the respondents, the fundamental competencies that a graduate should have are:

- general professional competencies: understanding of business processes of enterprises and their interrelations; ability to correctly keep business correspondence, prepare reports, presentations, and other documents;
- communication competencies: the ability to present a produced product or service; the ability to express the ideas clearly; the ability to conduct negotiations;
- analytical competencies: systematic thinking, analytical thinking, ability to learn quickly;
- innovative competencies: the vision of new opportunities; ability to generate new ideas, initiative, independence;
- behavioral characteristics: responsibility, discipline; ability to use time effectively, ability to work in a team and achieve collective goals.

As determining reasons for rejecting the employment of graduates, the respondents also mentioned high salary expectations and the lack of professional experience. Respondents noted that the following forms of university interaction with organizations, institutions, enterprises were the most preferable: organization and implementation of all types of practices; they showed little willingness to participate in the joint development of educational programs and low interest of employees of the organization in the educational process (as teachers).

### Conclusions

Thus, based on the results of the study, it is possible to give the following recommendations:

- for analyzing the labor market for its development trends, it is necessary to track changes in employers' requirements to candidates. This will make it possible to identify permanent requirements that change over time and orient training towards meeting these requirements, first and foremost;
- to design educational programs taking into account practice-oriented parameters;
- to improve the organization of students' professional practice following the new recommendations of the Ministry of Education and Science of the Republic of Kazakhstan;
- to carry out a systematic analysis of the results of all types of professional practice, to improve its effectiveness;
- to strengthen links with the business community, to develop social partnership;
- to increase the interest of employers in creating various mechanisms of cooperation between the higher education institution and enterprises. As foreign practice shows, one of the effective tools is tax benefits or financial assistance to employers who employ graduates. Such a measure is widely used in France, Poland, the Czech Republic, and Singapore;
- to step-by-step create new organizational structures aimed at developing general and professional competencies of graduates.

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**О.Д. Безлер, З.Н. Борбасова, С.Н. Улаков**

### **Қарағанды аймағындағы экономикалық мамандықтар түлектеріне жұмыс берушілердің қанағаттануын зерттеу**

#### **Аңдатпа**

*Мақсаты:* Қазіргі әлеуметтік-экономикалық жағдайларда университет түлектерін жұмысқа орналастыру міндеттерін шешу жоғары оқу орнының білім беру жүйесіне интеграцияланған, қоғамның қазіргі заманғы жағдайларына сай келетін түлектерді жұмысқа орналастыруға жәрдемдесу жүйесін құру және жұмыс істеу тәсілдерін, ұйымдастырушылық және әдістемелік қағидаларын әзірлеуді талап етеді. Жоғары білім беру жүйесі мен еңбек нарығы өзара іс-қимылының жаңа тетіктерін әзірлеу қажет.

*Әдісі:* Еңбек нарығында бәсекеге қабілеттілікті қамтамасыз ету үшін бітіруші ие болуы тиіс құзыреттіліктерді анықтау мақсатында мақалада авторлар жұмыс берушілердің экономикалық мамандықтар түлектерінің қанағаттануына маркетингтік зерттеу және еңбек нарығына қажетті құзыреттіліктерге анықтау жүргізген. Сауалнама Қарағанды қаласында мемлекеттік кәсіпорындар мен бизнес құрылымдардың басшылары арасында өткізілген. Репрезентативтілік мақсатында сауалнама экономикалық мамандықтардың түлектеріне қатысты болды, себебі жетекші жоғары оқу орнындарында білім беру қызметінің жалпы бағыты - бұл экономикалық бейіндегі мамандықтар.

*Қорытынды:* Мақалада авторлар жоғары оқу орындарының экономист-түлектерін жұмысқа орналастырудың аймақтық ерекшеліктерін көрсеткен. Сонымен бірге, білім беру қызметтерін сатып алу процесінде алынған құзыреттер еңбек нарығының қажеттіліктерін қанағаттандыруы керек.

*Тұжырымдама:* Зерттеу нәтижелері бойынша еңбек нарығы мен білім беру қызметтері нарығын интеграциялаудың жаңа ұйымдық-экономикалық тетіктерін әзірлеу бойынша тәжірибелік ұсыныстар берілген.

*Кілт сөздер:* еңбек нарығы, жоғары білім беру қызметтері нарығы, түлектің құзыреті, еңбек нарығының қажеттілігі, еңбек нарығының сұранысы, жоғары білім беру қызметтері нарығының ұсынысы, түлектерді жұмысқа орналастыру.

**О.Д. Безлер, З.Н. Борбасова, С.Н. Улаков**

### **Исследование удовлетворенности работодателей Карагандинского региона выпускниками экономических специальностей**

#### **Аннотация**

*Цель:* В современных социально-экономических условиях решение задачи трудоустройства выпускников университета требует выработки подходов, организационных и методических принципов создания и функционирования системы содействия трудоустройству выпускников, интегрированной в систему образования вуза, адекватной современным условиям общества. Необходима разработка новых механизмов взаимодействия системы высшего образования и рынка труда.

*Методы:* С целью определения набора компетенций, которыми должен обладать выпускник для обеспечения конкурентоспособности на рынке труда, в статье авторами было проведено маркетинговое исследование удовлетворенности работодателей выпускниками экономических специальностей и выявление компетенций, необходимых рынку труда. Опрос был проведен среди руководителей государственных предприятий и бизнес-структур в г. Караганде. В целях репрезентативности опрос касался выпускников экономических специальностей.

стей, поскольку в ведущих вузах г. Караганды общая направленность образовательных услуг — это специальности экономического профиля.

*Результаты:* В статье авторами показана региональная специфика трудоустройства выпускников-экономистов высших учебных заведений. При этом получаемые компетенции в процессе покупки образовательной услуги должны удовлетворять потребности рынка труда.

*Выводы:* По результатам исследования даны практические рекомендации по разработке новых организационно-экономических механизмов интеграции рынка труда и рынка образовательных услуг.

*Ключевые слова:* рынок труда, рынок услуг высшего образования, компетенции выпускника, потребность рынка труда, спрос рынка труда, предложение рынка услуг высшего образования, трудоустройство.

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## **Sovereign ratings of Ukraine: factors and risks**

### ***Abstract***

*Object:* The aim of the article is to develop theoretical principles that reveal the content, functions and role of sovereign credit ratings in the financial market, justify the transformation of methodological approaches to determining sovereign ratings in times of crisis, and develop recommendations regarding the regulation of rating agencies in Ukraine.

*Methods:* The methodological basis of the article was the provisions of general economic theory, a systematic approach, a trend-based forecasting method, analytical alignment methods, and a statistical method.

*Findings:* As a result of the study, it was found that if a country is assigned a speculative level rating, most of the capital flows into short-term speculative operations. High riskiness, micro and macroeconomic uncertainty, and limited opportunities for the state to influence the economic environment and processes in the country and market participants create an ideal environment for speculative capital movement.

*Conclusions:* A certain flow of funds into the real sector in the speculative sector - due to growing risks and the cost of capital is the use of modern tools of business and making financial and economic decisions. Reduce the risks of investors and improve the investment attractiveness are designed such innovative systems and those technologies as the financial control, value-orientations management, financial communication, modern methods of assessment of credit risks, and the like. Their practical advice in complex with macroeconomic reforms in the country will help to improve the ratings of our state as a whole and individual economic entities, create favorable conditions for the inflow of capital into the real economy.

*Keywords:* sovereign ratings, corporate sector of the economy, credit and investment ratings, speculative ratings, capital.

### ***Introduction***

Credit rating industry formation is caused by informational asymmetry on the financial market and the general interest in financial information converting into a simple and clear debtors creditworthiness assessment – a credit rating. For example, in the USA the practice of assigning credit ratings to issuers of debt obligations has been going on for more than a hundred years, while the Ukrainian market of credit rating services has been developing only for the last two decades.

The main reasons for the rapid development of the global rating market are: acceleration of economic and financial globalization, which led to the standardization of risk factors and the need to create an adequate tool for managing the investment portfolio; capital market regulation, including financial crises; development of information and communication technologies that facilitate the rating process.

The purpose of the article is to develop theoretical provisions that reveal the content, functions and role of sovereign credit ratings on the financial market, justify methodological approaches transformation to determining sovereign ratings in times of crisis and make recommendations regarding the regulation of rating agencies in Ukraine.

### ***Literature Review***

The theoretical and methodological basis of the article are publications of foreign and Ukrainian authors, the provisions of general economic theory, a systematic approach to studying the functioning of the market for credit rating services. The crises of the 90s led to significant transformation in the methodology for determining sovereign ratings: conditional debts (for example, government guarantees) and international liquidity were central to the sovereign default risk assessment; the concept of “selective default” was formulated, approaches to determining the non-payment probability of domestic debt in local currency to foreign public debt in foreign currency were revised. Key parameters of the rating methodology, those are rating horizon (short-term, long-term); definition of an event; rating structure (determination of key factors, its determining and quantitative risk assessments); practice of rating revision (credit warnings and forecasts);

standardized assessment using a rating scale; creation of a formalized model of the object of assessment are revealed. Requirements for the rating methodology (transparency, accessibility), the same approach to issuers of the same category are a constant adjustment caused by new economic realities.

A review of sovereign (credit) ratings dynamics of Ukraine indicates that the country is often in a pre-default state. The investment environment is characterized by a maximum level of risk. A “Ca” rating (Moody's) means not just speculative, but an ultrahigh speculative level with a high probability of default. The end of I quarter 2015 was characterized by the lowest rating among nearly 140 countries. The specified rating class signals that due to a set of adverse factors, investors who invest in Ukraine run the risk of incurring losses. Among the reasons for the high investments risks, Moody's analysts highlight serious geopolitical risks, as well as the likelihood of large losses by external private lenders due to government plans to restructure eurobonds. The negative outlook reflects Moody's expectations that external and public debt levels will remain very high, despite debt restructuring and reform envisaged.

High risk, micro- and macroeconomic uncertainty, limited opportunities for the state to influence the economic environment, the processes in the country and market participants these all create an ideal environment for speculative capital movement. The nature of speculative transactions is explained by the orientation toward situational benefit from price fluctuations in the value of assets, combined with excessive disproportionality of volumes and velocity of circulation of financial and real capital (Korneev, 2008). The effect of crowding out capital from the real sector to the area of speculative operations can be logically explained over high risks in coordination with the local market. In such a situation, investors will make decisions on investing only on condition of obtaining super-profits. So, we have a circle: high risks and instability stimulate the crowding out of capital into speculative operations, and, in turn, the growth of the speculative sector puts additional pressure on the economy, which leads to deepening crisis processes.

To the functions of credit ratings on the financial market belong:

- overcoming the information asymmetry of the financial market to make investment decisions and ensuring the investor's right to receive reasonable independent information about the creditworthiness of the borrower;

- resolution of principal-agent problems and credit risks monitoring in the term of managing investment portfolios and risk level regulation of capital investment and bank reserves regulation to cover loan losses;

- access to the stock, credit and deposit markets by setting the cut-off level in the form of a minimum rating, capital requirements for credit institutions;

- ensuring information security in order to achieve transparency and validity of decision-making mechanisms at all levels of the banking system, including the development of internal banking risk control and management systems;

- conditions optimization for attracting global capital to national financial markets.

The principles of rating agencies activity are:

- independence of ratings;

- publicity (availability) of analytical evaluation criteria;

- collegial decision-making procedures;

- interactivity;

- confidentiality;

- use of rating scales;

- continuous monitoring of issuer default probability;

- development of methodology.

Undoubtedly, the expected rate of return on capital invested in a risky environment should compensate risks. At the same time, in the case of a pre-default sovereign rating, quantitative risk assessments require a risk premium, the size of which will be much larger than the real sector of the economy can provide. So, a dilemma arises for investors: withdraw capital from a sector that does not provide a rate of return corresponding to a risk premium, or suffer economic losses in the form of the difference between the expected risk premium and actual financial results. We study the causal relationship of the risks of sovereign ratings, interest rates and capital migration from the real sector to the speculative. According to the traditional approach, the expected rate of return on capital invested in an enterprise depends on the risk-free (base) interest rate, the market average risk premium and the systematic risk of investing in a particular asset (beta factor). Since enterprises use both their own and borrowed capital to finance their activities, the weighted average rate of return on capital (WACC) is calculated to determine the total price of capital. The indicated interest rates serve as the basis for calculating the dis-

count rate, which is an important calculation parameter for evaluating the effectiveness of investments, determining the fair value of assets and evaluating the value of a business. The country's sovereign ratings directly affect both the local risk-free interest rate and the average rate of return on the local market. Moreover, in different countries, the financial crisis may vary in their effect on interest rates. According to the results of KPMG research (KPMG - an international consulting company) in developed countries there is a tendency to increase market risk premium during the financial crisis (MRP). At the same time, the risk-free (basic) rate of return is somewhat reduced (KPMG, 2013). And states with low ratings are characterized by a significant increase in the latter. Risk-free financial instruments are characterized by the absence of default risks, currency risks and any other threats of losses by the investor. Since such instruments do not exist in nature, in practice they use returns on "quasi-risk-free" investments, which mainly include investments in government debt obligations. It should be understood that a risk-free rate of return does not mean a simple fixation of the current rate of return on government bonds. For this, a complex set of calculations is used, which provides for smoothing rates and analyzing the curve of the structure of interest rates for a certain period. One of the ways to determine the risk-free rate of return in countries with developed stock markets is using the Svensson method, which takes into account the complex relationships between the spot rate and the period of circulation of financial instruments (Svensson, 1995). This method is widely used by central banks of many countries to establish the base interest rate, however, due to the lack of reliable information to determine the local risk-free rate for Ukraine, this method is unacceptable today.

### **Methods**

The influence of a country's sovereign ratings on a risk-free interest rate is carried out through the so-called country risk premium (CRP). Thus, the yield on government obligations within emerging markets is consisted of two components: the global risk-free rate and the country's risk premium. In the case of pre-default ratings, the risk-free financial instruments issued by it are practically absent, since the country's risk premium is extremely high. So, the base interest rate can grow to a level that exceeds the yield on some corporate securities. This thesis can be confirmed by the dynamics of the discount rate of the National Bank of Ukraine, which during 2014 - 2015 was revised five times and grew more than 4.6 times. As in April 2015, the discount rate, which is the base interest rate for other NBU interest rates and referred to the currency price, and in some cases for a risk-free rate, has been increased to 30% (NBU, 2016). For comparison: in the euro area, the base interest rate during the 2009–2011 debt crisis reached its historical minimum at that time - 0.12%. At the same time, from January 1, 2013 the ECB introduced the establishment of a negative accounting interest rate, which since 2015 has been 0.83%. In the USA, the interest rate since the end of 2008 is also at a historic low (0.25%) level (Trading economics, 2019). The catastrophic situation with sovereign ratings and interest rates in Ukraine is caused by the presence of a complete set of risks on emerging markets described by T. Copeland and J. Murrin. These are high inflation, macroeconomic instability, increased state control over capital, political risks, the threat of military conflicts and civil unrest, changes in government regulation, a low culture of contractual relations, poor investor protection, and corruption (Copeland, Koller, Murrin, 2007). It is clear that under such circumstances, the calculation of the objective local risk-free rate loses its sense. As A. Tereshchenko points out, one of the points to solve this problem is to use the so-called global risk-free rate in the calculation of capital costs (Tereshchenko, Babiak, 2013). According to various estimates, its value ranges from 3 to 4%. The application of this rate avoids the drawback that is widespread in theory and practice - double risk accounting when assessing the cost of capital invested in the local market (the market risk premium includes the global risk premium for developed countries and the country's additional risk premium) (Tereshchenko, 2010). At the same time, the global risk-free rate solves the information lack problem and the problem of interest rates base calculating for emerging market countries that are in the acute phase of the financial crisis.

Another important parameter for determining capital costs, which substantially depends on the country's sovereign rating, is the market average rate of return. It is clear that high risks directly affect the risk premium expected by investors. The average risk premium consists of a risk premium on developed markets (global risk premium) and a risk premium for investments in a certain country. As already noted, the second component is most sensitive to the level of sovereign ratings.

At the beginning of 2015, Ukraine's ratings fell to historic low level, respectively, the risk premium reached a maximum of 15%. Taking into account the risk premium for countries with a developed stock market and minimal default risk (AAA rating), the market premium for investment risk in Ukraine has become 20.75%. It is worth noting that the given values of the risk premium are estimated in US dollars. If they

are broadcast in hryvnia equivalent (adjusted for inflation in Ukraine and the USA), we will get even higher risk premium values.

In addition, rational investing calculation takes into account the risk-free interest rate and the risks of investing in a particular asset (enterprise). For example, if the global risk-free rate is 3.5%, and the systematic risk of investments (beta factor) into the enterprise (or an asset) is 1.5, then, if you use the CAPM model, the rate of return, which will compensate overall risks of the investor, will be 34, 6% in US dollars. It is clear that the yield in hryvnia equivalent depends on the inflation rate in Ukraine, therefore, significantly exceeds its normalized rate. So, if in March 2015, compared to the same period of 2014, inflation in Ukraine amounted to 45.8%, and in the United States - about 1.5%, then as a result of the transformation of interest rates taking into account the level of inflation, we obtain the required rate of return at the level of 64 % in hryvnias.

With high risks and, accordingly, a high discount rate, most investment projects in the real sector of the economy become unprofitable. Another negative consequence of high risks and low sovereign ratings is a decrease in the value of assets located in the country. In addition, the value of corporate enterprises as a business asset is significantly reduced. So, low sovereign ratings indicate the inexpediency of investing in industrial investments, fixed assets and enterprises on the local market.

Large financing risks can be justified only if it is possible to obtain super-profits. In the case of Ukraine (subject to systematic risks at the level of 1.5), the required return should exceed 34.6% in US dollars or 64% in hryvnias. For comparison: in developed countries it averages 8-12%. Taking into account the level of risks, investments into the manufacturing sector are not able to ensure the economic return on investment. Therefore, capital investments are frozen, and investments are made only in the most speculative operations with signs of a shadow economy.

### **Results**

In the case of limited opportunities, government policy should be aimed at localizing the reasons for the declining sovereign ratings, so that it will be possible to reduce the largest component of high interest rates - a premium for country risk. We emphasize that a sovereign rating is derived from the level of risks, budget revenues and expenses, monetary policy, the state debt burden, the geopolitical situation, other factors of the state financial stability and the ability of the government and business entities to fulfill their obligations. In other words, it is not the credit rating that affects macroeconomic indicators and the level of risks, but vice versa. While working on raising the country's sovereign ratings, the main efforts should be directed on such risk generators as corruption, macroeconomic instability, low level of investors rights protection, frequent changes in the government regulation. The introduction of anti-crisis management elements is an adequate response of the corporate sector to modern challenges, in particular, risk management systems and anti-crisis financial controlling tools (Tereshchenko, 2004). We are talking about the need to introduce effective risk neutralization systems at enterprises, including those that have macroeconomic roots, which will reduce the risks of investing in the corporate sector compared to government financial instruments.

Another way to mitigate the factors of rapid growth in interest rates is to reduce the information asymmetry at both the macro and microeconomic levels. This refers primarily to the reduction of information risks of investors. This is a complex issue, that include ensuring transparency in the economic government activities, predictability of changes in regulatory legal acts, regulating business activities, implementing corporate governance principles (the key of which is openness of management to investors) at the level of business entities.

From a theoretical point of view, the reduction of the risks of investing capital in enterprises, and, consequently, the provision of investments in the real sector of the Ukrainian economy will be achieved if corporate finance carries out pricing and information functions. As A. Krysovaty, V. Fedosov, and N. Ryazanova prove, these functions are closely related: there are many examples when a company ended in capital losses, bankruptcy, and losses, the main reason for which was the distortion of primary data on corporate finances. The availability of proper financial and economic information and its effective exchange is a condition for the sustainable development of the corporation. Only if the uncertainty of economic relations is reduced, the latter can minimize or even completely eliminate the risks in its activities (Krysovaty, Fedosov, Ryazanov, 2013). Given the above, we believe that in the conditions of low sovereign ratings of Ukraine, the implementation of the latest technologies, financial decision-making and risk management can contribute to the solution of the task of raising capital by domestic enterprises. These technologies should be aimed at reducing the information asymmetry between investors and enterprises, as well as at ensuring the pricing interests of investors. One of the innovative tools to ensure the implementation of the pricing function of corporate finance is a value-oriented management system (VBM). The application of this approach to the imple-

mentation of the financial policies of enterprises can somewhat mitigate the effects of information asymmetries between participants of financial relations and neutralize the conflict associated with it (Uhodnikov, 2014). The introduction of this system provides a fundamentally new philosophy of enterprise management, which includes establishing mutually beneficial relations with all interest groups, social responsibility to society and staff, value-oriented responsibility to investors, and the development of a culture of contractual relations. In combination with other measures, this will help to reduce the risks of investing into corporate sector and capital costs. On the one hand, the use of innovative methods of financial communication will contribute to the reduction of informational risks of creditors, and on the other hand, the assessment of creditworthiness and investment attractiveness of enterprises. The definition of credit risks should be based on empirical data on borrowers default statistics and on internal rating principles (Damodaran, 2010). The transition to a rating system for assessing credit risks will make it possible to harmonize technologies aimed at information asymmetry reducing and, therefore, reduce risks and interest rates. Another area of implementation of the corporate finance information function is the introduction of financial communication tools for enterprises to find potential investors. We are talking about a system for positioning an enterprise on the capital market as an attractive object for investment.

### **Conclusion**

During the financial and economic crisis, the main parameters used in capital cost calculating are distorted anomalously. Low sovereign ratings and, accordingly, a high risk of default significantly affect the size and procedure for establishing a risk premium for investments in a certain state. Risk premium largely determines the level of local interest rates and, consequently, the cost of capital for the corporate sector. The risk premium directly affects the size of the risk-free (base) interest rate, as well as the average profitability in a particular local market. Thus, by changing the parameters that form the state's rating, it is possible to achieve a reduction in the risk premium for a particular country and at the same time interest rates in it. Given the interdependence of macro- and microeconomics, influence on the parameters that determine the ratings should be applied by both government bodies and corporate enterprises. In the context of capital costs, the difference between financial crises in countries with developed stock markets and in countries with developing markets lies in the nature of changes in interest rates, in particular, the base interest rate: in the first – it decreases, and in others – it increases on the contrary. High risks and the rate of return on invested capital determine the displacement of financial resources from the real sector of the economy into speculative operations. The growth in volumes of the latter turns into a factor of the financial crisis.

Sovereign ratings of a country are formed on the base of factors not controlled by the sovereign government (significant level of debt burden, external military dangers, closure of markets by individual states, a number of macroeconomic indicators), as well as controlled ones (level of corruption, protection of investor rights, inflation, most macroeconomic indicators, the quality of state regulation of economic processes). These factors should be focused on reforms that will ultimately contribute to improving the country's sovereign ratings. The usage of modern tools for doing business and making financial decisions is a definite safeguard for capital flow from the real sector to the speculative sector due to rising risks and the cost of capital. Such systems and technologies as financial controlling, value-oriented management, financial communications, modern methods of assessing credit risks are made to reduce investors' risks and increase investment attractiveness. Their practical recommendations, combined with macroeconomic reforms in the country, will help to improve the ratings of our state as a whole and individual business entities, and create favorable conditions for capital inflows into the real sector of the economy.

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## Е.А. Борзенко

### Украинаның егеменді рейтингтері: факторлар мен қауіптер

#### Аңдатпа

**Мақсаты:** Мақаланың мақсаты қаржы нарығындағы егеменді несиелік рейтингтердің мазмұнын, функциялары мен рөлін ашатын теориялық ережелерді дамыту, дағдарыс кезеңінде егеменді рейтингтерді анықтаудың әдістемелік тәсілдерін өзгертуді негіздеу және Украинадағы рейтингтік агенттіктердің қызметін реттеу бөлігінде ұсынымдар әзірлеу болып табылады.

**Әдісі:** Мақаланың әдіснамалық негізі жалпы экономикалық теорияның ережелері, жүйелік тәсіл, тренд негізінде болжау әдісі, аналитикалық теңестіру әдістері, статистикалық әдіс болып табылады.

**Қорытынды:** Зерттеу нәтижесінде елге алыпсатарлық деңгейдегі рейтингтер берілген жағдайда капиталдың көп бөлігі қысқа мерзімді сипаттағы алыпсатарлық операцияларға ауысатыны анықталған. Тәуекелділіктің жоғары болуы, микро және макроэкономикалық белгісіздік, мемлекеттің экономикалық ортаға және елдегі процестерге және нарыққа қатысушылардың ықпалының шектеулі мүмкіндіктері алыпсатарлық капиталдың қозғалысы үшін мінсіз орта жасайды.

**Тұжырымдама:** Капиталдың нақты сектордан алыпсатарлық секторға ағуының белгілі бір сақтандырғышы – тәуекелдердің өсуі мен капитал құнының салдарынан бизнесті жүргізудің және қаржы-экономикалық шешімдерді қабылдаудың қазіргі заманғы құралдарын пайдалану болып табылады. Инвесторлардың тәуекелдерін азайтуға және инвестициялық тартымдылықты арттыруға қаржылық бақылау, құндылықты-бағдарланған басқару, қаржылық коммуникациялар, кредиттік тәуекелдерді бағалаудың қазіргі заманғы әдістері және т.б. сияқты инновациялық жүйелер мен технологиялар бағытталған. Олардың елдегі макроэкономикалық реформалармен кешенді практикалық ұсыныстары біздің мемлекетіміздің және шаруашылық жүргізудің жекелеген субъектілерінің рейтингтерін жақсартуға көмектеседі, экономиканың нақты секторына капиталдың келуі үшін қолайлы жағдай жасайды.

**Кілт сөздер:** егеменді рейтингтер, экономиканың корпоративтік секторы, кредиттік-инвестициялық рейтингтер, алыпсатарлық рейтингтер, капитал.

## Е.А. Борзенко

### Суверенные рейтинги Украины: факторы и риски

#### Аннотация

**Цель:** Целью статьи является развитие теоретических положений, раскрывающих содержание, функции и роль суверенных кредитных рейтингов на финансовом рынке, обоснование трансформации методических под-

ходов к определению суверенных рейтингов в период кризиса и выработка рекомендаций в части регулирования деятельности рейтинговых агентств в Украине.

*Методы:* Методологической основой статьи послужили положения общей экономической теории, системный подход, метод прогнозирования на основе тренда, методы аналитического выравнивания, статистический метод.

*Результаты:* В результате исследования установлено, что в случае присвоения стране рейтингов спекулятивного уровня большая часть капитала перетекает в спекулятивные операции краткосрочного характера. Высокая рискованность, микро- и макроэкономическая неопределенность, ограниченные возможности влияния государства на экономическую среду и на процессы в стране и участников рынка создают идеальную среду для движения спекулятивного капитала.

*Выводы:* Определенным предохранителем перетекания капитала из реального сектора в спекулятивный сектор, вследствие роста рисков и стоимости капитала, являются использование современных инструментов ведения бизнеса и принятие финансово-экономических решений. Уменьшить риски инвесторов и повысить инвестиционную привлекательность призваны такие инновационные системы и технологии, как финансовый контроллинг, ценностно-ориентированное управление, финансовые коммуникации, современные методы оценки кредитных рисков и т.п. Их практические рекомендации в комплексе с макроэкономическими реформами в стране помогут улучшить рейтинги нашего государства в целом и отдельных субъектов хозяйствования, создадут благоприятные условия для притока капитала в реальный сектор экономики.

*Ключевые слова:* суверенные рейтинги, корпоративный сектор экономики, кредитно-инвестиционные рейтинги, спекулятивные рейтинги, капитал.

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## **The effectiveness analysis of the university-business interaction institutional mechanism and recommendations for its improvement**

### **Abstract**

*Object:* The purpose of this study is to provide justification of Business Interaction Centers on the basis of organizational models, determine its functions, tasks and indicators for evaluating its work for different types of universities, taking into account business interests ensuring direct and most active participation of the business community in performance of educational, scientific and entrepreneurial functions of the university.

*Methods:* The methods are content, comparative, retrospective types of analysis.

*Findings:* The article includes the results of analysis of the effectiveness of university-business interaction in Kazakhstan, based on the Matrix of characteristics of the UBI institutional mechanism and the profile of an entrepreneurial university, which has found that formally all universities have required departments for interacting with business for entrepreneurial, educational and scientific activities, but the majority of the universities studied do not have a integrated center for interaction with business.

*Conclusions:* Increasing the effectiveness of interaction with business, universities are required to make changes to their organizational structure and create the integrated unit for interaction – the Business Interaction Centre.

*Keywords:* institutional mechanism, Business Interaction Centre, university-business interaction, entrepreneurial university, functions of Business Interaction Centre, forms of interaction, organizational model, organizational structure.

### **Introduction**

Kazakhstan is on the verge of fundamental changes in the higher education system related to the adoption of the Law of the Republic of Kazakhstan “About amendments and additions to some legislative acts of the Republic of Kazakhstan on the expansion of academic and administrative autonomy of Higher Education Institutions”. These changes ensure to move to a new level of reforming the higher education system making it more open for interaction and adaptive to challenges, respond to rapidly changing demands of the business and economy, give new opportunities for development of a strategic partnership between business and universities. Also it has launched processes reducing the state’s role and strengthening the market mechanisms, when universities work in the labor market, the educational services market, the scientific and technical products and services market (Belash et al., 2012) and the innovative products and services market. The universities have to meet demand generated by the economy and business with quality supply of graduates, basic and supplementary educational programs, research and innovative products and services. The universities face the most important challenge - their inability to meet demand fully arising in these types of markets. The negative consequence of this unsatisfied demand is development of infrastructure for transfer of knowledge and technology outside the higher education system. The development of the markets of supplementary and business education, and consulting is due to the growing demand for human resources training with additional skills, for new management technologies and applied research in the competitive environment. These services are provided by native and international training and consulting companies, research agencies, training centers and corporate universities. One of the reasons such educational and research structures existence is universities’ misperception of real business needs. That is why business does not choose traditional educational institutions expediting the process of transferring competencies at the lowest cost. Thus, universities have many potential competitors, which take on main universities’ activities forming its own system of interaction with a business community, promote online and e-learning offering not only specialized training for their companies, but undergraduate and Master's programs; provide consulting services and conduct applied research. Taking into account this negative and threatening factor for the system of

higher professional education the so-called "entrepreneurial universities" (Clark, 1998) become effective in terms of interaction with the business community. According to B. Clark, the characteristic "entrepreneurial" includes conscious efforts for "institutional construction," which provides transformations ensuring the university's competitive advantage in the future. Moreover, these transformations require significant changes in the organizational structure of the university.

The authors' personal contribution is UBI effectiveness assessment based on analysis of organizational structures of universities of various types in terms of carrying out entrepreneurial functions in four types of markets, as well as availability of an integrated unit for managing interaction with different partners such as business, government agencies and NGOs, on the basis of one of the internal organizational models. Also the authors justify the necessity of such a unit, determine its functions, a mechanism of its arrangement and specifics of its work. It may be called Business Interaction Center (hereinafter the Center). The term "interaction" includes all its types from transactional to long-term: participation, contacts, cooperation, collaboration, relationship. This Center is an integrator for all departments separately interacting with business, creating conditions to form an integrated comprehensive programme of university-business interaction (hereinafter UBI), accumulating all the information to assess the effectiveness of interaction and making decisions about future directions of this interaction.

The preliminary prerequisite is such a situation that each university has embarked on a transformation path from traditional to entrepreneurial in conditions of academic capitalism developing, budget financing reducing, academic and administrative autonomy expansion. The difference is in the stage of the university's life cycle and in the archetype of the entrepreneurial university (Bronstein et al., 2014). That is why the design and construction of organizational structures and departments of the university interacting with business, the choice of various forms of interaction, indicators for evaluating the effectiveness of this interaction will depend on the above-mentioned difference.

The main hypothesis is that provided a university has an integrated unit as a touch point for interacting with business based on one of the organizational models. It will allow any university to arrange systemic and long-term relationship with its business community. First of all, a university should become an open system, and this is the first step to transformation of traditional universities into entrepreneurial-type ones.

### ***Literature Review***

The universities, business community and government agencies are interested in aspects of UBI. The authors have been interested in researchers' works reflecting the current situation of UBI institutional mechanism. The level of development and forming infrastructure for UBI and forms of interactions are presented in the works of G. Dutrenit, V. Arza (2010), A.A. Tashkinov (2011), S.V. Shabayeva, A.L. Kekkonen (2017), D.A. Sitenko (2018), S.K. Kunyazova, A.A. Titkov, S.Zh. Ibraimova (2016). Classifications of internal organizational models of UBI (centralized/unitary, chaotic/multi-divisional, project/matrix, federal/holding) and their functions are described in works of S.V. Grinenko (2009), T. Vihervaara (2018), F. Brescia G. Colombo, P. Landoni (2016). The functions of universities traditional (employment, education, science) and entrepreneurial (entrepreneurship, entrepreneurship-education, entrepreneurship-science) are determined in works of A.O. Grudzinsky, A.B. Bednyi (2004), I.A. Pavlova (2016), G.A. Reznik, M.A. Kurdova (2017). The extensive literature analysis has shown that main attention is paid to the problems of transactional relations between universities and businesses in the transfer of technology and commercialization, the bias towards an accelerated transition to research universities with their low level of socio-economic results and lower demand for R&D in the industry sector due to its decrease.

### ***Methods***

The content, comparative, retrospective types of analysis as study methods have been used for effectiveness of UBI institutional mechanism as an object of the study and availability of the units in the organizational structure of the universities for UBI in four types of markets via one intermediary-unit as a subject of the study.

### ***Results***

The effectiveness analysis of the UBI institutional mechanism has been conducted with the authors' matrix of criteria of the UBI institutional mechanism (see Table 1). This matrix reveals the criteria of channels and forms of UBI via university internal departments interacting with business in different types of markets and taking part in performance of their traditional and entrepreneurial functions. The matrix has been made using: 1) Model of the matrix of institutional functions and university's roles (Pavlova, 2016),

demonstrating the exceptionality of the entrepreneurial function; 2) classification of higher educational institutions' functions during evolvement of innovation-based economy (Reznik and Kurdova, 2017); 3) general classification of the channels and forms of interaction (Dutrenit et al., 2010), with a focus on bi-directional channels and long-term interaction intensity, and 4) analysis of publications on the UBI, the most of which devoted to such topics as creation of spin off (Feliū and Rodríguez, 2017), academic entrepreneurship and joint research (Dima et al., 2017).

Table 1. The matrix of criterions of the UBI institutional mechanism for Kazakhstan universities

Type of the market	University function	Possible divisions for interaction	Channels of interaction	Forms of interaction	Interaction intensity
Labour	Employability	Career and Job Placement Centre	Traditional	Job placement	Short-term
Education services	Education	Chairs, Educational Department	Bi-directional	Basis curriculum design	Short-term
				Basis curriculum delivery	Long-term
		Chairs, Educational Department	Bi-directional	Participation of business in monitoring the effectiveness of study (exams, defense) and education quality assessing	Short-term
		Vocational Education Institute, Worker Profession Training Centre	Bi-directional	Development and implementation of effective teaching methods (i.e. dual education programs)	Long-term
		Internships and Mobility Department	Bi-directional	Mobility. Students internships	Medium-term
	Education-entrepreneurship	Supplementary Education and Advance Training Institute/Centre	Service	Personal training, Lifelong learning for businesspeople	Short-term
		High School, Chairs, Training Centre	Bi-directional	Optional curriculum design and delivery	Short-term
		Resource Centre	Bi-directional	Temporary exchange of staff (i.e. mobility of academics to business and vice versa)	Short-term
		Chairs	Commercial	Target training by business orders	Long-term
		E-Learning and Open Online Courses Center	Bi-directional	Education environment and Knowledge network	Long-term
Scientific and technical products/services		Science	Research Institute/Centre, Laboratory	Bi-directional	Collaborative or joint R&D
Science-entrepreneurship	Bi-directional	Contract research		Long-term	
	Service	Consulting to business		Short-term	
	Service	Exchange of professional information		Short-term	
Innovative products and services	Entrepreneurship	Incubator, Start-up Centre, Accelerator	Commercial	Setting up start-ups and spin-off companies	Medium-term
		Commercialization and Technology Transfer Office	Commercial	Commercialization of R&D results, Patents and Licensing	Medium-term
		Scientific-technological park	Bi-directional	Organizing pilot-industrial and small-scale production	Long-term
Scientific publications	Science-education	Science Department	Traditional	Conferences, Joint publications	Short-term

*Note - Compiled on the basis of the sources (Pavlova, 2016), (Reznik and Kurdova, 2017), (Dutrenit et al., 2010)*

According to the matrix in Table 1, the greatest interest by long-term relationships criterion is interaction via bi-directional channels. These channels provide exchange of knowledge (Dutrenit et al., 2010) and they prove the education entrepreneurial function comes the first. This is confirmed by fulfillment of the priority role of universities in stimulating innovation (Christopherson et al., 2014) and accomplishment by universities of their third mission (Kitagawa et al., 2016). If the choice of the university's priority functions depends on the economic effect they have impacted, then the university's activity in commercialization of

knowledge or multifaceted extra budgetary educational activity gives the greatest economic effect in terms of the university's development. The income structure analysis of Western universities has confirmed this fact. Therefore, when compiling a profile of an entrepreneurial university by its functions, provided that traditional functions are already being implemented as historically established, it is necessary to follow the priority functions for UBI of Kazakhstan universities: the first priority is educational-entrepreneurial, the second priority is entrepreneurial and the third priority is scientific-entrepreneurial.

The choice of Kazakhstan's universities (see Table 2) highlighted in the article for the analysis has been based on the National ranking of universities 2019. The situation with chosen universities has shown an identical picture in terms of the formation of organizational structures and units for interacting with business depending on the university's profile – multidisciplinary, technical, humanitarian-economic.

Table 2. The effectiveness analysis of the UBI institutional mechanism of some Kazakhstan universities

University name	Divisions for interaction in the markets:				Integrated Interaction Centre
	Labour	Educational services	Scientific and technical products and services	Innovative products and services	
1	2	3	4	5	6
Multidisciplinary					
Al-Farabi Kazakh National University	Career and Professional Development Centre	Career and Professional Development Centre, New Educational Technologies Institute	Research Institutes and Centres	Engineering and High Technology Cluster, Science and Technology Park, Commercialization Department	Contact centre
L.N. Gumilyov Eurasian National University	Career and Business Partnership Department, Employer Council, Alumni Office	Digitalization Competence Centre, Experimental Educational Programmes Department, Career Guidance and Testing Centre, Advance Training and Supplementary Education Institute	Research Institutes and Centres	Commercialization Department, Innovation and Patent Service Department, Innovation Park, Business Incubator, Eurasian Technology Centre	Career and Business Partnership Department
E.A. Buketov Karaganda State University	Career and Employment Centre	No unit	Institutes, Laboratories, Research Laboratory	Science and Production Integration Regional Centre, Student Design Bureau	Contact centre
M. Auezov South Kazakhstan State University	Career and Employment Support Centre	High Schools, Faculty of E-Learning	Research Institutes, Scientific Centres, Laboratories	Technology Transfer Office, Student Business Incubator	Entrepreneurship and Partnership Centre
S.Amanzholov East Kazakhstan State University	Centre for Marketing, Career and Employment	Professional and Advanced Training Resource Centre, Supplementary Vocational Education Institute	Economic Research Centre, National Collective Use Laboratory, Research Centre	Technology Commercialization Office	No unit
Technical					
K. Satpayev Kazakh National Technical University	No information	Scientific and Educational Centres,	Institutes, Research Institutes, Scientific and Technical Laboratories	Commercialization Department, Contract Research Office, Techno park, Joint Ventures, Production Laboratory	No unit
Almaty Technological University	Career Centre	Advance Training and Retraining, Educational and Scientific Centres	Science Department, Research Institutes	Technology Commercialization Office, Technoparks	No unit

Continuation of Table 2					
1	2	3	4	5	6
Karaganda State Technical University	Career Centre	Career Guidance Centre, Corporate University, Training Centre, Workers Professions Centre	Research Institutes, Laboratories	Innovation and Entrepreneurship Department, Technology Commercialization Office, Patent and Licensing Department	Strategic Development and Partnership Department
Humanitarian and economic					
Karaganda Economic University of Kazpotrebo-soyuz	Strategic Development Department, Resource Centre	Project Resource Centre, E-Learning Faculty	Research Institutes and Laboratory, Monitoring and Science Development Centre	Commercialization and Technology Transfer Office, Coworking Centre	Resource Center, Call-centre
Almaty Management University	No information	Higher Schools: Public Policy and Law, Business, Management, Hospitality Centre	Laboratories: Neuro marketing, Design, Kaizen, Bilim, Fintech	Territory Development Centre	Contact person
<i>M. Narikbayev KAZGUU University</i>	Professional Practice, Career and Employment Office	Corporate Development and Career Centre, High Schools, Business School, Hub of Executive Knowledge, Legal and Economic Studies Academy	No unit	Endowment fund	Call-centre
<i>Note – Compiled by the authors</i>					

Table 2 presents the results of websites content analysis of the three profiles of universities in order to study information about their organizational structures construction for the following: 1) the availability of units that interact with business in different types of markets via the implementation of their traditional and entrepreneurial functions, 2) the availability of an integrated unit liable for interaction with business.

In general, the analysis of the universities organizational structures and their divisions interacting with business has found true of the above mentioned hypothesis that all civilian universities, which work for the needs of business are entrepreneurial and they have all the necessary infrastructure for implementation of their entrepreneurial functions.

Traditionally in Kazakhstan, the main form of interaction with business is job placement of graduates (Borbasova et al., 2019). The employment indicator plays an important and dominate role when checking the quality of universities and one of the indicators of their activity effectiveness. The focus of these units is mainly aimed at development, first of all, of technical and professional competencies contributing to the most effective employment of students, graduates and young professionals.

With regard to educational services, their significance and first priority begun in the world in the nineties of the twentieth century, when problems of organizing mass higher education had manifested in a global competitive market environment. This trend has led to the understanding that not only science, but also the educational activities of the university should be transferred. The UBI is on extremely low level in the market of complementary education in Kazakhstan. Moreover, this market is highly competitive and it is represented by training companies and corporate centers offering applied training demanded by business. Instead of it the universities more focus on the educational needs of students, teachers and applicants.

The interaction of business and universities in the market of scientific and technical products and services is mainly carried out through consulting services and contract research. The main indicator is amount of financing for consulting and contractual work and the information on fulfilling these directions is classified. In the National Report, the main units which interact with business on research activities are represented by 130 laboratories (Natsionalnyi doklad, 2019).

The entrepreneurial function of universities in the market of innovative products and services is implemented mainly by commercialization offices, business incubators and technology parks, which are represented in numbers of 24, 24 and 9, respectively, at the end of 2019 (Natsionalnyi doklad, 2019). Currently, the universities pay serious attention to development of infrastructure for entrepreneurial activity, especially youth entrepreneurship through start-up centers (Kunjazova et al., 2016) and the startup community (Sitenko

et al., 2018) in Kazakhstan. In this regard the organizational structure of Karaganda State Technical University deserves special attention, in which there is a Department of Innovation and Entrepreneurship implementing time entrepreneurial activity of the university and interacting with business.

Particular attention in the analysis of organizational structures was given to availability of a unit as an integrated center for interaction with business. The analysis found the following situations:

- 1) there is no unit or responsible person for contacts with business;
- 2) there is a call-center or a contact-center;
- 3) there is a unit or responsible person for contact with business;
- 4) there are several units for contact with business in difference directions, but without coordinating with each other.

The first situation when entrepreneurs simply don't know who to contact for interaction is typical for universities which are only embarking on the path of transformation, regardless of their forms of ownership and legal status. It involves traditional forms such as job fairs, career days, presentations of employing companies and active including business in educational and research processes.

The availability of a call/contact-centre is typical for humanitarian and economic universities. It greatly facilitates communication processes with the external environment, if an operator prompt responses to requests and he/she has a high level of competence identifying appliers' needs and making decisions to whom to redirect their requests.

The most important analysis of the situation with availability of the unit for interaction with business and their functions. The analysis has found only three universities having such divisions. The first is Career and Business Partnership Department with traditional forms of interaction such as job placement and student internships; the second is Entrepreneurship and Partnership Centre with student start-ups; the third is Strategic Development and Partnership Department for strategic partnership with national and international organisations, universities and enterprises. Although the key word in the name of these divisions is "partnership", every university has a completely different meaning the main functions of such a division. Additionally, due to established practices and experience of a particular university none of the existing organizational models of these units do not reflect in their pure form.

The fourth situation is more typical for the polytechnic and research universities, which are represented by decentralized structures, where there is no integrated center in the organizational structure, except for Karaganda State Technical University. Interaction with business is carried out both by units responsible for interaction and the teaching staff of departments. This leads to duplication of functions between different departments and struggle for resources. In this case, business representatives are forced to simultaneously maintain contact with several representatives located in different departments on various issues and at different levels, which does not allow to make up an integrated comprehensive UBI programme.

### ***Discussions***

Based on the results, the article proposes to highlight a position for an employee responsible for UBI in one of the existing units, or to create a completely new unit, as an intermediary to coordinate UBI and to plan an integrated program for this interaction at a higher management level of a faculty or university, taking into account the existing organizational structure of management, financial capabilities, models of corporate governance practice (Brescia et al., 2016). When choosing the organizational model and functions for the Centre, the following parameters should be taken into account: 1) the archetype of an entrepreneurial university (research-entrepreneurial, technical-entrepreneurial, innovative-entrepreneurial, commercial-entrepreneurial) (Bronstein et al., 2014); 2) the units interacting with business, their functions and placement in the organizational structure; 3) the stage of the life cycle of an entrepreneurial university; 4) types of business by the classifications such as small-medium sized and large organisations, sectors focuses, local/ regional/ national/ international geography (Kitagawa et al., 2016); 5) location of the university. The main functions of the Centre, regardless of the chosen organisational model, are presented in Table 3.

The expert-analytical function is obligatory for the Centre. It consists of analysis and then continuously monitoring the university's internal and external environment (Belash et al., 2012), taking into account the peculiarities of its location and the region needs for which it works, studying the needs in training and scientific and technical services and products of the business community, students and staffs.

The analysis of the internal environment for supporting of universities is carried out for indicators for three areas: infrastructure, management and employees. The implementation of the expert-analytical function in the external environment analysis of the university requires close cooperation with their Marketing department and it includes a list of market research providing the values of indicators of the markets.

Table 3. The main functions of the Business Interaction Centre

Tasks	Indicators
Expert-analytical function	
University environment monitoring	Development of the infrastructure for supporting joint activities, the quality of material and technical support and the level of development of communications; the level of methodological support and qualifications of employees accompanying activities
Monitoring and analysis of demand for personnel and skills, employment of graduates	Needs for specialists, demand for university graduates, satisfaction with university graduates, vacancies
Monitoring and analysis of products and services education and consulting markets	Needs for supplementary training for employees, demand for supplementary training and targeted training.
Monitoring and analysis of scientific and technical products and services market	Demand for scientific and technical research and development, satisfaction with scientific and technical services
Organizational function	
Creation and maintenance of bases of enterprises and associations, graduates	Availability of up-to-date databases
Creation of Corporate training centres for training of employees in the university	Number of students enrolled in continuing education programs at the expense of business; number of centers
Direct support of physical facilities	Number of practice places and laboratories
Financial-economic function	
Conclusion of contracts for targeted training of specialists	Proportion of students enrolled based on the results of targeted admission to study, income
Conclusion of contracts for the organization of supplementary training	Volume and sum of contractual work in the budget of the university
Commercialization of R&D results	Number of patents and licenses, income
Start-ups, spin-offs	Number of projects, their financial results
Conclusion of contracts with enterprises for R&D and rendering of consulting services	Volume and sum of contractual work in the budget of the university

*Note – Compiled on the basis of the sources (Belash et al., 2012), (Grinenko, 2009).*

The second important function of the Centre is organizational, which is performed in order to expand the scope of interaction and develop relations with potential partners of the Centre. This involves to organize a system for registering business contacts and Customer Relationship Management, coordinate the work on fulfilling orders to provide complete and consistent responses to customer requests for maintaining a positive image of the university as a reliable and responsible partner for business.

The financial-economic function of the Centre is directly related to the educational-entrepreneurial function, entrepreneurial function and scientific-entrepreneurial functions of the university attracting extra-budgetary funding.

Special attention is paid to description of the functions which become key depending on a choice of the organizational model. If the university chooses the unitary model, the key functions are decision-making and coordinating the activities of the university in the search, attraction and involvement of business partners. The main goals of this unit are: continuous collection, systematization and updating of information on key scientific and educational areas of the university and the relevant competencies of its employees, the search for potential partners, conducting preliminary negotiations with companies as potential partners.

When choosing the multi-divisional model, the Centre should perform the functions of strategic planning and control of many distributed units, play the role of organizer, providing methodological support and determining the working order of university departments with business partners. The Centre should have information about the main directions of the university's activities and act as a "single window", which is able to formulate a request from business for a specialized unit and organize interdisciplinary project implementation, but rarely participating in negotiations with business. At the same time, university departments carrying out work for the enterprises' orders have significant autonomy.

The key function of the Center using the matrix model, is to implement project management and provide service support for projects in joint activities. The main organizational substructure implementing a specific project is a group of university employees, which is called a project group, which is established to implement a new university product. This group operates within the mission, strategic plan and charter of the university, while it has a high degree of independence in the choice of methods for solving the problems set

in the project tasks. The control of its activities is carried out according to the results of work, the distribution of earned money is carried out according to the agreements with the university on funds sharing.

Without doubts, many issues of both internal and external nature will occur when organizing such Centres, but for establishing viable Business Interaction Centres, it is necessary to take into account mutually beneficial interests of all the actors (Rybnyček and Königsgruber, 2019) which will be a driver for successful interaction.

### Conclusions

The positive changes occurred in Kazakhstan's education law have expanded the possibilities of academic and administrative autonomy for implementation of academic freedom and mobility, the business's participation in activities of universities and formation of positions of universities as open systems with entrepreneurial culture. At the same time, the universities continue to be closed organizations with complex internal structures and business often does not imagine where the unit they need is located, which is responsible for a specific area or implementation of specific projects. The center-intermediary for interaction with business – Business Interaction Centre as an integrator for all departments separately interacting with business solves these tasks successfully taking into account mutual interests. The scientific novelty and practical value of the results are in: the created profile for an entrepreneurial university by its functions with priority educational and educational-entrepreneurial functions; substantiation of creation Business Interaction Centres with the basic unified functions such as expert-analytical, organizational and financial-economic, these Centres' tasks of and indicators for efficiency evaluation of UBI; additional functions depending on the chosen organizational model; the parameters for choosing a suitable organizational model for the Business Interaction Center.

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**Т.П. Драха, З.А. Сальжанова, А. Витренко**

### **Жоғары оқу орындары мен бизнестің өзара әрекеттесу тетігін ұйымдастырудың тиімділігін талдау және оны жетілдіру бойынша ұсыныстар**

#### **Аңдатпа**

**Мақсаты:** Зерттеудің мақсаты — әртүрлі жоғары оқу орындары үшін басқару модельдері негізінде бизнеспен өзара әрекеттесу орталығының қажеттілігін негіздеу, бұл бизнес қауымдастықтың білім беру, ғылыми және жоғары оқу орындарының кәсіпкерлік функцияларын жүзеге асыруға, тікелей және белсенді қатысуын қамтамасыз ету, яғни бизнес, өзара қызығушылықтарын ескере отырып, оның жұмысын бағалау үшін функцияларын, міндеттері мен көрсеткіштерін анықтау.

**Әдісі:** Зерттеу жүргізудің негізгі әдістері ретроспективті, салыстырмалы және мазмұндық талдау түрлері болып табылады.

**Қорытынды:** Мақалада бизнес пен жоғары оқу орындарының және кәсіпкерлік университет бейінінің өзара әрекеттесуінің ұйымдастырушылық тетігінің сипаттамасының матрицасы негізінде Қазақстандағы жоғары оқу орындары мен бизнестің өзара әрекеттесуінің тиімділігін талдау нәтижелері келтірілген, ол ЖОО-да ресми түрде университеттердің кәсіпкерлік, білім беру және ғылыми қызметі бойынша бизнеспен өзара әрекет жасауға қажетті барлық бөлімшелер бар екенін көрсетті, бірақ зерттелген жоғары оқу орындарының көпшілігінде өзара әрекеттесу үшін бірыңғай орталық жоқ.

**Тұжырымдама:** Жоғары оқу орындарынан бизнеспен өзара әрекеттесудің тиімділігін арттыру үшін олардың ұйымдық құрылымына өзгерістер енгізу және өзара әрекет жасау үшін бірыңғай бөлімше құруды талап ету.

**Кілт сөздер:** бизнеспен өзара әрекеттесу орталығы, өзара әрекеттесу, бизнеспен өзара әрекеттесу орталығының функциялары, өзара әрекеттесу формалары, ұйымдастыру үлгісі.

**Т.П. Драха, З.А. Сальжанова, А. Витренко**

### **Анализ эффективности организационного механизма взаимодействия вузов и бизнеса и рекомендации по его совершенствованию**

#### **Аннотация**

**Цель:** Цель исследования — обосновать необходимость Центра взаимодействия с бизнесом на основе моделей управления для разных типов вузов; определить его функции, задачи и показатели для оценки его работы с учетом взаимных интересов с бизнесом, обеспечивающим прямое и наиболее активное участие бизнес-сообщества в реализации образовательной, научной и предпринимательской функций вуза.

**Методы:** Методами проведения исследования являются ретроспективный, сравнительный анализ и анализ содержания.

**Результаты:** В статье приводятся результаты анализа эффективности взаимодействия вузов и бизнеса в Казахстане на основе Матрицы характеристик организационного механизма взаимодействия бизнеса и вузов и профиля предпринимательского университета, который показал, что формально в вузах присутствуют все подразделения, необходимые для взаимодействия с бизнесом по предпринимательской, образовательной и научной деятельности университетов, но у большинства исследованных вузов нет единого центра для взаимодействия.

*Выводы:* Для повышения эффективности взаимодействия с бизнесом от вузов требуется внесение изменений в их организационную структуру и создание единого подразделения для взаимодействия.

*Ключевые слова:* организационный механизм, Центр взаимодействия с бизнесом, взаимодействие бизнеса и вузов, предпринимательский вуз, функции Центра взаимодействия с бизнесом, формы взаимодействия, организационная модель, организационная структура.

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**Analysis of criteria for evaluating environmentally responsible hotels:  
theoretical aspects and methodology**

**Abstract**

*Objective:* The objective of this study is to determine the main criteria for evaluating environmentally responsible hotels based on a detailed analysis of international experience in conducting eco-certification in the tourism and hospitality industry by leading organizations around the world.

*Methods:* The main methods are theoretical research methods, such as analysis of indicators of eco-certification of green hotels, analysis of international standards for eco-certification of accommodation services, as well as classification of criteria for evaluating environmentally responsible hotels.

*Findings:* As a result of analysis and research in this direction, two groups of indicators have been identified that directly and indirectly determine the possibility of establishing a hotel among the categories of environmentally responsible hotels: direct resource-saving criteria and management and information.

*Conclusions:* Taking into account that Kazakhstan has not yet developed a methodology for eco-certification of collective and individual accommodation facilities, as well as procedures for assigning an eco-label to green or eco-hotels, the study is of a recommendatory practical nature for the development of mechanisms for the introduction of environmentally responsible hotels in the tourist services market.

*Keywords:* sustainable tourism development, green hotels, environmentally responsible hotels, eco-label, eco-certification of hotels, eco-certification criteria.

**Introduction**

According to the analysis of research in the field of sustainable development of tourism enterprises and the hospitality industry, there is an active growth in demand for environmentally responsible hotels in the world. Today, there is an increased consumer demand for eco-branded goods in the world. However, we should note the transformation of the concept of eco-consumption to the market of tourist and hotel services. The problems of greening hotel and tourist services have increasingly considered by researchers of the tourism industry against the background of the development of eco-tourism.

In Kazakhstan, the development of hotels that provide accommodation and food services in accordance with the "green concept of production and consumption" is a new direction in the development of the hotel industry. According to the results of the study, the practice of operating green hotels in the Republic is on the stage of forthcoming, despite the development of eco-tourism in recreational areas. At the same time, research articles of domestic researchers in the field of determining the development opportunities for priority types of tourism allow us to conclude that our country has enough regions with high tourist and recreational potential, which sufficiently possess the main prerequisites for the development of "green tourism" (Shayekina, Mamrayeva, Tashenova, 2015; Mamrayeva, 2018; Mamrayeva, Tashenova, 2020). The emergence of eco-sites near national tourist parks can also contribute to the development of accommodation facilities focused on environmental responsibility.

In the course of analyzing the possibilities of developing environmentally responsible hotels in our country, we have identified difficulties in determining and correlating these types of hotels in the tourism industry due to the impossibility of classifying and certifying green hotels. One of the main reasons for the passive development of green hotels in Kazakhstan is the lack of mechanisms for the formation and development of green hotels, which primarily include the certification procedure, as well as the low involvement of tourists and the population to the problems of greening in the country. However, recent events in the tour-

ism industry and in all other sectors of the economy, associated with the emergence and development of the COVID-19 pandemic in almost all countries of the world, have clearly demonstrated the need for sustainable economic development throughout the world and in all sectors. Issues of respect for the environment, the transition from a linear economy to a circular economy, the introduction of sustainable development concepts in all tourism enterprises, the safety of tourist's accommodation, including the long-term and reuse of resources in hotels, will become more relevant than ever in the coming decades. In our opinion, based on the study of foreign experience, namely the work of international companies engaged in certification of hotel services, it is necessary to determine the main requirements and indicators for eco-hotels and try to apply them in the domestic practice of hotel services.

The fact that over time green or so-called eco-hotels will be in high demand among a certain category of consumers, there is no doubt, due to the new formation of consumer behavior in the market of innovative goods and services aimed at a more careful attitude to the environment, and of course first of all to their own health and lifestyle.

### ***Literature Review***

In connection with the development of environmentally responsible enterprises in the hospitality industry, there are many interpretations of the definition of "eco-hotel", "environmentally responsible hotels", "green hotels". As for researcher Astafyeva, she defines environmentally responsible hotels as eco-hotels and suggests considering them as the product of a conceptual innovation in the hospitality industry, the main goal of which is to create new customer-oriented accommodation services that comply with the norms and rules of preserving the eco-environment of a tourist object (Astafyeva, 2016).

Authors E. V. Galenko and P. O. Krivoruchka note an increase in consumer demand in recent years for accommodation services in environmentally responsible hotels that use "green technologies" in order to cause less damage to the environment (Galenko, Krivoruchka, 2018, 110-113).

The high involvement of consumers of hotel services in environmental safety issues once again proves the relevance of the study. According to some authors, the model of consumer behavior of guests in hotels with a "green label" is characterized by high satisfaction and loyalty of guests towards hotels whose activities are aimed at reducing environmental harm, thus noting the positive experience of implementing green practices in the hotel industry (Merlia et al, 2019).

Some scientists noted that tourists who once lived in green hotels will definitely want to return to green hotels in their next trips, and also indicated a different degree of desire to return to hotels of tourists with different nationalities on the example of a specific tourist destination (Berezan et al, 2013).

In our opinion, the environmental behavior in tourism will always be under the interests, it is quite natural that the development of green hotels is a two-way interaction involving on the one hand the formation, organization and implementation of the concept of green production of hotel product, and the other environmental services consumption of accommodation and catering in hotels by tourists. Okumus, F., Köseoglu, M.A., Chan, E., Hon, A., Avci, U. paid their special attention to the behavior of staff in green hotels based on the analysis of such factors as knowledge, awareness and care that characterize the staff of green hotels and proposed a model of their environmental behavior (Okumus et al, 2019). Perhaps this model will allow hotel managers to be more attentive to issues of environmental awareness and desire to implement green practices in hotels, as well as to apply them in eco-strategies of personnel management.

The authors of Bashir and others point out the primary need to take into account the interrelated influence of conscious environmental consumption of hotel services and personal norms of guest behavior when forming the concept of eco-hotels development (Bashir et al, 2019). Thus, the concept of "green hotel" is closely related to such definitions and postulates as respect for the environment during your stay and vacation, the use of green technologies, awareness of the green label of the hotel, the staff's adherence to eco-standards of environmentally responsible behavior.

The results of the research in the field of eco-certification in the practice of hotel enterprises allow us to state the fact that this procedure has a positive impact on the dynamics of sustainable development in the hotel industry, namely, it helps to inform guests about the features of living in environmentally responsible hotels. Thus, Geerts, W. identified three main advantages of implementing eco-certification in the hospitality industry (Geerts, 2014). Let's list the main advantages of this certification procedure for the hotels, according to the above-mentioned author:

1) eco-certification means a voluntary examination of the hotel for compliance with environmental requirements;

- 2) getting an eco-label by hotels after eco-certification allows to increase the profitability of the hotel business, in some cases it serves as a good marketing tool for promoting the hotel as a tourist eco-brand;
- 3) guests who book rooms in hotels with an eco-label can be sure that the hotel complies with the concept of minimizing harm to the environment.











Russian authors Nizhegorodtsev and Ratner expressed their opinion about the development of certified green hotels in Russia as a nascent direction in the hotel business, and note the low level of environmental certification of Russian hotels, linking it with inefficient environmental management (Nizhegorodcev, Ratner, 2015).

**Methodology**

In the world practice of forming and developing the concept of a green economy, including in the field of sustainable development of tourism and the hospitality industry, there is a need to define criteria and standards that identify products and services of environmentally responsible enterprises.

A striking example of an international organization that professionally defines environmentally preferable "green goods and services" is the non-profit Association for voluntary eco-certification of goods and services, the global network of eco-labels (GEN). This organization has been operating for over 25 years, in table 1 below, we have identified a rating of the countries-leaders of the international certification of goods and services by number of standards and certified products, services in the field of environmental responsibility.

Table 1. Countries participating in the Global Ecolabelling Network (GEN) international certification of goods and services in 2017

Countries-leaders in the number of standards				Countries-leaders in the number of certified products and services			
Country/region	Participant of the program	Label	Number of standards	Country/region	Participant of the program	Label	Certified products
Korea	Korean Eco-Label Program		165	EU	EU Ecolabel		70000
Thailand	Green Label: Thailand		123	Northern Europe	Nordic Swan Ecolabel		36300
China	Green Mark Program		120	Northern America (USA)	Green Seal		26000
Germany	The Blue Angel Eco-Label		120	Korea	Korean Eco-Label Program		14091
China (CEC)	China Environmental Labelling		99	Germany	The Blue Angel Eco-Label		12000

*Note: compiled by the authors based on the resource «The Global Ecolabelling Network 2017» <https://view.publitas.com/global-ecolabelling-network/gen-annual-report-2017/page/1>*

The processes of greening in the hotel business are directly related to the growing demand for tourist accommodation in green hotels. Green Key Global Organization (2019) defines that the research of hotel booking site Booking.com worldwide shows 68% of tourists prefer to stay in eco-oriented hotels.

Hotel companies around the world are increasingly implementing the concept of environmental responsibility in their practice, paying attention to the problems of rational resource consumption, control of solid and food waste emissions during the production of a hotel product. So, the hotel chain Marriott International in 2018 announced its plans to reduce water consumption by 15%, the carbon impact on the environment by

30%, the amount of waste by 45-50%, these goals are united by a program developed by the hotel called "Serve 360" (Harris, 2018).

The Radisson Hotel Group hotel chain (2020) takes an active position in the field of certification of eco-hotels, more than 450 hotels of this chain are assigned eco-labels, the network cooperates with leading organizations specializing in certification in the field of ecologization as Green Key Global, EarthCheck.

It is clear that to get an eco-certificate, the hotel must meet the basic requirements for green hotels by international organizations that have the right to conduct this procedure. Therefore, attention should be paid to the analysis of the activities of international organizations that conduct professional certification procedures and develop standards for compliance of accommodation facilities with environmentally responsible hotels. This will determine the most criteria that must be taken into account to evaluate environmentally responsible hotels.

According to the analysis, the most significant international organizations in the field of certification of the hotel business environment are such leading organizations as *Green Key Global*, *Leed*, *Green Seal*, *HVS*, and the Russian eco-quality organization «*Leaf of life*».

Let's consider the methodology of eco-certification of hotels offered by the international organization Green Key Global (Figure 1).

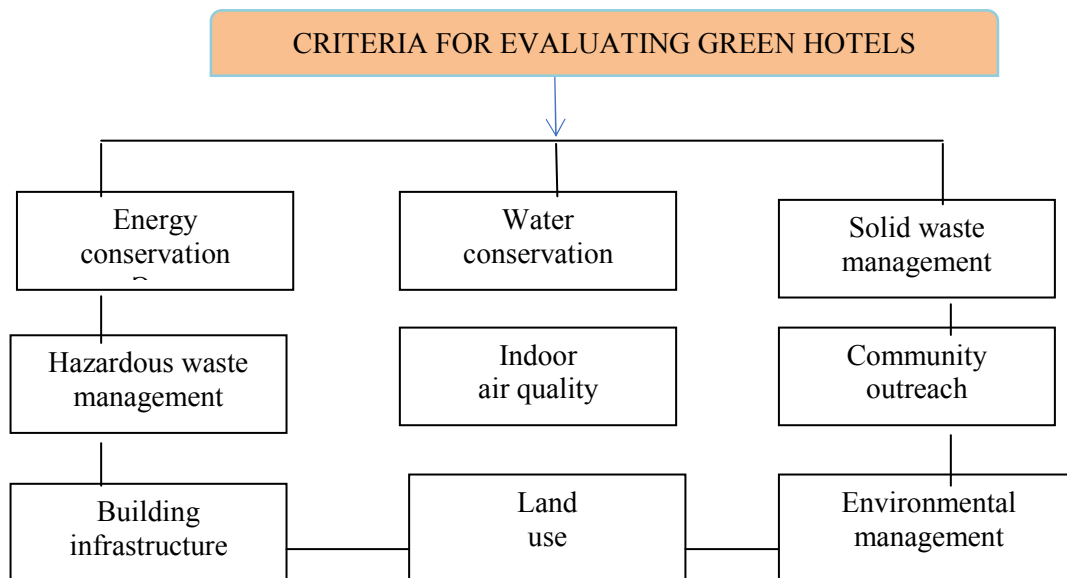


Figure 1 – Main criteria for evaluating environmentally responsible hotels by Green Key Global

(Note: compiled by the authors based on <https://www.greenkey.global/>)

Since Green Key Global has awarded the Green Key environmental badge to more than 3,100 hotels and other institutions in 66 countries around the world, this eco-badge allows hotels to achieve the following results:

1) increase the hotel occupancy rate by applying eco-labeling, strengthen the market position due to the competitive eco-advantages of the hotel in the market of hotel services;

2) reduce financial costs by conducting an environmental audit, based on the results of which the hotel offers specific recommendations aimed at reducing costs and increasing the productivity of the hotel enterprise;

3) certification conducted by Green Key Global is recommended by the Global Council for sustainable tourism (GTC), and also accompanies the necessary information on environmental conservation.

Green Key Global considers energy conservation, water conservation, solid waste management, and others as the main areas for analyzing "green practices"

However, it should be noted that the goals of eco-certification of this organization are directly related to seven categories of the 17 international goals in the field of sustainable development adopted by UN members in 2015 (Figure 2).



Figure 2 – Compliance of eco-certification goals with international UN sustainable development goals

(Note: compiled by the authors based on <https://www.un.org/sustainabledevelopment/>)

The world scale of development of this type of eco-labeling of hotels, restaurants and other tourism facilities is shown by the following data: the Netherlands-647, France-644, Greece-376, Belgium-257, Portugal -180, Sweden-165, Turkey-97, Russia-25. In general, according to the analysis, four companies from more than 60 countries have passed eco-certification of this organization (Figure 3).

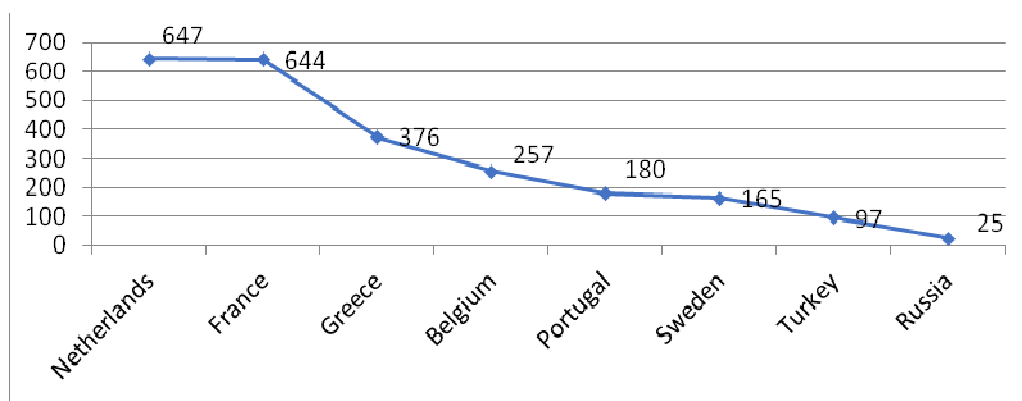


Figure 3 – Eco-certification by countries in the world according to Green Key Global

(Note: compiled by the authors based on <https://www.greenkey.global/green-key-sites>)

According to the research, experts highly appreciate the work of the international organization LEED (Leadership in Energy and Environmental Design) in the field of eco-certification of buildings and structures, including hotels, the main goal of which is to reduce or eliminate the negative impact on the environment. This program evaluates the level of environmental construction of buildings and structures. According to the score, depending on the number of points scored, the hotel is assigned one of four rating levels as a result of eco - certification: platinum – 80 and higher points, gold – 60-79 points, silver-50-59 points, certified 40-49 points.

In Russia, eco-certification services for hotels are provided by the organization "Ecological Union", which is part of the international organization GEN and has the right to conduct certification of goods and services, assigning the Ecolabel "Leaf of life".

In order to pass the eco-certification and assign the eco-label "Leaf of life", a number of procedures must be completed in stages, from submitting an application in the prescribed form and sending it for consideration to the eco-certification body to the assessment by auditors of all hotel services and checking the quality management system, this stage also includes laboratory tests. In general, according to the results of the environmental audit, the hotel must score at least 25 points, only if the hotel can get an eco-label "Leaf of life" that meets the requirements for compliance with an environmentally responsible hotel (Figure 4).

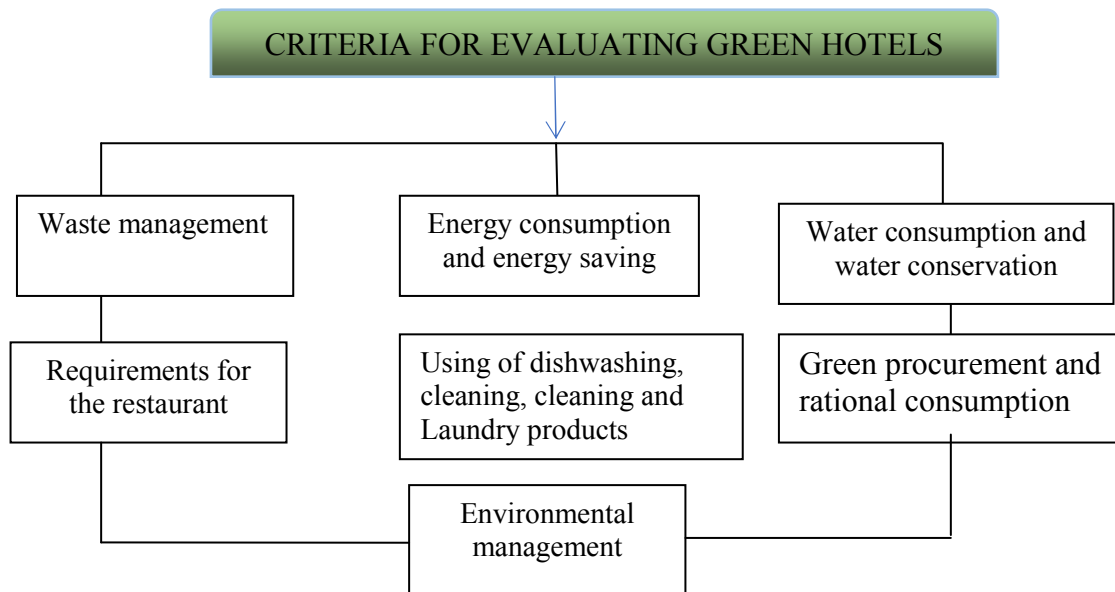


Figure 4 – Criteria for evaluating environmentally responsible hotels by «Leaf of life»

*(Note: compiled by the authors based on <https://ecounion.ru/wp-content/uploads/2019/12/sredstva-razmeshenia.pdf>)*

One of the most popular organizations in the field of certification of products and services is the independent organization Green Seal, founded in 1989, which is also a member of the international organization GEN. When conducting eco-certification procedures, Green Seal is based on the international standard ISO 14020:2000, which contributes to the achievement of the 17 sustainable development goals proposed by the UN in 2015.

Having studied the criteria for evaluating the environmental compatibility of accommodation facilities provided by Green Seal, it is necessary to highlight the special requirements in the GS-33 certification concerning indicators related to energy in hotels. For example, after an analysis of compliance with the eco-criteria of this organization, the hotel can be assigned one of three levels: bronze, silver or gold. As shown by the analysis of indicators of eco-certification of this organization, as the higher level of the hotel, the higher a number of requirements. If hotel plans to go to the highest level as "gold", then special attention should be paid to the problems of energy consumption, namely, it is necessary to monitor the energy consumption in all rooms of the hotel.

The report of the study conducted by scientists at the University of California indicates the positive effect of passing the Green Seal certification of hotels. So, for example, the transition of hotels from the category of bronze certification to silver allowed hotels in Los Angeles to reduce additional emissions by 8.8%. The same hotels that switched from silver to gold were gradually able to reduce emissions by 18.2%. Extrapolation of these indicators to the urban level allowed researchers to predict higher results of the Green Seal eco-certification program: if all hotels in the city received a silver level of certification, the current level of greenhouse gas emissions in the city would decrease by about 0.7%, and if they passed the "gold" certification, the current air emissions would decrease by another 1.3%, which would lead to a total reduction of harmful substances in the atmosphere by 2% (McConagha et al, 2017).

This organization has developed 27 standards for more than 500 categories of goods and services, each of which contributes to the formation and sustainable development of the circular economy. To pass certification for compliance with environmental standards, accommodation facilities must meet the category "GS33-Hotels and real estate", the hotel has the opportunity to pass one of three levels of certification: bronze, silver, gold. The analysis of this standard allows to identify the following indicators for evaluating environmentally responsible hotels (Figure 5).



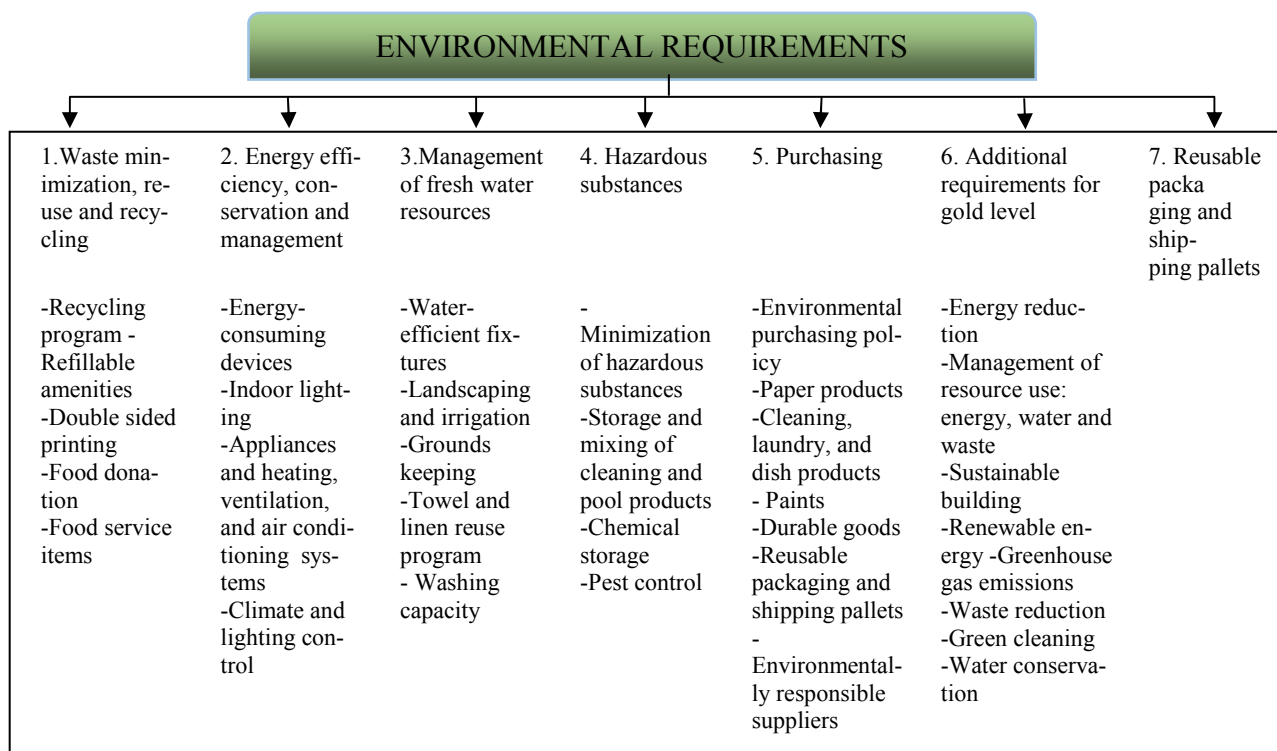


Figure 5 – Criteria for evaluating environmentally responsible hotels by Green Seal

(Note: compiled by the authors based on <https://greenseal.org/certification/get-started/>)

**Results**

Thus, the use of eco-labeling allows to strengthen the image of the hotel, use eco-labeling on a legal basis, expand the customer base and strengthen the loyalty of guests, apply innovative eco-technologies in the service of guests. An important aspect in the process of assigning eco-labeling to hotel enterprises is the selection of criteria for environmentally responsible hotels. For this purpose, the international organization for certification of goods and services Green Key Global has developed 13 criteria for 6 categories of institutions, such as hotels, hostels, campsites, recreation parks, restaurants, and conference centers.











The results of the study of the methodology for evaluating foreign professional organizations, such as Green Key Global, Green Seal, LEAD, allowed us to distinguish the main groups of indicators. Analysis of the criteria for international standardization of "environmentally responsible hotels" allows identifying two groups of evaluation indicators, such as "direct resource-saving criteria" and "management and information criteria".

We have included such indicators as water consumption, energy consumption, cleaning services, laundry and landscaping as direct resource-saving indicators, since these indicators can directly affect the rational use of resources without harm to the environment. In our opinion, the hotel management staff should pay special attention to the concept of environmental management, in this regard the management and information criteria for evaluating eco-hotels, such as attracting staff, environmental management, informing guests, corporate social responsibility, internal environment and administration.

The proposed methodology for evaluating the criteria of environmentally responsible hotels most optimally covers all the indicators and requirements imposed in foreign practice.

Table 2 below shows the classification of criteria for evaluating environmentally responsible hotels with the main requirements for each individual criterion.

Table 2. Classification of criteria for evaluating environmentally responsible hotels

Criteria	Ecolabel	Evaluation criteria
<b>1. Direct resource-saving criteria</b>		
1.1 Water consumption		<ol style="list-style-type: none"> <li>1) use of water leak sensors, rational use of cold and hot water in the room;</li> <li>2) application of water-saving faucets for washbasins;</li> <li>3) installation of soap and shampoo dispensers in bathrooms and guest rooms;</li> <li>4) possibility of secondary use of water, including rainwater</li> </ol>
1.2 Energy consumption		<ol style="list-style-type: none"> <li>1) introduction of energy-saving lamps (usually no less than 40-60% of lighting equipment), automatic electricity switches in hotels,</li> <li>2) use of air conditioning in all rooms only in the presence of a guest, remote control of lighting, 3) use of technologies of the "Smart Hotel"</li> </ol>
1.3 Cleaning and Laundry Services		<ol style="list-style-type: none"> <li>1) use of environmentally friendly detergents, eco-marked products in the process of cleaning rooms, halls, lobbies, production and storage facilities on the territory of the hotel,</li> <li>2) use of washing machines completely filled with dishes at a low effective temperature;</li> <li>3) provision of eco-marked services: dry cleaning, beauty salon, Laundry, restaurant</li> </ol>
1.4 Landscaping of the territory		<ol style="list-style-type: none"> <li>1) landscaping of the surrounding area, landscape,</li> <li>2) creating a favorable eco-environment for hotel guests,</li> <li>3) creating a neutral and active system landscaping in the working and recreational areas accordingly;</li> <li>4) work to improve the ecosystem of the surrounding area;</li> <li>5) use of organic means for garden fertilizers and for insect control</li> </ol>
<b>2. Management and information criteria</b>		
2.1 Recruitment of staff		<ol style="list-style-type: none"> <li>1) conducting training sessions and seminars for hotel employees on the company's eco-policy,</li> <li>2) monitoring the compliance of personnel with environmental requirements for labeling, separate waste collection, dosage of detergents, etc.</li> <li>3) implementation of the function of responsible manager for compliance with eco-activities</li> </ol>
2.2 Environmental Management		<ol style="list-style-type: none"> <li>1) creation of an effective control and management system in the field of minimization of environmental damage, control of hydrocarbon emissions into the atmosphere, and environmental protection</li> <li>2) rental of eco-friendly vehicles, such as bicycles, electric cars</li> <li>3) transfer of decommissioned furniture and equipment to charitable organizations</li> </ol>
2.3 Informing guests		<ol style="list-style-type: none"> <li>1) familiarizing guests with the hotel's eco-policy;</li> <li>2) mandatory presence of an eco-label in the hotel;</li> <li>3) the use of "green cards" in hotel rooms, calling for a responsible attitude of guests to replace towels and bed linen;</li> <li>4) the presence of eco-labels in all hotel products</li> </ol>
2.4. Corporate social responsibility		<ol style="list-style-type: none"> <li>1) forming a moral and ethical code within the hotel's eco-policy;</li> <li>2) maintaining the principles and norms of voluntary eco-certification of the hotel;</li> <li>3) conducting eco-PR campaigns by the hotel;</li> <li>4) labor protection of hotel employees and ensuring their safety</li> </ol>
2.5. Internal environment		<ol style="list-style-type: none"> <li>1) maintaining the eco-concept in all hotel departments: Front Office, room service, engineering, F&amp;B, housekeeping, marketing and booking, etc.,</li> <li>2) development and implementation of eco-technologies in all phases of guest service in the hotel: before arrival, arrival, accommodation, departure</li> </ol>
2.6. Administration		<ol style="list-style-type: none"> <li>1) mandatory development and implementation of the eco-management system and its elements;</li> <li>2) periodic monitoring and measurement of water and energy consumption indicators, and, if necessary, preventive measures to eliminate violations</li> </ol>
<p><i>Note: compiled by the authors based on the resource based on the analysis of reports and data from international organizations Green Key Global, Green Seal, LEAD [https://www.greenkey.global/, https://greenseal.org/certification/get-started/, https://www.usgbc.org/leed].</i></p>		

### **Discussion and conclusion**

The dynamics of increasing demand for environmental goods and services among eco-oriented consumers gave rise to the formation and development of mechanisms for assigning an environmental mark to goods and services in various industries. This trend has not spared the accommodation sector, which is the main material and technical base of the tourism and hospitality industry. International practice witnesses an increase in the number of tourists who prefer to stay in hotels that have passed the eco-certification procedures and have an eco-label sign. This segment of consumers of tourist products has not been ignored by many hotel chains, which primarily responded to the sustainable consumer behavior of tourists with special concern for the problems of environmental conservation, as well as life safety.

The certification and standardization processes of environmentally responsible hotels are a necessary tool for confirming the environmental friendliness of the provided accommodation and catering facilities. As the results of the research have shown, there is no approved single standard in the form of a standard that would clearly define the requirements for all areas and criteria of green hotels around the world. Since the introduction of a single international certification of eco-hotels is impossible due to a number of related factors, such as geographical location, level of economic development, income level, cultural values, level of involvement of the population in environmental issues and the circular economy and others.

The analysis of criteria for evaluating environmentally responsible hotels allows identifying the most effective methods of international organizations whose activities are aimed at sustainable development. As a result of our analysis, we have identified the most necessary criteria for developing the methodology for evaluating activities of environmentally responsible hotels.

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**А.А. Дуйсембаев, Д.М. Усенова, Джоао Сарменто**

**Экологиялық жауапты қонақ үйлерді бағалау критерийлерін талдау:  
теориялық аспектілер және әдіснамасы**

**Андатпа**

*Мақсаты:* Бүкіл әлемдегі жетекші ұйымдардың туризм және қонақжайлылық индустриясында экосертификаттауды жүргізудің халықаралық тәжірибесін егжей-тегжейлі талдау негізінде экологиялық жауапты қонақ үйлерді бағалаудың негізгі өлшемдерін анықтау.

*Әдісі:* Негізгі әдістер ретінде «жасыл отельдерді» экосертификаттау көрсеткіштерін талдау, орналастыру қызметтерін экосертификаттаудың халықаралық стандарттарын талдау, сондай-ақ экологиялық жауапты қонақ үйлерді бағалау критерийлерін жіктеу сияқты зерттеудің теориялық әдістері қолданылған.

*Қорытынды:* Талдау мен зерттеу нәтижесінде экологиялық жауапты қонақ үйлер категориясында қонақ үйді анықтау мүмкіндігін тікелей және жанама анықтайтын критерийлердің екі тобы анықталған: тікелей ресурс үнемдейтін өлшемдер және басқару-ақпараттық.

*Тұжырымдама:* Қазақстанда ұжымдық және жеке орналастыру құралдарын экосертификаттау әдістемесі, сондай-ақ «жасыл» немесе экоконақ үйлерге эколейбл беру рәсімдері әзірленбегенін ескере отырып, жүргізілген зерттеу туристік қызмет көрсету нарығында экологиялық жауапты қонақ үйлерді енгізу тетіктерін әзірлеу үшін ұсынымдық практикалық сипатқа ие.

*Кілт сөздер:* туризмнің тұрақты дамуы, «жасыл» қонақ үйлер, экологиялық жауапты қонақ үйлер, эколейбл, қонақ үйлердің экосертификациясы, экосертификация критерийлері.

**А.А. Дуйсембаев, Д.М. Усенова, Джоао Сарменто**

**Анализ критериев оценки экологически ответственных гостиниц:  
теоретические аспекты и методология**

**Аннотация**

*Цель:* Определение основных критериев оценки экологически ответственных гостиниц на основе подробного анализа международного опыта проведения экосертификации в индустрии туризма и гостеприимства ведущими организациями во всем мире.

*Методы:* В качестве основных методов использовались теоретические методы исследования, такие как анализ показателей экосертификации «зеленых» отелей, анализ международных стандартов экосертификации услуг размещения, а также классификация критериев оценки экологически ответственных гостиниц.

*Результаты:* В результате анализа и исследования в данном направлении определены две группы показателей, прямо и косвенно определяющих возможность определения отеля в категории экологически ответственных гостиниц: прямые ресурсосберегающие критерии и управленческо-информационные.

*Выводы:* Учитывая, что в Казахстане еще не разработана методика экосертификации средств коллективных и индивидуальных средств размещения, а также процедуры присвоения эколейбла «зеленым», или экоотелям, проведенное исследование носит рекомендательный характер для разработки механизмов внедрения экологически ответственных гостиниц на рынке туристских услуг.

*Ключевые слова:* устойчивое развитие туризма, «зеленые» отели, экологически ответственные гостиницы, эколейбл, экосертификация гостиниц, критерии экосертификации.

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### The shadow economy: concept and evaluation

#### Abstract

*Object:* The article discusses the concepts, assessment, and reasons that affect the development of the shadow economy of Kazakhstan. In particular, the authors aim to propose mechanisms for limiting the shadow economy in the Republic of Kazakhstan based on theoretical justification of the reasons for the existence of the shadow economy.

*Methods:* Based on the use of comparative and theoretical analysis, it is concluded that it is necessary to limit the shadow economy by improving the main directions from the point of view of the state legalization policy. The subject of the research is economic relations arising in the process of formation and development of the shadow sector of the economy in the Republic of Kazakhstan.

*Findings:* In the proposed scientific article, the authors pay attention to the essence of the concept of the shadow economy, analyze the areas of development of shadow economic activity in Kazakhstan, and suggest the main directions for preventing the laundering of income from uncontrolled economic activities as a reduction of the shadow economy.

*Conclusions:* Informal processes are clearly expressed in the economy of the Republic of Kazakhstan, especially in the sphere of construction, agriculture, trade and transport. One of the priorities of the state administration is to reduce the share of shadow business in the economy and transfer it to the «legal» mode of operation. The state policy of legalization is presented as a mechanism for reducing this, since these measures will transfer a significant part of the rent created in the society to the implementation of economic reforms in the state.

*Keywords:* shadow economy, shadow economy spheres, shadow turnover, share of the shadow economy in commodity production and services, shadow activity level of the industry by GDP.

#### Introduction

Theoretical aspects of the problems of the shadow economy are currently being actively investigated in the scientific literature and periodicals, because it is difficult to talk about the essence of this phenomenon and suggest ways to reduce it without knowing the origins of its formation and without investigating the causes of this phenomenon.

The Republic of Kazakhstan is going through a difficult period of its history, characterized by an unprecedented process of radical reform of the political and economic system. Real results of economic reform have been achieved: the market infrastructure and market mechanisms for stimulating production have been practically formed, the phenomenon of a commodity deficit has been eliminated from economic life, and a positive balance of foreign trade is constantly maintained. At the same time, the formation of a market economy has brought to life a number of negative phenomena and processes. One of them is the development of shadow economic activity, the impact of which on the country's economy is significant, as well as on the economic security of the state (Daribekov, 2007)

In his Message to the people of Kazakhstan for 2018, the President of the country N. Nazarbayev changes the vector of attitude to the shadow economy, presenting it not as a sphere that requires elimination and punishment, but as a potential resource of the country's economy: "decisive actions are Required to improve the business climate, especially at the regional level. The government should prepare a new package of systemic measures to support business and bring it out of the shadows" [Nazarbayev, 2018].

The shadow economy exists in almost all countries, regardless of their socio-economic characteristics and models of economic mechanism. The current socio-economic situation in Kazakhstan cannot be considered without taking into account the unobserved (shadow) economy. According to expert data, its share in economic turnover reaches 30% of GDP. At this stage, the influence of shadow factors on economic life is quite noticeable.

### **Literature review**

Despite the fact that the "appearance" of the shadow economy in economic studies is a new problem, foreign and domestic authors study it. The issues of detection and prevention of the shadow economy was considered in fundamental works of such scientists abroad, such as: Smith, P. K. Hart, Dominik H. Enste, Williams C. C. and Schneider, F. Hope, K. R.R. Remeikiene, L. Gaspareniene and others. Study materials and publications on this issue leads to the conclusion that the existing theory is aimed at the identification and description of the phenomenon of the shadow economy. Widely known work of Kazakh and Russian scientists on this issue, namely: M.V. Golovko, A.V. Guskova, R.O. Bugubaeva, Ainabek K.S., Vidritskaya N.I., Seitkhozina B.U. It should be noted that the majority of scientific and practical research in the field of studying the shadow economy focused on the economic nature of the shadow economy and on ways of reducing its specific weight.

However, the poorly understood aspects related to the assessment of the share of shadow economy in the sectors of economy of the Republic of Kazakhstan and formation of the main directions of the limitations of its size, which determined the need for this study.

### **Methods**

Methods are based on the consolidated achievements of neoclassical, institutional and neo-institutional theory as well as scientific works of domestic and foreign scientists in the field of shadow economy. We used the abstract-logical, analytical, economic and statistical methods.

Obtained in the course of the study theoretical principles complement and build on national science in the sphere of combating the shadow processes in the economy. The proposals developed in the framework of the present work are applicable for the development on the state level concept to combat the shadow economy.

### **Results**

Analysis of the shadow economy is a subject of many works, scientific articles proposing different terminology the device is used to refer to the concept of "shadow economy": "casual", "u", "underground", "hidden", "underground", "informal", etc. The variety of types of the informal economy, as well as the heterogeneity of approaches to it, determine differences in the numerous definitions of the informal economy.

According to one commonly used definition, it comprises all currently unregistered economic activities that contribute to the officially calculated Gross National Product (Smith, P., 1994). The term "shadow economy" comprises numerous economic activities and it is difficult to provide a formal definition. In general, the shadow economy can be seen as the decision of individuals and firms for economic activity against official norms, formal institutions and regulations. From the economic policy's point of view, those shadow economic activities are particularly relevant, which create addition value and is basically based on voluntary contracts between two persons (e.g. illicit work) (Dominik H. Enste, 2010). The shadow economy includes all economic activities, which are hidden from official authorities for monetary, regulatory, and institutional reasons (Schneider, F., 2016).

Shadow economy comprises of economic activities, enterprises and workers (both professionals and non-professionals), when the latter get involved into economic-commercial operations beyond the limits of legal economics, and such operations are not regulated or protected by a state (Hope, K. R. 2014). Shadow economy covers all unregistered trade, finance and service provision activities as well as all forms of work without employment contracts and/or without payment of social insurance contributions and employee taxes in non-observed business (R. Remeikiene, L. Gaspareniene, F. G. Schneider, 2018).

The shadow economy includes all market-based legal production of goods and services that are deliberately concealed from public authorities for the following reasons:

- to avoid payment of social security contributions; to avoid certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, etc.;
- to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms (F. Schneider, A. Buehn, 2018)

Some authors claim as a set of relations between various entities in public proceedings, formal rules of management, the results of which for one reason or another, not included or cannot be included in official statistics. According to another view, under the shadow (uncontrolled) economy (shadow business) understands the totality of the in principle legal but are not detected open the verification methods of financial and economic operations.

To classify the economy as "shadow", the Russian economist M.V. Golovko uses a stricter criterion—absence, deliberate refusal of state registration of transactions (Golovko, 2013).

Russian researcher A.V. Guskova suggests that considering economic activities prohibited by law and not recorded by statistics as one of the components of the shadow economy, as well as speculative transactions, postings, and fraud related to the receipt and transfer of funds (some types of economic crimes)

According to Kazakh scientists R.O. Bugubaeva, Ainabek K.S., Vidritskaya N.I., Seitkhozina B.U. the shadow economy is understood as an economic activity that is not registered with official statistics and contradicts generally accepted legal and / or moral standards. The shadow economy is based on the hidden nature of operations (R.O. Bugubaeva et al., 2018).

The impact of shadow processes that occur latently in the economy is so significant that it can pose an economic threat to the country.

Firstly, shadow processes affect all stages of production and redistribution of resources, violating the integrity of the country's economy and leading to a shortfall in tax revenues for national and local budgets.

Secondly, operating in the shadow sector of the economy is characterized by partial or complete concealment of income, which leads to distortion of tax, financial, statistical and other types of reporting. As a result, generalized results for an individual enterprise or group are unreliable.

Thirdly, large resources are concentrated in the shadow sector of the economy, which can become a factor of economic growth (Ryabushkin B.T., Churilova E., 2003.)

Shadow economy - a complex phenomenon of the socio-economic system of the state, which is represented which is represented by a totality of uncontrolled and unregulated economic relations between the economic entities in the direction of obtaining illicit income, which, accordingly, is concealed from the payment of taxes (O. Kopylenko, I. Gryshova, O. Diachenko, 2018)

Based on these definitions, each of these perspectives reflects prevailing in the economy real processes. The authors have different approaches to the definition of the shadow economy, emphasizing the features of this phenomenon. However, it seems logical to consider, as a key sign of inclusion activities of the shadow economy is the absence of statistical authorities, which is the main criterion in the evaluation of shadow economic relations.

The development of the shadow economy is, on the one hand, a reaction to the fact the state rule of regulation. Regulation is impossible without restrictions, and unreasonable restrictions provoke their violation, especially if it is profitable. Many types of the shadow economy is largely explained by flaws in the state regulation — the bureaucratization of management, too high taxes, etc.

However, it should be clearly aware that even the best system of centralized management could reduce the scale of the shadow economy, but not eliminate it. And the minimum tax some taxpayers will necessarily evade from their payment. To shadow production are activities that are productive and legal but deliberately concealed from public authorities in connection with the failure to comply with regulations.

Causes of shadow production are:

- evasion from payment of taxes on income, etc.;
- evasion from payment of contributions for social insurance;
- failure to comply with standards set by legislation (standards of labor protection, safety and sanitation);
- failure to provide departmental reporting.

Based on the methodology of the SNA, all known manifestations of the shadow economy are divided into two broad groups (figure 1).

Activities in the informal sector includes the manufacture involving non-registered unincorporated enterprises in the household sector and relevant thresholds for registration.

Activities carried out by unincorporated household enterprises producing exclusively for own final use.

Illegal activities include activities that produce goods and services forbidden by law or carried out by manufacturers without obtaining the appropriate permit (crimes against property of all kinds, theft, robbery, robbery, fraud, etc.; economic crime; the flight of capital abroad, illegal export of goods, influencing the size and structure of GDP).



According to the OECD in the first decade of the new century, the size of the shadow economy in the world reached 10 trillion dollars. USA, it was nearing 2 billion people (accounting for about 50% of the entire workforce of the planet), and it was mainly concentrated in southern Africa (nearly 40% of the region's GDP) and Latin America (35%).

Countries — leaders in the size of the shadow economy (over 60% of GDP) were Zimbabwe, Bolivia and Georgia. In 2017 against the shadow economy GDP of Azerbaijan was in the lead (67%), Nigeria (48%), Ukraine (46%), on the one hand, and Switzerland (6.0 per cent) and the USA (5.4%), on the other hand. (ACCA Global, 2017)

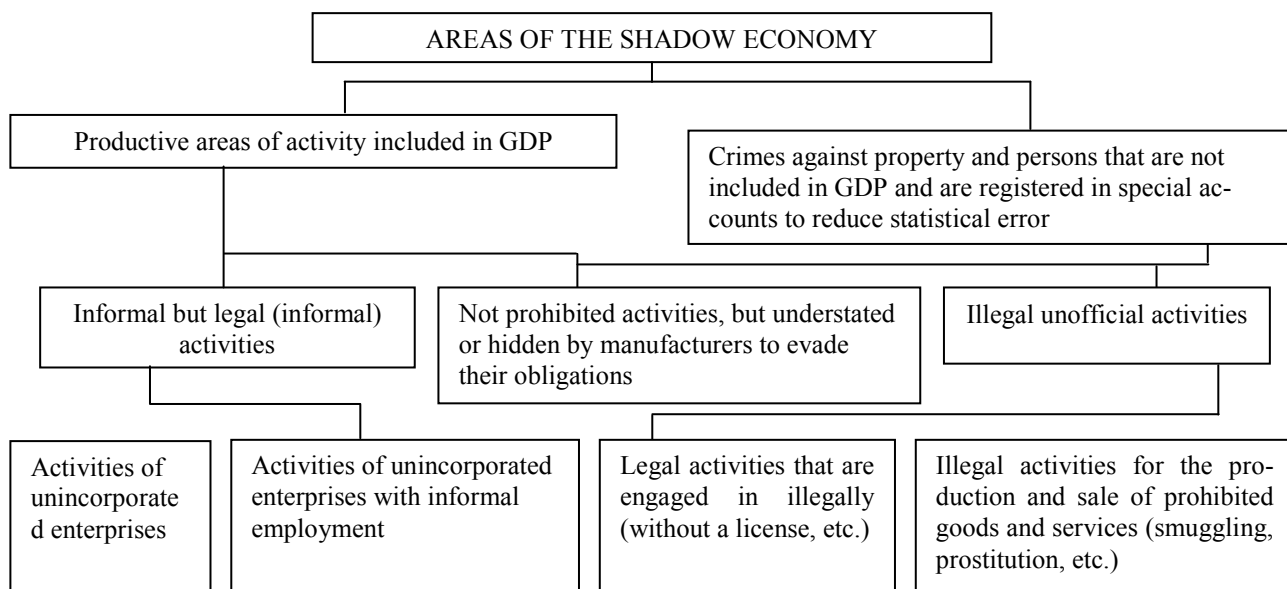


Figure 1. The scope of the shadow economy according to the methodology of SNA

Note - compiled by the author based on (System of National Accounts, 2008)

According to others, the minimum was observed in the United States (7.8 Percent), Japan (10%), and China (10.2%). In the opinion of the columnist, Wall Street Journal by 2025 the reduction in size of the shadow economy will continue in the United States (6.9%) and Canada (13.8 percent). Experts ACCA expect by 2025 2% drop from the level of 2017 around the world, amounting to 22.5% of GDP 11 (Fig. 2).

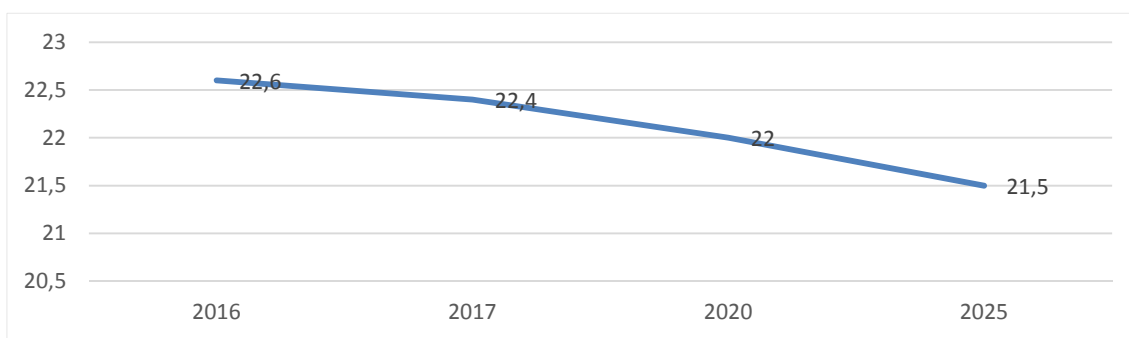


Figure 2. The scale of shadow economy, % of world GDP

Note - compiled by the author based on (ACCA Global, 2017)

For the Russian Federation forecast ACCA stable: 2011 — by 39.33%, 2025 — 39.3 per cent that aspect of the analyzed problem does not seem to be favorable. A high share of shadow economy in GDP shows the economy of Kazakhstan, where in 2018, according to the statistics Committee under the Ministry of national economy of the Republic of Kazakhstan amounted to 27.02% (figure 3).

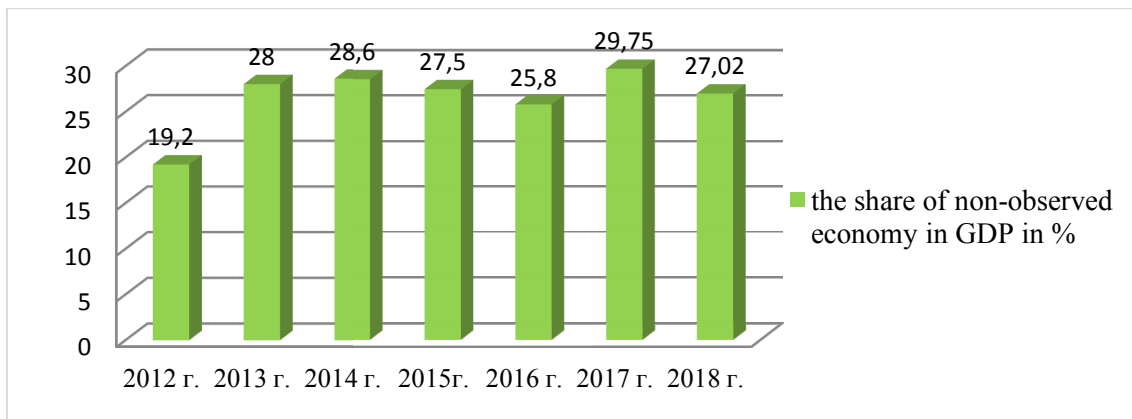


Figure 3. Share of the shadow economy in the Republic of Kazakhstan

Note - compiled by the author based on (Committee on statistics of the Republic of Kazakhstan, 2019)

From figure 3 it is seen that the share of shadow economy is reduced. So, if in 2014 the share of non-observed economy was 28.6% of GDP, in 2018, there was a decline of 1.58 %, which amounted to 27.02% of GDP. The average specific weight of the non-observed economy for the last six years was 26.5%, the size is in the range from 19.2 to 27.02% of GDP.

Dynamics of development of non-observed economic activities can be represented in the form of a branch cut, which is most attractive for "shadow" (figure 4).

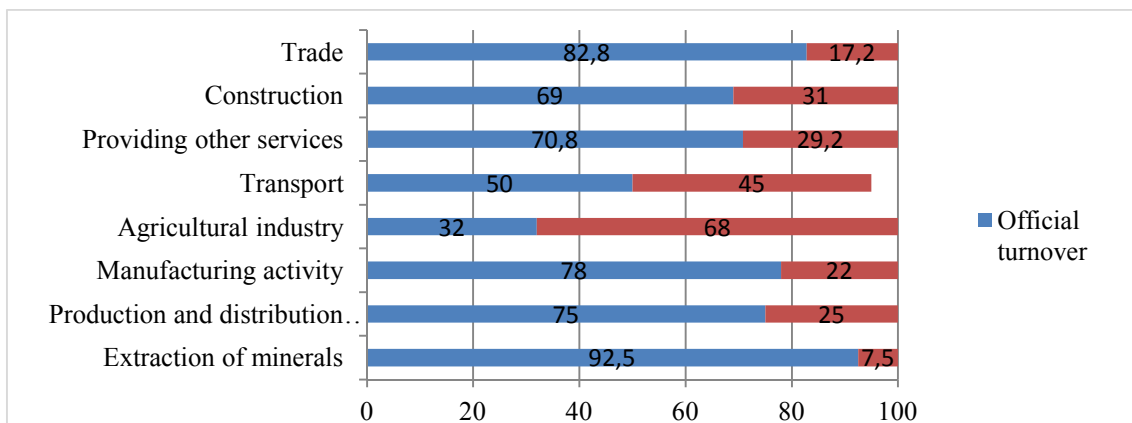


Figure 4. Relative size of shadow economy in the Republic of Kazakhstan by types of economic activity on average over the 2015-2018 years in %

Note - compiled by the author based on (Committee on statistics of the Republic of Kazakhstan, 2019)

From figure 4 it is seen that "shadow" entities choose mostly non-productive sector of the economy except agriculture. From 2013 to 2018, the share of the shadow economy in the production of commodities fell by almost half, from 9% to the current 6.9 percent (Figure 5).

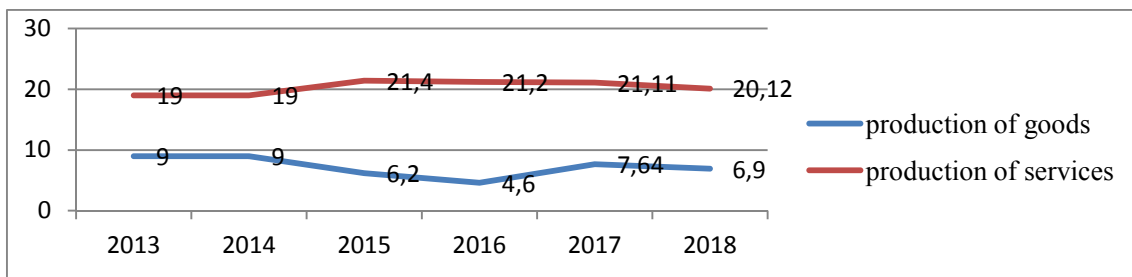


Figure 5. Share of the shadow economy in the production of commodities and services (%)

Note - compiled by the author based on (Committee on statistics of the Republic of Kazakhstan, 2019)

In a service economy, an increasing volume of services away from an official Declaration, the share of the shadow economy over the same period rose from 19% to 20.12%. The most actively go into the shadows of the commercial enterprise.

In the sector of wholesale and retail trade (including car repairs) in 2018 the order of 8.62% of the facilities were without proper official registration. A year earlier this share was estimated lower – at the level of 8.87%. (Figure 6).

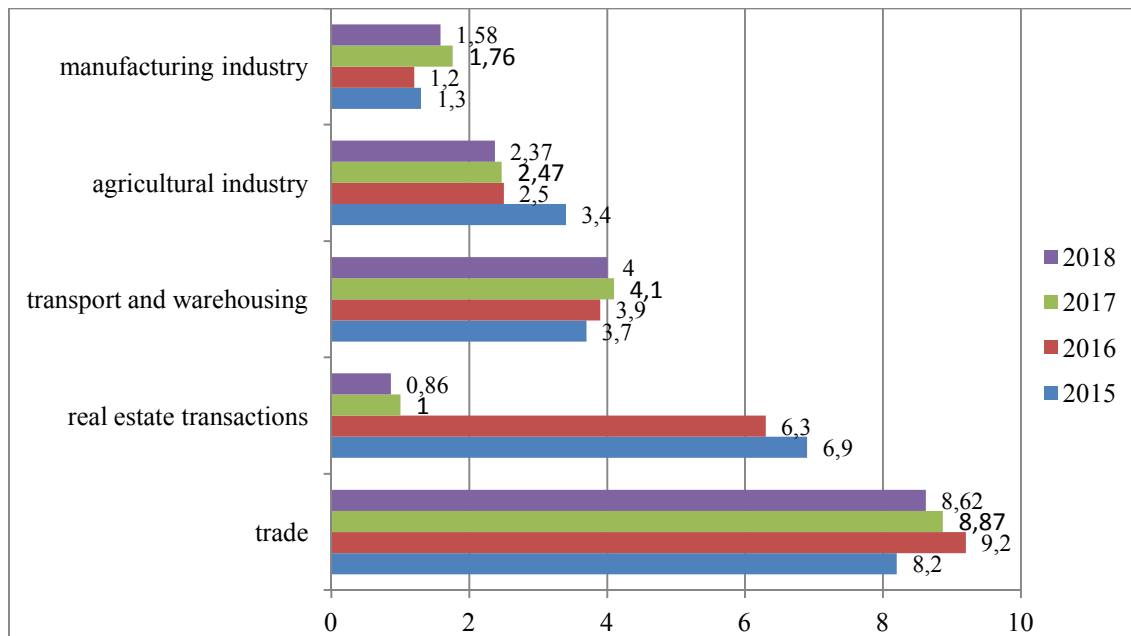


Figure 6. Industries with the highest share of the shadow economy in Kazakhstan

Note - compiled by the author based on (Committee on statistics of the Republic of Kazakhstan, 2019)

From figure 6 it can be seen that the reduction of the shadow economy is observed in the transport and logistics industry, from 4.1 % to 4.0%. Producers of agricultural products, as well, actively legalized. For the analyzed period the share of underground production in total production decreased from 2.47% to 2.37%. In the sector of real estate transactions, the share of the unobserved economy has decreased from 1% to 0.86%.

High level of shadow economic activity belongs to the construction industry and the provision of services. However, these sectors in the structure of the shadow economy have a low share. A significant share in the structure of non-observed economy has industries related to agriculture, however, the volumes in this sector remain at a low level (figure 7).

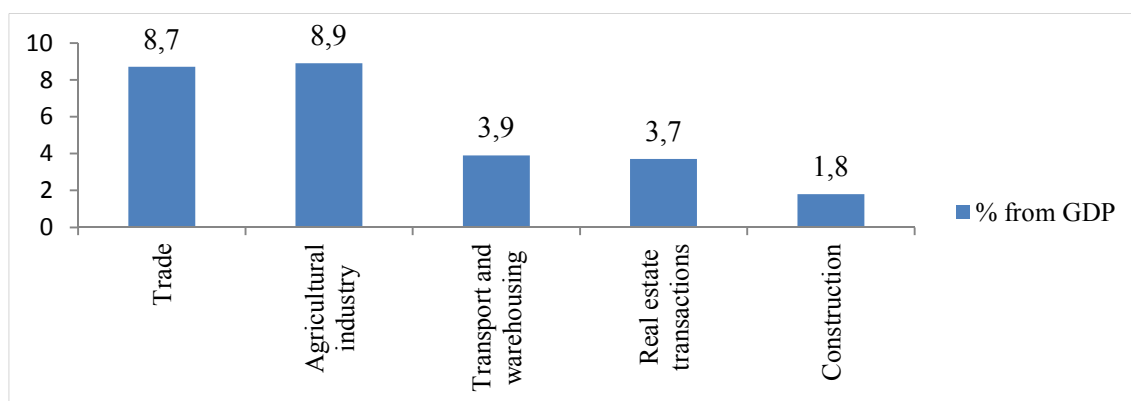


Figure 7. The Level of shadow activities by sector to GDP the average for the 2015-2018 godesin %

Note - compiled by the author based on (Committee on statistics of the Republic of Kazakhstan, 2019)

From figure 7 it is seen that the average level of the shadow by industry to GDP over 2015-2018 is different. The average level of the shadow by industry to the GDP attributed to agriculture, which amounted to

8.9% of GDP. The main form of manifestation of the shadow economy in agriculture is informal production. The greatest volume of shadow economy is concentrated on private farms (statistically important: this refers to farms of values, not a home for personal use), since they recorded a significant turnover of shadow money and informal employment. Prerequisites for the preservation of the informal sector in the agricultural sector is small commodity production, the lack of a developed logistics system for procurement, transportation and storage of raw materials. All these factors lead to the emergence in the sphere of a large number of economic agents, unreasonably overestimating the cost of production.

The shadow economy in the trade represented a hidden production with the aim of understating the tax base, spontaneous trade and lack of organization outlets, as well as informal employment.

This cross-sector division of underground activities shows perfection of normative-legal laws regulating various aspects of economic activity. This motivates us to transform an official of economic activity in the most "convenient" types of shadow activity.

Thus, the shadow processes are clearly expressed in the economy of the Republic of Kazakhstan, especially in the field of construction, agriculture, trade and transport. One of the priorities of the Government of the Republic of Kazakhstan is to reduce the share of shadow business in the economy and its translation to "legal" mode of operation. Therefore, not only for one region but for the state as a whole, the problem of development of the shadow economy, regulation of the shadow economy, necessary task. Implemented in the country measures aimed at democratization of society, business support, combating corruption and the shadow economy contribute to positive change in institutional and economic environment.

The effective combating of the shadow economy is largely dependent on understanding the place and role of the state in a market economy. For example, all agree that shadow operations have become subjects of market economy is simply uneconomical.

In recent times stands out approach to solving the problems of the shadow economy.

The first liberal ideas accompanied by full legalization of all of the shadow economy and the associated high rate of primitive capital accumulation.

The second approach, which arose on the basis of negative outcomes of the liberal and repressive. It is aimed at the expansion and strengthening of law enforcement authorities, improvement of interaction of special services, the increased penalties and stricter laws.

Undoubtedly, the state has direct responsibility in terms of combating corruption of the state apparatus and its fusion with the powerful business representatives. Necessary as the adoption of legal rules that minimize the possibility of extortion and bribery in relations between officials and business, and a strict administrative action against their specific manifestations.

The increasing resistance to existing norms and economic regulations that is reflected in the continuing importance of the shadow economy can be dealt with through a two-pillar strategy of reducing the attractiveness of the exit option (the shadow economy) while strengthening the voice option (voting and participation). (Table 1).

Table 1. A two-pillar strategy for reducing the attractiveness of the existing option (shadow economy) and strengthening the voice option

Exit option	Voice option
Reducing financial incentives to escape into the shadow economy Improve and simplify the tax system to strengthen acceptance Reform social security systems by strengthening the equivalence principle (more social tax contributions equals higher payments) Boost efficiency in administration and combat corruption Focus on higher growth and welfare in the official sector to reduce pressure on government budgets Protect property rights and increase investment in infrastructure Allow more flexible work arrangements for employees and employers (individual agreements) Reduce regulation and bureaucracy	Strengthening popular participation in government Build trust and invest in social capital (for example, through support of corporate social responsibility) Reduce centralization Support more direct democratic elements in some areas Encourage popular participation to increase commitment and loyalty and reduce free riding Avoid attacking the symptoms through stricter controls, which encourages hiding participation in the shadow economy rather than reducing it Focus on reforms of institutions and systems Explain and communicate broadly the need for reforms
<i>Note - compiled by the author based on (Enste, D. H., 2018)</i>	

Federal elements have to be strengthened, and instruments of direct democracy, such as referendums and legal initiatives, should be introduced to give citizens more opportunities to participate in rule making and the design of the tax system. Increased participation will diminish the perception of being subjected to unfair restrictions on personal freedom, thereby boosting tax morale and civic loyalty and reducing the attractiveness of the shadow economy. Acting in accordance with the subsidiarity principle (matters should be handled at the lowest competent level of administration) is economically advisable and more efficient (Enste, D.H., 2018).

To strengthen the material base and improvement of methods of fight against economic crimes and corruption in the United States, Japan, France, was created in 1989 (FATF) special international structure to combat money laundering. An account of major financial transactions and entities that have carried out this operation, financial and credit institutions. Was established financial intelligence agencies to track suspicious transactions and deposits. Banks are required to inform the security services about suspicious transactions and to provide access of these services to the clients' accounts. Administrative processes are decentralized. To expand the administrative capacity of local authorities, they have been given responsibility, the extent of which varied depending on the Ministry and sector. Employment is determined by educational level. Admission to higher levels of service dependent on educational attainment and is often associated with exams.

One method of reducing the shadow economy has become a state policy of legalization. The legalization of criminal proceeds is a link between an open economy and the criminal sector of the shadow economy. Figure 8 presents the scheme of interaction of an open economy with the criminal sector, while the laundering of proceeds allocated conditionally to show its place in the functioning of the economic system.

Under the legalization of income obtained by criminal means is understood as giving lawful appearance to possession, use and disposal of monetary funds or other property obtained through the Commission of crimes.

The basic rules of combating laundering of the proceeds from uncontrolled economic activities are:

- a) the definition of the concept of legalization of income as activities of giving a legitimate appearance to the proceeds of crime;
- b) establishing requirements for the registration of a number of types of financial transactions and identification of persons who committed them, as well as requirements for storage of these materials;
- c) the use of the term "financial transactions" (which covers transactions with money, securities, property, property rights) and license and registration of such operations;
- g) application of the concept of "organizations which perform financial operations." As such, should be recognized not only credit institutions but also all other business entities, as well as offices, gaming establishments, etc.;
- d) restriction of commercial and banking secrecy in order to obtain information necessary to detect and prevent action on legalization of proceeds from crime;
- e) the imposition of restrictions on financial transactions with the cash movement of cash across the customs border;
- g) the introduction of the category of financial transactions subject to special control;
- h) obligation of employees of organizations carrying out financial transactions, to inform the competent authority about the illegal transactions and transactions requiring special control;
- I) the immunity of employees of organizations carrying out financial transactions, accountable for the disclosure of information constituting commercial or Bank secret, if this information to the shadow economy to the authorized body about the illegal transactions and transactions requiring special control;
- k) establishment of responsibility of employees of organizations carrying out financial transactions.

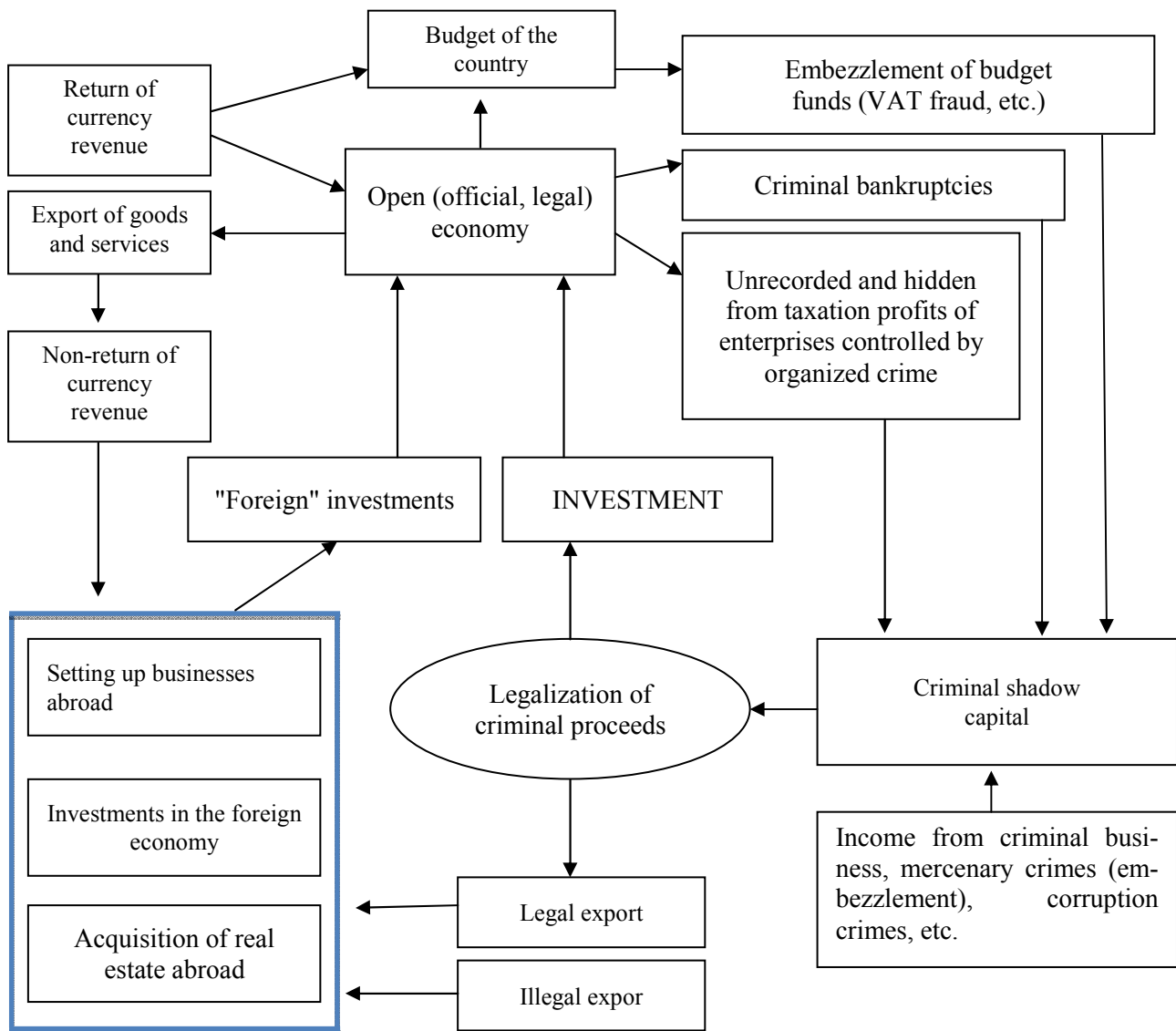


Figure 8. Interaction of open economy and the informal sector

Note - compiled by the author based on (Golovanov, 2003)

Thus, such events allow to use a significant portion created in the society rents on the implementation of socio-economic programs, the development of fundamental scientific research and for the development of small business. It is fundamentally important to provide control not only of regions but of the state over activity of shadow structures operating in the strategically important for the economy enterprises. This is essential to reduce the effect of shadow structures on the economy as a whole.

### Conclusion

Economic theory still has not developed a universal definition of the shadow economy, and the reason lies in the conceptual disagreement of authors and special approach to it in different countries. This fact reflects significant theoretical and methodological problem due to the fact that the term "shadow economy" in the modern period is widely distributed, including is subject to state control.

Shadow activity in sectors of the Kazakh economy appears uneven. Leaders among the "shadow" sectors of the economy are: agriculture, manufacturing, construction and transportation. The minimum value of the shadow activities have on mining (7%), production and distribution of oil, gas and water (up to 21%). This is because these industries are fully controlled by the government.

The decrease in the level of incomes and a sharp differentiation has led to the growth of the shadow activities of the population. This is especially clearly seen in agriculture and transport, as tax administration data sectors of the economy difficult.

The legalization of shadow money is a necessary condition for the functioning of organized crime in the economic sphere. In order that the money or other property derived from criminal business could be put into further circulation without danger for the criminals to be exposed, legal cover must be purchased, which is achieved in various ways. The fight against laundering of criminal money is one of the most effective mechanisms for combating criminal economic system, causing significant damage to a healthy economy and undermining the financial stability of any state. After all, shadow capital legalized allows organized crime to buy all types of property and to establish control over the economic and then the political system of the country.

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### **Көлеңкелі экономика: түсініктер мен бағалау**

#### **Аңдатпа**

**Мақсаты:** Мақалада Қазақстанның көлеңкелі экономикасының дамуына әсер ететін ұғымдар, бағалау және себептері талқыланды. Атап айтқанда, авторлар көлеңкелі экономиканың пайда болу себептерін

теориялық негіздеуге негізделген Қазақстан Республикасындағы көлеңкелі экономиканы шектеу тетіктерін ұсынуға тырысқан.

*Әдісі:* Салыстырмалы, теориялық талдауды қолдану негізінде мемлекеттік заңдастыру саясаты тұрғысынан негізгі бағыттарды жетілдіру арқылы көлеңкелі экономиканы шектеу керек деген тұжырым жасалған. Зерттеу пәні - Қазақстан Республикасындағы көлеңкелі сектордың қалыптасуы мен дамуы процесінде пайда болатын экономикалық қатынастар.

*Қорытынды:* Ұсынылған ғылыми мақалада авторлар көлеңкелі экономика ұғымының мәнін қарастыруға көңіл бөлген, Қазақстандағы көлеңкелі экономикалық қызметтің даму саласына талдау жасаған, сондай-ақ көлеңкелі экономиканы қысқарту ретінде бақыланбайтын экономикалық қызметтен кірістерді жылыстатудың негізгі бағыттары ұсынылған.

*Тұжырымдама:* Көлеңкелі процестер Қазақстан Республикасының экономикасында, әсіресе құрылыс, ауыл шаруашылығы, сауда және көлік саласында айқын көрсетілген. Мемлекеттік басқарудың басым міндеттерінің бірі экономикадағы көлеңкелі бизнес үлесін төмендету және оны «заңды» жұмыс режиміне ауыстыру болып табылады. Азайту тетіктері ретінде жария етудің мемлекеттік саясаты ұсынылады, өйткені бұл іс-шаралар қоғамда құрылған рентаның елеулі бөлігін мемлекетте экономикалық реформалар жүргізуге бағыттайды.

*Кілт сөздер:* көлеңкелі экономика, көлеңкелі экономиканың сфералары, көлеңкелі айналым, тауар өндірісі мен қызмет көрсетудегі көлеңкелі экономиканың үлесі, ЖІӨ-ге қатысты көлеңкелі белсенділік деңгейі.

**В.И. Глухова, С.С. Дарибеков, А.С. Дарибекова, С.Ш. Мамбетова, З.А. Ескерова**

### **Теневая экономика: понятия и оценка**

#### **Аннотация**

*Цель:* В статье рассматриваются понятия, оценки и причины, влияющие на развитие теневой экономики Казахстана. В частности, авторы стремятся предложить механизмы ограничения теневой экономики в Республике Казахстан на основе теоретического обоснования причин существования теневой экономики.

*Методы:* На основе использования сравнительного, теоретического анализа сделан вывод о необходимости ограничения теневой экономики путем совершенствования основных направлений с точки зрения государственной политики легализации. Предметом исследования являются экономические отношения, возникающие в процессе становления и развития теневого сектора экономики в Республике Казахстан.

*Результаты:* В предложенной научной статье автором уделено внимание рассмотрению сущности понятия теневой экономики, проанализированы сферы развития теневой экономической деятельности в Казахстане, а также предложены в качестве сокращения теневой экономики основные направления пресечения отмывания доходов от неконтролируемой экономической деятельности.

*Выводы:* Теневые процессы ярко выражены в экономике Республики Казахстан, особенно в сфере строительства, сельского хозяйства, торговли и транспорта. Одной из приоритетных задач государственного управления является снижение доли теневого бизнеса в экономике и перевод его на «легальный» режим работы. В качестве механизмов снижения представляется государственная политика легализации, так как данные мероприятия переведут значительную часть созданной в обществе ренты на проведение экономических реформ в государстве.

*Ключевые слова:* теневая экономика, сферы теневой экономики, теневой оборот, доля теневой экономики в товарном производстве и услугах, уровень теневой активности промышленности по ВВП.

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## **Development of education in the context of state management of the quality of life of the population in the Republic of Kazakhstan**

### **Abstract**

*Object:* This paper aims to identify current trends and challenges to providing quality and affordable education to the population through the analysis of the process of state management of the quality of life in education, and to propose recommendations on how to resolve the said challenges and improve the quality of education in the Republic of Kazakhstan.

*Methods:* The following methods were used during the research: empirical, analytical, synthetic and comparative-logical ones.

*Results:* The article explores the education system of the Republic of Kazakhstan as a key branch of the social sector and the most important aspect in the state management of the quality of life of the country's population. In particular, we have seen into the indicators that characterize the following: coverage of children with preschool education, dynamics of secondary, technical and professional, higher and postgraduate education, inclusive education development, all of which are aimed at comprehensive development, creativity and strategic thinking, the ability to adapt to different personal conditions and contribute to improving the quality of life of the population, and consequently, sustainable socio-economic development of the country.

*Conclusions:* As a result of the research, we have identified issues, the solution of which shall help to improve the quality of educational services and ensure their accessibility. We have formulated conclusions and proposals to improve the effectiveness of strategic management of the education system to achieve a decent level of quality of life for the population in the Republic of Kazakhstan. Recommendations formulated and proposed by the authors can be used by research centers involved in national research, by public associations and public administrations directly for the elaboration of state programs, strategic plans in education and in the process of improving the quality of education management system as a component of the quality of life of the Republic of Kazakhstan population as a whole.

*Keywords:* public administration, quality of life of the population, accessibility and quality of education, human capital, competitiveness.

### **Introduction**

Economic literature views the quality of life of the population in the context of various aspects and interprets differently depending on the purpose of the study. Regardless of the conceptual solutions encountered, one of the essential and significant components of the quality of life is education; its accessibility and quality. In turn, the "quality of education" concept reflects the degree of compliance of the educational process at all levels and is characterized by real educational results that meet the established regulatory requirements, social and personal expectations of the population. Accordingly, ensuring access to quality education for as many people as possible shall also lead to an improvement in the quality of life of the population.

At the same time, there is a point of view circling in scientific community that says, education is presented as a secondary element of the "quality of life" category. We do not share this vision since in addition to its actual cost, education is also a means of achieving various results that have a creative value for the quality of human life. At the same time, while some of these results have monetary value and create income for an individual, others, such as self-realization and active cognitive activity, contribute to the expansion of human freedoms and potential opportunities, regardless of whether it currently has any impact on the individual's personal income and thus benefits both the individual and the entire society in achieving a decent future.

Certainly, given the significant impact of the availability and quality of education for society, an important task for public administration represented by government authorities at national and local levels is

their participation in the formation of an appropriate institutional environment, adequate to the requirements of higher quality of life in its various aspects. This includes ensuring the elaboration of integrated development strategies of both companies and individual sectors associated with education.

The strategic documents developed by the state emphasize the importance of improving the level of education of the population and the effectiveness of the education system management. Thus, according to the Leader of the Nation N.A. Nazarbayev, the strategy "Kazakhstan-2050" indicates that "In order to become a developed and competitive nation we must become a highly educated nation. In the modern world simply embracing literacy is not enough. Our citizens must be ready to permanently gain new working skills using the most advanced equipment and the most modern production techniques." (Strategija "Kazakhstan-2050" [Strategy "Kazakhstan-2050"], 2012).

According to the Strategic development plan of the Republic, the perspective positioning in education is presented as "the development of human capital with high-quality and demanded skills of the XXI century, which will determine the further growth of the economy of Kazakhstan. The education system should aim at ensuring accessibility and inclusiveness at all levels and training experts that meet both the labor market's current needs and the needs of the economy in the future." (Strategicheskij plan razvitija Respubliki Kazakhstan do 2025 goda [The strategic plan for development of the Republic of Kazakhstan until the year 2025], 2018).

Notably, the Global Competitiveness Index (hereinafter referred to as GCI) report of The World Economic Forum (hereinafter referred to as WEF) for 2019, puts Kazakhstan's competitiveness in the "Education and skills" factor on the 57th place, i.e. average level. Despite minor improvements in indicators such as "quality of vocational education" and "expected duration of education", the country's position in this rating is still low, which puts notable emphasis on the relevance of the topic of this research. In addition, the relevance is determined by the need to improve the mechanism of public administration in education. This shall provide the population with knowledge, skills and abilities that meet the requirements of a rapidly changing modern market economy and contribute to the successful adaptation of people to the new requirements of the labor market, their ability to withstand global challenges and shocks.

In this regard, the purpose of this study is to identify current trends and challenges to providing quality and affordable education to the population via the analysis of the state management of the quality of life in education, and to propose recommendations on how to resolve the said challenges and improve the quality of education in the Republic of Kazakhstan.

### ***Literature Review***

The following foreign and Russian researchers have studied and presented the issues of the influence of education on the quality of life of the population in their scientific works: C. E. Ross, M. Van Willigen, J.D. Edgerton, L.W. Roberts, S. von Below, J. V. Winters, P. Morais, V. L. Miguéis, A. S. Camanho, N.B. McLaren, M. A. Shorokhova, I. L. Sirotina and many others (C. E. Ross, M. Van Willigen, 1997; J.D. Edgerton et al., 2012; P. Morais et al., 2013; J. V. Winters, 2011; N. B. McLaren et al., 2015).

The analysis of author opinions given in scientific literature allows to classify them by similarity of education category definitions as a component of the quality of life of the population. For example, some authors argue that the demand for knowledge and high quality of education improves the quality of life of the population as it increases the possibility of access to interesting, permanent and paid work, increases the possibility of stable social relationships, especially marriage, which increase social support. It also develops analytical skills that people use to determine their behavior, to change personal preferences and restrictions / opportunities provided to individuals (C. E. Ross, M. Van Willigen, 1997; J. D. Edgerton et al., 2012).

A group of Russian scientists (N. B. McLaren, M. A. Shorokhova, I. L. Sirotina) take a different view and believe that a quality education is a relative concept associated with the socio-economic order of a particular society considering the stage of development and basic capacity as obtaining a quality education does not always guarantee the implementation of acquired knowledge in practice and high social status. This leads to the contradiction between the human desire to implement their knowledge and inability to do so. This can only be resolved by creating necessary conditions for the development of high-tech industries (N.B. McLaren et al., 2015).

In most studies, the quality of education is considered not only as a result of activity, but also as a process aimed at achieving the planned results considering the internal potential and external conditions of the object. At the same time, the assessment of the quality of education is the process of finding the degree of

compliance of educational results and conditions for ensuring the educational process. In this regard, in addition to quantitative indicators of educational infrastructure, the assessment of the education quality is based on the number of the following quality indicators: universities' rankings in international indices, government costs on education, innovation development level, academic degree holders rate, competitiveness and professional mobility of students, relevance and competitiveness of graduates in the labor market, their achievements, etc.

Meanwhile, the quality of education is directly related to the availability of education, which is understood as the opportunity and equality for each participant in the educational process to get the desired quality educational resources. Depending on types of access to education, different social groups have different educational opportunities. In this regard, when solving problems of accessibility of education, the state focuses on socially vulnerable groups of the population with relatively limited opportunities to participate in the educational process. Managing access to education also includes creating educational needs, creating financial, infrastructure, and other opportunities (M. V. Novikov, 2012). The state and society need to focus on these very aspects in the framework of human development as a condition for achieving success, sustainable economic growth, prosperity and social well-being and improving the quality of life of the population (K. Birchler, K. Michaelowa, 2016; N. Ghaffarzagdegan et al., 2017; R. Laurie et al., 2016; J. W. Lee, H. Lee, 2016; A. Nasibulina, 2017; D. M. Salvioni et al., 2017).

The concept that education is considered a factor of competitiveness of cities and the country as a whole achieved through increasing the number of qualified human resources, also deserves attention. For example, foreign authors argue that "The competitiveness of cities relies increasingly in their capacity to attract highly educated workers, as they are important assets for firms when choosing a location, and therefore the local level of human capital has a positive impact on the quality of life of the population" (Morais P. et al., 2013; Winters J. V., 2011). Human capital can be increased through education, professional training, gaining work experience. Time and money required for education and training can be considered an investment in human capital. This type of investment brings significant long-term and integral socio-economic effect in terms of volume by its nature. Therefore, it is the most beneficial one for the potential sustainable development of the modern innovative economy and the level of competitiveness of the country (A.A. Bulasheva, T.A. Kusainov, 2019; S. M. Dzhumasheva, 2018; G. Konop'janova et al., 2018).

We believe that the analysis and generalization of various points of view of the authors in the scientific literature in relation to the research topic do not allow us to consider the impact of education on the quality of life of the population narrowly and one-sidedly. Given that education is a part of quality of life, we must base the research of the existing problems and governance on an integrated approach that includes a number of the following criteria: *education availability* (based on the following indicators: number of public and private preschool education institutions, schools, colleges and universities, number of students and teachers in urban and rural areas, volume of state order for training, etc.), *teaching staff structure (hereinafter referred to as TS) and its training level* (based on the following indicators: skilled pedagogical personnel for preschool education, position in international rankings by subjects, academic degree holders rate, universities' positions in QS World University Rankings (foreign teachers' share, the ratio of teaching staff and the number of students, citation index, etc.)), *the demand for graduates in the labor market* (based on the following indicators: internationalization of the education system, command of English, the share of employed by the education level), etc.

### **Methods**

In the course of the research, we used the following techniques and methods: empirical (collecting information), analytical (dividing the problem into homogeneous parts and considering them separately), synthetic (generalizing the conclusions made during the analysis), comparative-logical (comparing homogeneous elements in different situations, cross-country comparisons). The information base for the research consists of laws and regulations, research papers, monographs and publications by domestic and foreign scientists in public management of the quality of life of the population, and statistical collections on the education system of the Republic of Kazakhstan.

### **Results**

We believe that the analysis of trends in education starts with the availability of education by monitoring a number of indicators of pre-school education such as the number of institutions, the number of students and teachers, capacity supply for students, etc. The State program for the development of education and science of the Republic of Kazakhstan for 2016—2019 (hereinafter referred to as the Program) approved by the

government of the Republic of Kazakhstan dated July 24, 2018 No. 460 provides for and includes individual indicators of educational accessibility (Gosudarstvennaja programma razvitija obrazovanija i nauki Respubliki Kazakhstan na 2016—2019 gody [The state program of education and science development of the Republic of Kazakhstan for 2016-2019], 2018).

First of all, let us consider the dynamics of the development of the preschool education system's key indicators in the Republic of Kazakhstan over the past 5 years. For example, according to the results for the period of 2015-2019, there is an annual planned increase by 1480 units of the network of preschool organizations (see Table 1).

Table 1. Preschool education indicator trends in the Republic of Kazakhstan for the period of 2015-2019 units

Indicators	2015	2016	2017	2018	2019
Number of preschool institutions	8 834	9 410	9 828	10 314	10 583
<i>urban area</i>	<i>2 844</i>	<i>3 261</i>	<i>3 672</i>	<i>4 057</i>	-
<i>rural area</i>	<i>5 990</i>	<i>6 149</i>	<i>6 156</i>	<i>6 257</i>	-
<i>state-owned property</i>	<i>7 059</i>	<i>7 074</i>	<i>6 770</i>	<i>6 565</i>	<i>6 284</i>
<i>private property</i>	<i>1775</i>	<i>2336</i>	<i>3058</i>	<i>3 749</i>	<i>4299</i>
Number of students in preschool institutions	758 772	807 170	862 305	880 896	893 461
Capacity	728 551	757 685	896 985	832 113	-
Capacity supply (students per 100)	105,0	106,1	96,1	105,9	-
Number of teaching staff in preschool institutions	80 857	84 796	90 671	94 838	97 197

*Note – Compiled by the authors according to the data provided by the Ministry of National Economy of the Republic of Kazakhstan Statistics Committee on the basis of source data (Statisticheskie bjulleteni [Statistical Bulletins], 2020).  
- reporting data for 2019 for certain indicators have not been published at the time of writing*

Despite the fact that preschool education and training holds one of the most successful levels of education by the factor of involving the private sector in the network development (more than one third of preschool institutions are private (4299 units or 40.6% in 2019, 1775 units or 20% in 2015, increase in preschool education coverage by 24.5%: 78.3% in 2019, 77.0% in 2018, 66.1% in 2017, 64.5% in 2016, 53.8% in 2015), there is still an issue with the lack of qualified teaching staff. This is due to low wages and high workload, which is reflected in the size of groups, the ratio of students and teachers (it remained unchanged over the past 5 years: 9 students per 1 employee). This indicates the insufficient effectiveness of the State Program in relation to quality indicators of the quality of preschool education (Gosudarstvennaja programma razvitija obrazovanija i nauki Respubliki Kazakhstan na 2016—2019 gody [The state program of education and science development of the Republic of Kazakhstan for 2016-2019], 2018). However, to improve the quality of education, regulations of the economic Commission for Europe (hereinafter referred to as the ECE) consider a smaller ratio of students and teachers to be more effective, because it allows staff to pay more attention to the needs of students individually and reduces the amount of time required to solve issues.

Now, to the secondary education. The number of secondary schools has decreased to 170 units during the study period (7563 for academic year 2014/2015, 7393 for academic year 2018/2019), and the number of private schools has increased by 78 units (189 in 2019; 111 in 2015) (see Table 2).

Table 2. Secondary education indicator trends in the Republic of Kazakhstan for the period of 2015-2019

Indicators	2014/2015	2015/2016**	2016/2017	2017/2018	2018/2019
1	2	3	4	5	6
Number of secondary schools, units					
total	7 563	7 511	7 450	7 414	7 393
urban area	1 932	1 965	1 980	2 012	2 055
rural area	5 631	5 546	5 470	5 402	5 338
Number of students in general education schools, people					
total	2 685 063	2 799 585	2 930 583	3 050 770	3 186 234
urban area	1 403 895	1 481 670	1 567 612	1 650 672	1 757 315
rural area	1 281 168	1 317 915	1 362 971	1 400 098	1 428 919
Number of those who graduated from the main secondary school (grade 9)					
total	221 907	224 674	241 188	230 679	235 404
urban area	111 032	110 631	124 244	119 154	126 619
rural area	110 875	114 043	116 944	111 525	108 785

Continuation of Table 2

1	2	3	4	5	6
Number of those who graduated from the main secondary school (grade 11)					
total	133 309	129 406	127 369	127 414	143 089
urban area	61 721	61 503	62 102	63 075	73 061
rural area	71 588	67 903	65 267	64 339	70 028
left the country***	-	-	-	4 158	7 606
Incl. those who entered educational institutions	-	-	-	3 893	7 117
Number of teaching staff in general education schools, people					
total	314 591	325 184	319 167	334 205	338 755
Employed population with secondary vocational (special) education, people					
total	2 794 817	2 987 880	3 201 192	3 466 417	3 701 939
<i>Note – Compiled by the authors according to the data provided by the Ministry of National Economy of the Republic of Kazakhstan Statistics Committee on the basis of source data (Statisticheskije bjulleteni [Statistical Bulletins], 2020).</i>					
<i>* since 2014, statistical observation 85-K is excluded from the plan of statistical work for 2014, data is collected by the MES of the Republic of Kazakhstan.</i>					
<i>** number of teaching staff in full-time public general education schools</i>					
<i>*** provided in the administrative form starting from 2017.</i>					

One of the indicators reflecting the highly educated teachers is the results of PIRLS 2016, where Kazakhstan (by the factor of quality of reading and text comprehension by elementary school students) holds 27th place (536 points) among 50 countries. This is comparable to Germany (537), Canada (543), Austria (541) and the Slovak Republic (535) and demonstrates the growth of the employed population with secondary vocational (special) education during the research period. In 2019, 4528 schools (64.9%) were provided with conditions for inclusive education compared to 2015 (30%), which is 30.4% higher.

However, despite the measures taken in the framework of the Program, the target figure has not yet been reached in terms of complete elimination of emergency and three-shift schools (0.6% and 1.8%, respectively), and therefore there is an overcrowding of schools and classes in metropolises and large cities. In particular, in 2019, there were 29 emergency and 122 three-shift schools (Gosudarstvennaja programma razvitija obrazovanija i nauki Respubliki Kazakhstan na 2016—2019 gody [The state program of education and science development of the Republic of Kazakhstan for 2016-2019], 2018).

Now to vocational educational and training (hereinafter referred to as VET). Its quantitative indicators also enjoy a growing trend. For example, during the research period, there was an increase in the number of colleges with a dual training introduced (518 in 2019, 348 in 2015) with the participation of more than 4000 companies. In addition, the share of training and production workshops, laboratories and state college special subject offices equipped with modern training equipment has significantly increased from 41.2% to 50%, respectively. The project “Free VET for all” has been implemented since 2017. According to it in 2019, reception by state order amounted to 94628 people. Over the past 4 years, the share of colleges that have created equal conditions and barrier free access for students with special educational needs (hereinafter referred to as SEN) has increased by 54.5% (69.5% in 2019, 15% in 2015)(Gosudarstvennaja programma razvitija obrazovanija i nauki Respubliki Kazakhstan na 2016—2019 gody [The state program of education and science development of the Republic of Kazakhstan for 2016-2019], 2018). On the positive side, it should be noted that there is a system of preferential support for SEN students, which includes the following: free meals provision, dormitories and travel tickets provision, additional payments to scholarship allowances. At the same time, there is a shortage of qualified mentors, training masters. In some cases, there is an underdeveloped methodological and material-technical base, the backwardness of training systems from innovative technologies currently used in industrial production using innovative technologies and the latest technology (companies are forced to retrain workers in situ). As a result, there is a discrepancy in the content and quality of professional education to the employer requirements.

Speaking of higher and postgraduate education, 99% of higher education institutions (hereinafter referred to as HEIs) have been internationally accredited by agencies that are full members of the international European networks for ensuring the quality of education and are included in the register of the authorized education body. In comparison with the academic year 2016-2017, the number of foreign students in higher education has increased by 3 times by 27206 people (40043 in academic year 2019-2020) (Statisticheskije bjulleteni [Statistical Bulletins], 2020). Implementation of educational programs in Eng-

lish continues. Over the past two years, 654 educational programs have been implemented. The number of teaching staff in English is 9270. Every year, the volume of the state order for the training of personnel in HEIs increases. In the academic year 2019-2020, the state order was 66556 (39700 in academic year 2016-2017). In particular, in 2019, the state order for the training of PhD and Master's degrees increased by 3.5 and 2 times making 2312 and 13159 (628 and 7429 in 2016), respectively (see Table 3).

Table 3. Higher and postgraduate education indicator trends in the Republic of Kazakhstan for the period of 2015-2019

Indicators	2015	2016	2017	2018	2019					
Number of higher education institutions, units										
total	127	125	122	124	129					
Number of teaching staff of higher educational institutions, people										
total	38 087	38 241	38 212	38 275	38 500					
Number of doctoral students, people										
total	2219	2710	3603	5 609	6 363					
intake	794	1 086	1 671	2 766	1 775					
output	533	619	721	721	905					
Number of master's students, people										
total	29 882	32 893	34 609	38 594	35 690					
intake	15 261	19 074	18 829	21 714	15 018					
output	15 816	16 445	18 268	19 233	20 249					
Number of students of higher educational institutions, people										
total	459 369	477 074	496 209	542 458	604 300					
intake	115 195	147 692	138 378	163 336	163 500					
output	147 184	138 004	127 084	130 691	142 400					
Employed population with higher and incomplete higher and postgraduate education, people										
total	3 205 699	3 212 142	3 366 990	3 489 576	3 422 471					
External outgoing academic mobility, people										
total	2 329	2 473	2 510	2 447	2 694					
External incoming academic mobility, people										
total	565	806	712	637	681					
Number of foreign scientists attracted to higher education institutions of Kazakhstan at the expense of the state budget and extra-budgetary funds of universities, people										
total	992	765	688	842	716					
Number and share of foreign students in higher education institutions										
The Republic of Kazakhstan	total international students, person	share of international students, %	total international students, person	share of international students, %	total international students, person	share of international students, %	total international students, person	share of international students, %	total international students, person	share of international students, %
	10 829	2,4	12 840	2,7	13 898	2,8	21 727	4,0	40 043	6,6

Note – Compiled by the authors according to the data provided by the Ministry of National Economy of the Republic of Kazakhstan Statistics Committee on the basis of source data (Statisticheskie byulleteni [Statistical Bulletins], 2020).

One of the important indicators allowing to assess the education system's quality, the potential for economic growth and competitiveness and the demand for young experts in the labor market, is the internationalization of the higher education system in Kazakhstan. It considers the needs of modern society, such as the ability to ensure academic mobility of students and teachers, training of staff of a new generation and qualification able to work in a globalized environment, which is reflected in international systems for assessing the competitiveness of universities and rating indicators of the quality of higher education. For example, the internationalization indicator analysis shows that the share of foreign students studying at universities in the Republic of Kazakhstan remains low (6.6% in 2019), despite an increase in their number by 2 times during the research period. This indicator averaged 6% for the Organization for Economic Cooperation and Development (hereinafter referred to as the OECD) countries in 2017, where statistics are not divided into categories of "foreign students" and "international students"

(2.8% for Kazakhstan), but in about one third of the OECD countries it is equal to or exceeds 10%. In higher education institutions in countries such as Australia, Austria, Luxembourg, New Zealand, Switzerland and the United Kingdom, the proportion of foreign students entering was at least 15%, peaking at 47% for Luxembourg and 21% for Australia(OECD, 2019).

It is also necessary to consider changes in such indicators as the share of employed people by level of education and the number of employed people with vocational (special), higher and postgraduate education. Despite the positive dynamics of these indicators shown in Tables 2 and 3, which in 2019 amounted to 42.1% and 38.9% of total employment, respectively, the above indicators are 2 times lower than in the OECD countries, where the average employment rate is 82% for adults with a short-cycle higher education, and rising to 84% for those with a Bachelor's degree, 88% for Masters and 92% for Doctors of science or equivalent degrees. Young people with the highest qualifications (Master's and Doctorate or equivalent) usually have the best job prospects. In most countries, adults aged 25-34 with a Master's degree or equivalent qualification have a high employment rate: Denmark – 90%, Iceland – 95%, the Netherlands – 91%, Norway – 94%, Poland – 90%. Young doctoral students also have good employment rates: the employment rate is 90% or higher in 16 of the 26 countries (Denmark – 96%, Finland – 97%, Lithuania – 99%, Hungary – 96%, Sweden – 93%) (OECD, 2019).

We believe that the quality of education has a significant impact when students are forced to learn on their own. This provides the performance of self-education students, when high-quality teaching staff of the universities only gives direction and shows the methods that obtain the necessary knowledge. First of all, this requires having a sufficient number of highly educated quality staff of higher education institutions, so for the academic year 2018-2019 the country had: 2379 PhD Doctors, 3352 Doctors of Sciences, 12414 Candidates of Sciences (Analiticheskij otchet po realizacii principov Bolonskogo processa v Respublike Kazahstan [Analytical report on the implementation of the principles of the Bologna process in the Republic of Kazakhstan], 2019). The structure of the quality staff is dominated by the number of candidates of science, which is 31% of the total number of full-time teaching staff (table 4).

Table 4. Qualitative composition of university teaching staff and their academic degree holders rate, people/%

	Academic year 2015-2016		Academic year 2016-2017		Academic year 2017-2018		Academic year 2018-2019	
	No. of people	share, %	No. of people	share, %	No. of people	share, %	No. of people	share, %
Total TS	38 087	100	38 241	100	38 212	100	40 594	100
Doctors of Sciences	3 568	9,4	3 499	9,2	3 251	8,5	3 352	8,3
Candidates of Sciences	14 239	37,4	14 023	36,7	13 276	34,7	12 414	30,6
PhD Doctors	1 272	3,4	1 737	4,5	2 062	5,5	2 379	5,8
Academic degree holders rate	19 079	50,1	19 259	50,4	18 589	48,7	18 145	44,7

*Note – Compiled by the authors based on the source data (Analiticheskij otchet po realizacii principov Bolonskogo processa v Respublike Kazahstan [Analytical report on the implementation of the principles of the Bologna process in the Republic of Kazakhstan], 2019)*

Despite the recorded growth of the high school teaching staff in the dynamics of recent years, the academic degree holders rate decreased by 5.4% in the academic year 2018-2019, and amounted to 44.7%. This trend shows a decrease in the ability of higher and postgraduate education institutions to meet the growing needs of the country's population in obtaining quality educational services due to the low motivation of young scientists to improve their skills (low salary supplement for academic degrees), the outflow of qualified scientists to the practical sphere or outside the country in pursuit of a higher quality of life; the low status of a teacher and scientist in society due to negligibly low wages, low quality of life and excessive workload with routine tasks that have nothing to do with the scientific and educational process, which diverts a significant part of the time that can be used for self-education, publication of scientific articles and monographs.

We believe that the indicators of Kazakhstan universities in national and world rankings prove to be one most effective tool for ensuring the quality of training. International rankings become a tool for public and global assessment of educational institutions considering the quality of training, scientific potential of the institution, its contribution to the economic development of the country and society. In this regard, we feel important to note that the QS WUR-2020 rating includes 10 Kazakhstan universities. In comparison with 2017, the number of Kazakhstan universities presented in the rating has increased. Kazakh National



Agrarian University (top “601+”) and Buketov Karaganda State University (top “701+”) have entered the rating for the first time (see Table 5).

Table 5. Positioning of Kazakhstan's universities in the QS World University Rankings for 2015-2019

	2015	2016	2017	2018	2019
Top 200+	1	1	1	1	1
Top 300+	1	1	1	1	0
Top 400+	0	1	2	3	2
Top 500+	1	1	1	0	2
Top 601+	1	2	2	3	1
Top 701+	5	2	1	2	4
Total universities	9	8	8	10	10

*Note – Compiled by the authors based on the source data (QS World University Rankings 2020 Yearbook, 2020)*

Among Kazakhstan's universities, Al-Farabi KNU takes the highest position: in 2015 the institution took 275th place and during the research period, improved its position in 2019 and took 207th place, effectively rising by 68 positions. However, despite the fact that Gumilyov ENU was in the top “300+” from 2015 to 2017, this university has lost 82 positions over the past two years to 418th place in 2019 (included in the top “400+”).

### **Discussion**

In the modern world, a necessary condition for the prosperity of a country that is a part of the world economy is a comprehensive state regulation of a complex multi-stage education system that includes significant targeted investments that contribute to the progressive and sustainable development of human potential as the basis of the national economy. At the same time, if the development of human capital is more of a social issue for the state, then for an individual, such development means, above all, increasing their competitiveness and efficiency, and, as a result, increasing opportunities to improve the quality of their life. This increase in the competitiveness of an individual is an important factor in the success of a nation and creates the most favorable basis for long-term sustainable economic growth (E. B. Ajmagambetov, 2018).

Certainly, within the framework of ensuring access to education in Kazakhstan, certain measures have been taken in recent years to increase the coverage of preschool education in order to prepare children for school and ensure the development of their skills. For example, in 2010, a “Balapan” Program launched for providing children with preschool education and training. It allowed doubling the coverage of preschool education. Today, the coverage of children aged 3-6 is 95.2%, and this figure is planned to be increased to 100% by 2020. However, the coverage of children aged 1-3 with early childhood education remains low and amounted to 31.7% in 2018 as an issue of priority children in preschool of 446,2 thousand (2019) is still not resolved. Moreover, in large cities and growth points, the network of preschool education institutions does not sufficiently cover the existing need (Dobrovol'nyj Nacional'nyj obzor 2019 o realizacii povestki dnja do 2030 goda v oblasti ustojchivogo razvitija [2019 voluntary national review on the implementation of the 2030 sustainable development agenda], 2019). In turn, according to some experts, the shortage of supply in some cases leads to bureaucratic and corrupt cases of violation of official authority in order to resolve this issue on the principle of priority of the individual.

Despite the implementation of the Program in secondary education, the issue of overcrowding of classes and schools in large localities has not been resolved yet, and, as a result, the problem of two or three-shift training of schoolchildren exists. The pace of infrastructure renewal of the school network does not keep pace with the growth of child birth rates, migration processes, and the life of educational facilities. In the context of improving the quality of school education, worth mentioning is the impact of the costs of 12-year school education model, which diverts a substantial part of teacher time reducing its direct awareness and realization of individual approach to each student in accordance with their capacity and abilities, and implementation of a creative approach to the educational process itself.

The test system for evaluating intermediate and final sections of students' knowledge also raises a lot of questions from the point of view of the quality of secondary education. The lack of a complete and accurate scientific and empirical substantiation of the effectiveness of the new foreign model of 12-year schooling in Kazakhstan, which replaced the Soviet model of education formed within centuries and proven in the international community (a powerful brain drain in Soviet times) on the background of a gradual

and multi-year transition (1980-2012 years, holding numerous interim assessments of the effectiveness of such transition) of the educational system of Great Britain to the Soviet model of education, raises a lot of questions as to whether the long-term and expensive reform of borrowing a foreign model is justified in the first place (Nazadbudushhee: Anglija perehodit k sovetsoj sisteme obrazovanija [Backtothefuture: England moves to the Soviet education system], 2019). Do the authorities in this area aim to comply with the trends of integration and globalization processes in terms of the implementation of inter-country rating quantitative indicators?

The issue of the ratio of the quality of education in the regional context needs to be emphasized. The gap in the external evaluation of educational achievement (hereinafter referred to as the EEEA) indicators between urban and rural 9th grade students increased from 5.3 in 2016 to 8.1 points in 2019. The main reasons for the gap are the lack of qualified staff who do not want to work in conditions of poor quality of life in villages, the weak material and technical base of rural schools, poor quality and lack of access to internet in some cases. In this regard, the outflow of graduates from Kazakhstan schools to universities in the near and far abroad remains due to the declining quality of education in universities, the corruption component and weak career guidance of Kazakhstan universities and secondary education institutions, and most importantly, the lack of prospects for self-employment without protection in prestigious and high-paying jobs.

Along with the above mentioned bottlenecks of Kazakhstan's education sphere, we feel important to highlight VET's main issues, which include the weak logistical base of the colleges for technical professions and occupations; insufficient accommodation supply in VET hostels; VET graduates training level inconsistency with the employer requirements. Digitalization is one of the factors for increasing the availability of technical, professional and higher education in Kazakhstan. This creates the necessary conditions for promoting the concept of "lifelong learning" and equalizing the learning environment for students in remote, rural regions. Given the importance of digitalization of the educational process, 98.3% of the country's schools have access to the internet and more than 100000 subject teachers have underwent courses on the use of information and communication technologies. However, the territories of remote rural schools are still not covered with broadband internet. According to modern teaching methods, teachers in these schools are required to actively use information technologies.

One of the major issues limiting the increase in the global competitiveness of Kazakhstan's higher education is the teaching staff's low level of command of the English language. Only 6.8% of teachers of Kazakhstan universities can lecture in English (Gosudarstvennaja programma razvitija obrazovanija i nauki Respubliki Kazakhstan na 2016—2019 gody [The state program of education and science development of the Republic of Kazakhstan for 2016-2019], 2018), which reduces the degree of participation of teaching staff in such events as joint international research, publication of research results in foreign journals, cross-country cooperation, internships and training, their independent work on the search for foreign literature.

Thus, as a result of the analysis of modern trends in Kazakhstan's education sphere, we would like to note that state control of the quality of education and its impact on quality of life of the population in general requires a systematic approach, which in addition to the evaluation and monitoring also involves an assessment of the following qualitative indicators: the quality teacher staff, the demand for teaching staff and graduates in the labor market, etc. This approach should be based on the principle of receiving feedback from service recipients (student parents, school students, high school students, teachers, consumers and employers based on questionnaires, surveys, active work of independent public institutions and non-governmental bodies), which, in our opinion, could be the starting point for qualitative reform and improvement of not only the mechanism of state management of the education system, but also the quality of education itself as the basis for the reproduction of human capital, viability and future of the state.

### ***Conclusion***

As a result of the study of the education system of the Republic of Kazakhstan, we feel necessary to identify its weaknesses and strengths, and existing opportunities and threats using on the SWOT analysis method (table 6).

Table 6. SWOT analysis of the education system of the Republic of Kazakhstan

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>– positive student trends based on PIRLS results;</li> <li>– increase in the volume of state orders for training future experts;</li> <li>– dual training development in VET sphere;</li> <li>– 99% of Kazakhstan universities have international accreditation</li> </ul>	<ul style="list-style-type: none"> <li>– insufficient number of qualified personnel in pre-school education;</li> <li>– incomplete coverage of students aged 1-3 in large cities with early preschool education;</li> <li>– low number of international students from the world indicators perspective;</li> <li>– low level of teaching staff’s command of English language;</li> <li>– low pay for teaching staff;</li> <li>– lack of conditions for scientific activity and systematic professional development of teaching staff;</li> <li>– bureaucratic and corrupt component</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>– increase of Kazakhstan universities participation in international rankings;</li> <li>– qualitative expansion of the academic mobility program;</li> <li>– salary increases and incentive bonuses for the teaching staff;</li> <li>– expansion of internal and foreign training programs for the teaching staff;</li> <li>– computerization and giving access to the internet, especially in rural localities;</li> <li>– return of the Soviet education system elements to secondary and higher education;</li> <li>– digitalization development for accessibility of education;</li> <li>– construction of a network of comfortable schools through construction in the framework of public-private partnership (hereinafter referred to as PPP)</li> </ul>	<ul style="list-style-type: none"> <li>– outflow of the population from the country, including children and teenagers in the pursuit of better education and subsequent employment without protectorate;</li> <li>– education degradation due to the reforms based on blind copying of foreign systems, without analyzing and evaluating their effectiveness and results;</li> <li>– competition from foreign universities, where talented Kazakhstan youth stay and work abroad after graduating;</li> <li>– decrease in the academic degree holders rate of the qualitative composition of the teaching staff against the background of the lack of material motivation and incentives for the latter</li> </ul>
<i>Note – Compiled by the authors based on the study of the education system of the Republic of Kazakhstan</i>	

In conclusion, the authors propose a number of measures to solve current issues in the state management of the educational quality of life of the population:

- to create real working opportunities and conditions for training and motivational measures including: a new system of teacher training (professional training to maintain, broaden, deepen and improve previously acquired knowledge and skills through the use of modern innovative pedagogical technologies providing improvement of education quality); training using the updated content; an annual increase in the wages of teachers and educators by 25% (a mechanism for tangible indexation of income in accordance with the real inflation level); the widespread introduction of a labor rationing system for the teaching staff to improve the quality of their professional training and the implementation of creative opportunities;

- to reduce the gap in the education quality between urban and rural schools by taking comprehensive measures to provide with qualified teaching staff, to increase wages, to provide sufficient educational materials, internet, computer equipment and digital technology to rural schools;

- to build preschool institutions and general education schools at the expense of the state and the private sector using the PPP mechanism;

- reduce the teachers’ workload by optimizing various forms of reporting and setting restrictions on engaging in non-standard functions and responsibilities not related to the educational process;

- to strengthen the practice orientation of the educational process in VET and higher education institutions by entering into academic calendars the mandatory and repeated practical classes directly at the produc-

tion (businesses), inviting practitioners of relevant industries to conduct master classes in educational disciplines to master necessary practical skills of future young experts;

- to increase the availability of modern training equipment in VET with an annual increase of 25% in the share of training and production workshops to full complement;

- to consider the mechanism of motivation and material support for researchers (in the complex: pay, financing of research activities, systematic professional development and expansion of academic mobility programs for teaching staff);

- to raise the level of digitalization of education through wireless communications, cloud computing, microservers, computers and peripheral equipment, local networks, broadband internet access and other features that shall improve the quality at all levels of education and create conditions for the formation of competitive personality, increase literacy, and contribute to human capital development and access to education;

- to expand the range of educational programs in English, assist students and teaching staff in improving their language skills, develop appropriate infrastructure and conditions for the admission of foreign students to achieve the development of the internationalization level in higher and postgraduate education and further bringing the national education system closer to international standards.

We believe that implementation of the proposed measures and suggestions to increase the availability and improve the quality of the education system in the context of the system (complex) approach shall allow creation of the appropriate institutional environment with a positive influence on expanding the capacity and possibilities of all subjects of scientific and educational process, their implementation in professional and personal growth, shall help to establish social trust in society, to develop society with active civil participation, to strengthen the rule of law, which in turn, shall ensure the progressive and sustainable economic growth of Kazakhstan.

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### **Қазақстан Республикасындағы халықтың тұрмыс сапасын мемлекеттік басқарудың мән мәтінінде білім беру саласының дамуы**

#### **Аңдатпа**

**Мақсаты:** Зерттеудің мақсаты білім беру саласындағы халықтың тұрмыс сапасын мемлекеттік басқару үдерісін талдау арқылы қалыптасқан үрдістерді анықтап, халыққа сапалы және қолжетімді білім беруді тежеуші мәселелерді айқындау, сонымен қоса оларды шешуге және Қазақстан Республикасындағы сапалы білім беруді арттыруға бағытталған ұсыныстарды жасау.

**Әдісі:** Зерттеу жүргізу барысында келесідей әдістер қолданылған: эмпирикалық, талдау, синтетикалық және салыстырмалы-логикалық.

**Қорытынды:** Мақалада елдегі халықтың тұрмыс сапасын мемлекеттік басқарудағы маңызды аспектісі және әлеуметтік саланың кілтті тарауы ретіндегі Қазақстан Республикасының білім беру жүйесіне талдау жүргізілген. Атап айтқанда кешенді түрде жан-жақты дамуға, шығармашылық пен стратегиялық ойлауға, тұлғаның әртүрлі жағдайларға бейімделе алуына бағытталған және халықтың тұрмыс сапасын жоғарылатуға, демек елдің тұрақты әлеуметтік-экономикалық дамуына мүмкіндік туғызатын: балаларды мектепке дейінгі білім берумен қамтуды, орта, техникалық және кәсіптік, жоғары және жоғары оқу орнынан кейінгі білім беру, инклюзивті білім берудің даму динамикасын сипаттайтын көрсеткіштер қарастырылған.

**Тұжырымдама:** Зерттеу нәтижесінде білім беру қызметтерінің сапасын жақсартуға септігін тигізетін және халыққа олардың қолжетімділігін қамтамасыз ететін негізгі мәселелер анықталған. Қорытындылай келе, Қазақстан Республикасындағы халықтың тұрмыс сапасының лайықты деңгейіне қол жеткізу үшін білім беру жүйесін стратегиялық басқарудың тиімділігін арттыру бойынша қорытындылар мен ұсыныстар тұжырымдалған. Авторлармен тұжырымдалып көрсетілген ұсыныстарды тікелей мемлекеттік басқару

органдарымен және қоғамдық бірлестіктермен, жалпы мемлекеттік зерттеулермен айналысатын ғылыми-зерттеу орталықтарымен білім беру саласындағы мемлекеттік бағдарламаларды, стратегиялық жоспарларды әзірлеу барысында, сондай-ақ жалпы Қазақстан Республикасы халқының тұрмыс сапасының құраушысы ретінде білім беру сапасының басқару жүйесін жетілдіру үдерісінде қолдануға болады.

*Кілт сөздер:* мемлекеттік басқару, халықтың тұрмыс сапасы, білім беру сапасы және қолжетімділігі, адами капитал, бәсекеге қабілеттілік.

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### **Развитие образовательной сферы в контексте государственного управления качеством жизни населения в Республике Казахстан**

#### **Аннотация**

*Цель:* Целью настоящего исследования являются посредством анализа процесса государственного управления качеством жизни населения в сфере образования определение сложившейся тенденции и выявление проблемы, ограничивающей предоставление качественного и доступного образования населению, а также предложение рекомендаций, направленных на их решение и повышение качества образования в Республике Казахстан.

*Методы:* При проведении исследования были использованы следующие методы: эмпирический, аналитический, синтетический и сравнительно-логический.

*Результаты:* В статье проведен анализ системы образования Республики Казахстан как ключевой отрасли социальной сферы и важнейшего аспекта в государственном управлении качеством жизни населения страны. В частности, рассмотрены показатели, характеризующие охват детей дошкольным образованием, динамику развития среднего, технического и профессионального, высшего и послевузовского образования, инклюзивного образования, которые в комплексе нацелены на разностороннее развитие, на креативность и стратегическое мышление, на умение адаптироваться к разным условиям личности и способствуют повышению качества жизни населения, а следовательно, и устойчивому социально-экономическому развитию страны.

*Выводы:* В результате исследования выявлены проблемы, решение которых поможет улучшить качество образовательных услуг и обеспечить их доступность для населения. В заключении сформулированы выводы и предложения по повышению эффективности стратегического управления системой образования для достижения достойного уровня качества жизни населения в Республике Казахстан. Рекомендации, сформулированные и предложенные авторами, могут быть использованы научно-исследовательскими центрами, занимающимися общегосударственными исследованиями, общественными объединениями, и, непосредственно, органами государственного управления при разработке государственных программ, стратегических планов в сфере образования, а также в процессе совершенствования системы управления качеством образования как составляющей качества жизни населения Республики Казахстан в целом.

*Ключевые слова:* государственное управление, качество жизни населения, доступность и качество образования, человеческий капитал, конкурентоспособность.

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### **Digital economy of Kazakhstan: theoretical aspects, development opportunities**

#### **Abstract**

*Object:* The aim of the study is to analyze the state of digital transformation of the national economy, identify existing contradictions and risks. Conducting a study of digital economy indices of the Republic of Kazakhstan, building a forecast for the development of digital economy.

*Methods:* In the course of the study, the following methods were used: observation, generalization, comparison, analysis, systematic approach, systematization of materials, processing.

*Results:* As a result of the study, a comparative analysis of the theoretical prerequisites for the definition of the term “digital economy” was carried out, differences to the definition based on a study of the opinions, opinions of scientists, experts were generalized, patterns of evolutionary development of the digital economy were revealed. The article substantiates and proposes the author’s definition of the concept of “digital economy”. The analysis of the state of the digital economy of Kazakhstan is carried out, the main trends, contradictions in the development of the digital economy, other “bottlenecks” that inhibit the development of the digital trend are identified. The forecast assessment of the development of digital literacy of the population for the near future is presented.

*Conclusions:* Based on the study of digitalization experience of other countries, the main indicators of the development of the country's digital economy are considered, their forecast estimates of development are calculated. On this basis, the author proposed a forecast of the future development of the digital economy. Finally, main conclusions and recommendations for development of the digital economy of Kazakhstan for the medium term are made.

**Keywords:** digitalization, digital economy, trends, indices, information and communication technologies, digital literacy, forecast.

#### **Introduction**

In the world, the digital economy is being actively introduced into the economic life of many countries, new digital segments of the economy are appearing, elements of digital technologies are being introduced into the production relations of the traditional economy. In digital production, value added is obtained by processing information using digital technology. In the context of digitalization, the final product is the formation of new knowledge based on information processing. The digital economy, as a new way of economic relations, is becoming the basis for development of modern economy as a whole. Digital technologies cause changes in economic relations, increase the level of competitive capabilities of sectors of national economy. Formation of new trends in the transformation of global economy on the way from the economy of goods to the economy of knowledge is taking place (Doucek P. et al., 2017).

For the Kazakhstani economy, digital changes can lead to a real transformation of the national economy on the platform of new digital technological solutions and innovations, raise it to a qualitative level of economic development, which confirms relevance of the study of the problems of the digital economy in the country and the ways of its development.

The aim of the research is to study theoretical aspects of digitalization, analyze the digital transformation of the national economy, identify existing contradictions, development problems, conduct research on the digital economy indices of Kazakhstan, and make a development forecast.



### ***Literature Review***

The study of digital economy issues is presented in the scientific works of foreign scientists and researchers, such as E. Brynjolfsson, R. Bukht, Zhang L., Chen S., B. Johansson, C. Karlsson, R. Kurzweil, M. Castells, T. Mesenburg, N. Negroponte, M. Skilton, R. Stow, D. Tapscott, R. Hicks, C. Schwab and others. Since the advent of the term “digital economy”, a lot of studies, interpretations and forecasts of the development of digital economy have appeared in the scientific community.

The concept of modern digital economy and the study of digital technologies in the world were first set forth in the scientific works of scientists, such as Lancaster F. W., 1996; Crawford W., 1996; Buchanan M., 2008 and others.

Many foreign and Russian scientists, international organizations (Schwab K., 2015; Bukht R., Heeks R., 2019; Bondarenko V.M., 2017; Borisyuk N.K., Smotrina O.S.; Glaz'ev S.Yu.; Golovenchik G.G., 2019; International news agency “Russia Today”, 2020) discuss various aspects and features of the concept of “digital economy”, but, in general, everyone notes the use of digital technologies as an integral part of the digital economy.

The statement by Schwab K. (WEF, Davos), which considers digital economy through the prism of changing the nature of production or economic relations, changing their subject-object orientation (Schwab K., 2015), is noteworthy.

According to Bukht R. and Heeks R., the definition of digital economy is as follows: “part of the total production volume, which is entirely or mainly produced on the basis of digital technologies by firms whose business model is based on digital products or services” (Bukht R., Heeks R., 2019).

Attention is drawn to digitalization in economic relations in the scientific work of S.Yu. Glazyev, in which it was noted that “Using the capabilities of the information-digital revolution in a changing world economy, the digital revolution complements and significantly expands the possibilities of generating, processing, transmitting, accumulating and assimilating information” (Glaz'ev S.Yu., 2017).

Serious attention in studies of the problems of digital economy has been given in the scientific works of Russian scientists, such as Glazyev S.Yu., Meshcheryakov R., Bondarenko V.M., Borisyuk N.K., Starodubtseva E.B., Markova O.M., Boyko I.P. and a number of others who note that the digital economy is an economic relationship using digital technologies, including the ICT industry, also noting various aspects of the

According to the definition of prof. Bondarenko V.M., “digital economy” is a holistic, systemic, complex problem of finding such model of relations between people that is compatible with the technologies of the 4th industrial revolution, i.e. digital technologies and other high technologies of the 21st century, and in its formation, development and implementation should ensure the achievement of an objectively set goal (Bondarenko V.M., 2017).

Professor Borisyuk N.K. and others (2018), give the following definition of “the digital economy as a system of industrial, economic, social and cultural relations based on the use of digital technologies that shape all processes, turning them into logistic schemes” (Borisyuk N.K., Smotrina O.S.).

Academician of the Russian Academy of Sciences of the Russian Federation, Professor V. Ivanov (2017) gives the broadest definition: “The digital economy is a virtual sphere that complements our reality.” At the same time, all mental activity of a person can be attributed to virtual reality, money - the main tool of the economy - is also a product of virtuality (International news agency “Russia Today”, 2020).

A serious study was conducted by a Belarusian scientist on the issues of the digital economy (G.G. Golovenchik, 2019), in particular, clarifying the content of the concept of “digital economy”, identifying the benefits and assessing the risks of digitalizing the economy. Under the guidance of L.M. Gokhberg, G. Abdrakhmanova et al., the report prepared by the staff of the Institute for Statistical Studies and Economics of Knowledge at the Higher School of Economics has highlighted key aspects of the development of the digital economy, and developed approaches to measuring the digital economy and assessing the impact of the digital economy on economic growth (G. Abdrakhmanova et al., 2019).

According to some scientists (Golovenchik G.G., 2019), Chinese researchers (Zhang L., Chen S., 2019) believe that there are two approaches to the definition of the term “digital economy” - extended and narrow. A narrow definition of the digital economy applies only to ICT-related sectors: telecommunications, the Internet, IT services, the production of components and software, and the field of electronic goods and services. Expanded definition says that “digital economy” is an economic production using digital technologies, including the ICT industry, and part of the industries of the “traditional” economy in which digital technologies are introduced.

Definitions of the term “digital economy” are well-known by leading international organizations (G.G. Golovenchik, 2019; G.I. Abdrakhmanova et al., 2019; Zhang L., Chen S., 2019), such as the British Computer Community (2014), the Organization for Economic Cooperation and Development (2016), UN Conference on Trade and Development, (2017), World Bank (2016), The Group of Twenty Leading Countries of the World, which note in their definitions that the use of digital technologies and the Internet is a key factor in the digital economy.

Kazakhstani scientists (Karenov R.S., Baimukhamedova G.S., Espolov T., Zhartay Zh.M., Esengeldin B.S., Tull L., Qarmys G.S. and others) in their research also pay attention to the study of various aspects of digital economy. For example, in their research papers they study the methodology issues of digital economy, examine the features of the application of digital technologies in such economic sectors as agribusiness, mining, industry, banking, trade, labor market, etc. (Espolov T., 2018; Karenov R.S., Baimukhamedova G.S., 2019; Qarmys G.S., 2019; Zhartaj Zh.M. et al., 2019).

Definitions of the concepts of “digital economy” evolved along with improvements in technological innovation. In recent decades, the information and communication technology (ICT) sector has developed rapidly and has been marked by the emergence of advanced technological solutions and, accordingly, a new understanding of emerging trends in the digital development of the economy.

As the analysis of the concept of “digital economy” suggested by various scientists or international research centers shows, first of all, the evolutionary characteristic changes of technological development are taken into account, starting from the concept of “information economy”, then “Internet economy (Internet communications)”, “network economy” (network resources and networks) and at the present stage of economic development - a more expanded concept of “digital economy” (digital technologies, computer-software tools, information systems, functional mechanisms, the Internet of things, big data analysis, cloud computing). The digital segment, for example, includes companies on digital platforms - the so-called platform companies that sell real goods, for example, Amazon, eBay and Alibaba. Also, similar activities are carried out by companies at the junction of the traditional and digital economies, such as Uber, Airbnb, whose applications are well-known (Huckle S. et. Al., 2016). Branches of the digital economy are emerging that are associated with the digitization of the processes of the traditional economy, part of which is based on the digital format (digitalization economy). The economic dictionary has introduced new terms that characterize the content of the digital economy, such as “digital currency”, “digital finance”, “digital asset”, “digital integration”, “digital insurance”, “digital bank”, “digital financing” and many others, which indicates the expansion of the content of the concept of “digital economy”. For example, an article (Ozili P. K., 2018) discusses some issues related to digital finance - an area that has not been critically examined so far in the literature. Digital financing and financial integration have several advantages for users of financial services, providers of digital finance. The digital financing issues discussed in this article (Ozili P. K., 2018; Digital McKinsey, 2017) are relevant for ongoing country-level projects that have greater financial accessibility through digital financing.

We believe that the concept of “digital economy” is broader than the information economy, Internet economy, web economy and other names, as it is broader and integrates them together. As the elements of the digital economy develop, it will be possible to clarify their types and characteristics in the research process.

The digital virtuality of the new economy is that many types of digital economic activity do not create a finished product. Some services of this type may be of an intermediate nature at the “business-to-business” level or at the consumer level; difficulties may arise in calculating value added.

Consequently, digital services are delivered in the virtual space, and it can be difficult to track them. Some scholars claim that measuring a digital economy using traditional economic analysis methods is unrealistic (Golovenchik G.G., 2019; Gohberg L.M., 2019; Zhang L., Chen S., 2019).

All considered definitions of the digital economy in one interpretation or another indicate that digital technologies are the main content of the digital economy. Thus, the digital economy is included in the basis of the new production process (digital technologies, computer-software tools, information systems, functional mechanisms like blockchain, Internet of things, cloud computing and others), forms new economic relations.

Thus, summing up the opinions of many scientists, researchers, we can assume that the most common basis in the definition of the digital economy is that the digital economy is all kinds of economic relations using digital technologies in the network space.

In our opinion, the digital economy is a system of new economic relations through the use of digital technologies, in which added value is based on the results of processing information in a network format.

Despite the absence of generally accepted criteria for evaluating the digital economy, an analysis of the available data allows us to determine the characteristic features of the digital economy, such as the uneven development of the digital economy; the fast pace of the digital economy in developing countries; the emergence of new specialties and the withering away of many specialties of the traditional economy and higher projected labor productivity.

### **Methods**

To study the problems of the digital economy and assess the impact on economic growth, the following forms of scientific knowledge are used in the article:

- 1) review, observation, generalization, comparison and systematization of the materials obtained, their processing through methods of economic analysis
- 2) through a systematic approach, the functional relationships between variable factors were investigated
- 3) forecasting of multifactor indices of the digital economy was carried out using economic and mathematical methods of analysis
- 4) based on systematization of the results of the forecast assessment of digital development of national economy, the conclusions and recommendations of development paths in the medium term are presented.

### **Results**

Nowadays, the digitalization of the economy is a strategic development priority in many countries. According to forecasts of leading world experts, by 2020 a quarter of the global economy will be digital. The introduction of digital communication technologies in economic and social relations will allow the state and society to rise to a higher level of national development, the effectiveness of their interaction is becoming an increasingly dynamic process. The leading countries of the world have the necessary scientific, technical and technological potentials for the development of digital economy, conducting research in creating new technological solutions, unlike Kazakhstan, as a developing economy with limited financial and scientific and technical capabilities. Leading countries in the field of high technologies, such as Great Britain, the USA, Singapore, the Republic of Korea, Denmark and others note that the qualitative development of the digital sector was preceded by the presence of a fundamental basis of technological progress.

According to the World Bank, the share of the digital economy in the world's total GDP is 5.5%, analysts predict a significant increase: by 2035, its volume will exceed \$16 trillion (Digital McKinsey, 2017).

At the same time, the analysis of national programs of various countries in the field of digitalization shows a number of serious contradictions of the digital economy:

- 1) the need to optimize government regulation and the market mechanism of private business, finding the optimal balance for economic growth.
- 2) digitalization contributes to the formation of social contradictions, the opposition of manpower to digital technology, as a potential increase in unemployment, violation of privacy.
- 3) the problems of introducing a digital economy for a developing country due to the need to ensure digital security on cybersecurity issues and maintaining the confidentiality of personal data.
- 4) the raw material orientation of the national economy can distract from the laborious work of attracting digital projects and the need for flexible transformations in the business management system. According to the results of a study by Boston Consulting Group (BCG), reflected in the article "Kazakhstan on the path to the digital economy," Kazakhstan ranked 50th in the ranking of 85 states in 2016 in terms of digitalization of the economy and is in the group with an emerging digital economy (Kemp, S., 2017; On the approval of the State Digital Kazakhstan Program). As noted in the e-intensity rating of the international consulting company The Boston Consulting Group, in terms of the current level of digitalization, Kazakhstan is a catch-up country. In world practice, the assessment of digitalization is calculated on the basis of 4 indices, which make it possible to assess the level of use of digital technologies in the activities of consumers, companies and government agencies, the availability of ICT infrastructure and the development of digital innovations.

Kazakhstan has adopted the state program Digital Kazakhstan, aimed at creating the digital economy of the future in the long term. As noted in the document, the program is aimed at the digital transformation of traditional sectors of the economy, the development of human capital, the digitalization of government agencies, the development of digital infrastructure.

For analysis from the World Economic Forum Global Competitiveness Index report for 2019, of the total number of 12 factors and (103) indicators, we selected those that characterize the level of the digital component of the economy of Kazakhstan (table 1).

Table 1. Global competitiveness index indicators of Kazakhstan

№	Indicators/parameters	Year 2019
1.	E-participation	41
2.	Adaptability of the legal framework to digital business models	43
4.	Internet users	47
5.	Digital skills among active population	43
6.	Education and skills	57
6.	ICT implementation	44
7.	Innovative capacity	95
8.	R&D expenses	101
9.	Research and development	115
10.	Growth of innovative companies	107
11.	Venture Capital availability	89

*Note – compiled by the authors based on the WEF GCI report for year 2019 (Center for strategic initiatives, 2019).*

The main conclusion is that Kazakhstan, in general, according to the many digital economy indicators, has ratings in the report of the Global Competitiveness Index according to the WEF report (41-47) out of 141 evaluated countries, but the positions in the “Innovative Capacity” factor are the weakest - 95th place, low indices, such as R&D expenses - 101st place, Research and Development - 115th place, availability of Venture Capital - 89th place, Education and Skills - 57th place, Growth of innovative companies - 107th place. Such an assessment, calculated by the authors on the basis of GCI indicators analysis, in general, coincides with the e-intensity rating of the international consulting company The Boston Consulting Group.

It is generally accepted in world practice that in order to assess the country's digital competitiveness, three main factors must be taken into account:

- 1) knowledge (the country's ability to learn new technologies);
- 2) technology (the ability to develop digital technology);
- 3) readiness for the future (ability to technologicalize the economy and society), (IMD World Competitiveness Center, 2019).

Accordingly, despite the good position of Kazakhstan in some indices, there are serious problems in the field of ICT security, the growth of digital companies, their innovative capabilities (research funding, R&D, venture capital).

### **Discussion**

Data should be analyzed based on 4 indices of the digital economy in order to assess the level of digital potential of Kazakhstan:

- 1) the level of digital development of the public sector.
- 2) digital literacy of the population;
- 3) digital business, digital companies, their services;
- 4) availability of ICT infrastructure and the development of digital innovation.

1. The level of digital development of the public sector. Kazakhstan ranked 28th in the UN ranking of e-government development for 2019 (39 last year, 2018). At the same time, Kazakhstan entered the top ten countries in Asia, taking 5th place, and the leaders are South Korea, Singapore and Japan. The e-government development index includes access characteristics such as infrastructure level and education level to reflect how a country uses information technology. The relationship between e-government development and the digital economy is confirmed empirically in an international study of 67 countries using authoritative archival data, primarily in the UN e-government survey and the Economic Intelligence rating for the digital economy (Zhao F. et al., 2015).

2. Digital literacy of the population. Based on the data of the UNESCO Adult Literacy Report, which are compiled from national estimates and estimates based on the Global Literacy Prediction Model, we have compiled a user chart on the Kazakhstan age scale (Figure 1).

Of the majority of users in Kazakhstan visiting the e-government website, the most active ICT users were citizens from 24 to 34 years old (56.6%), 14.6% of the site users are representatives of the age group from 18 to 24 years old, 11% - from 35 up to 44 years old. Less than all users over 55 turned out to be only

3.82% of the total number of ICT users. For 2018, the proportion of the population aged 6 to 74 years with the skills to use a personal computer, smartphone, tablet, laptop; standard programs; receiving services and services via the Internet, amounted to 79.6% than a year earlier (77.1%).

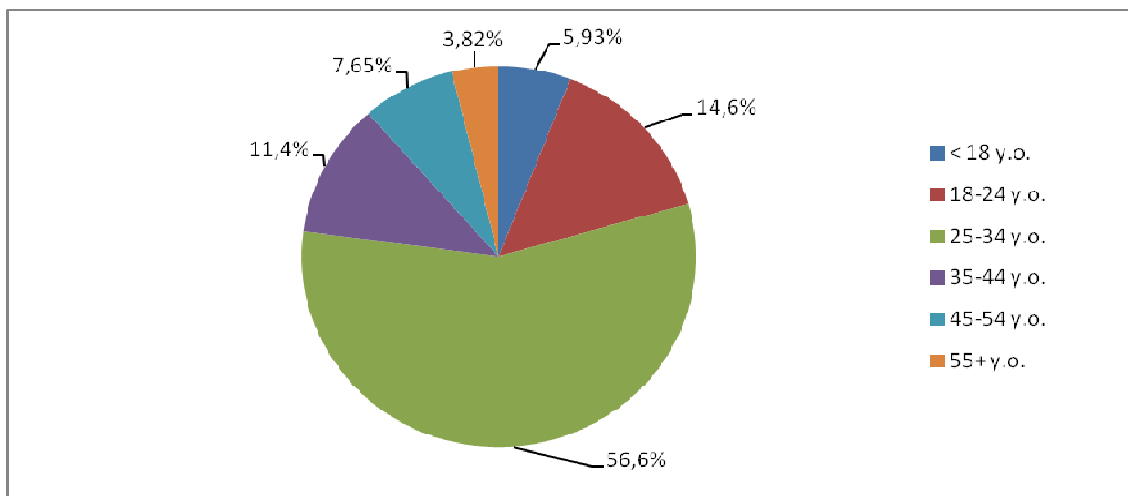


Figure 1. Age category of active users of digital technologies of the Republic of Kazakhstan

Note - based on the UNESCO Adult Literacy Report (UNESCO, 2019)

Let's calculate the forecast for the development of digital literacy in the near future according to the Student's method. Forecast indicators are compiled for 2020, 2021 and 2022 (Figure 2). As the forecast model showed, in order to achieve the 80% level of digital literacy in the country, it is necessary to train about 468 thousand people in digital competencies, which include basic digital skills, information security, electronic commerce, and the use of electronic and open government. The existing dependence of the indicators revealed the need to improve skills: 1. Basic digital skills; 2. Skills of using "electronic government"; 3. Skills of "electronic commerce"; 4. Information security skills.

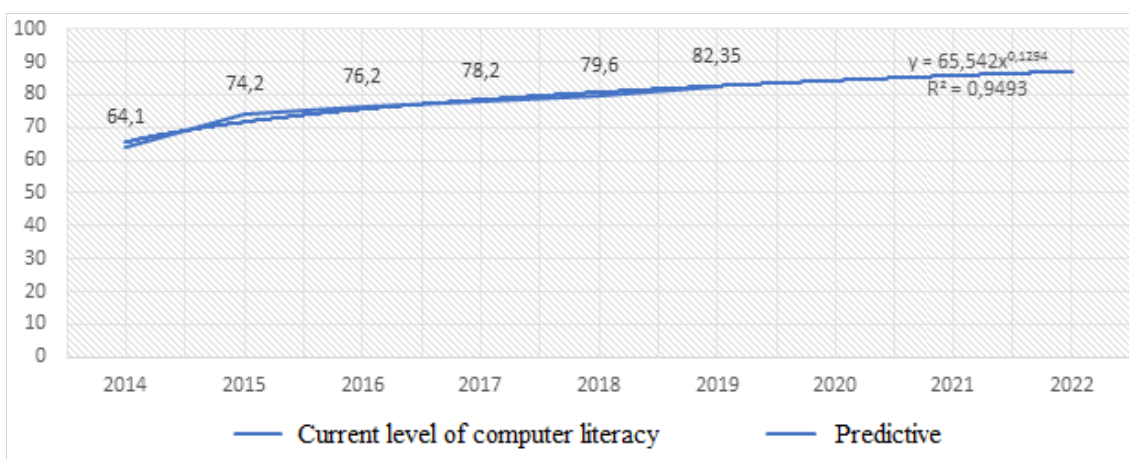


Figure 2. Predictive estimation of digital literacy of the population until 2022, in %.

The results of the study show that at present, digital knowledge and skills are becoming an urgent need and a prerequisite for success for most citizens of the country, they are needed to increase the effectiveness of employee qualifications. During the study, the results of the relationship of these indicators were obtained.

3. Development and availability of ICT, digital business. The ICT market is a key factor in the successful development of the digital economy in the country. Discussions at the 2017 World Telecommunication Development Conference in Buenos Aires, Argentina, October 9–20, 2017, on “ICTs for sustainable development,” contributed to the formulation of strategic goals aimed at accelerating the pace of achievement of countriesb (International Telecommunications Union, 2017). According to the current state of the ICT sector in the country, the ICT market in Kazakhstan is developing one-sidedly and weakly. Hardware prevails in the ICT market, it accounts for the majority of the market - almost 78.7%. Digital services, production of

digital products, software are poorly developed. According to the American company, in the global IT market, consulting and a variety of services account for 19%, equipment - 23.3%, software - 21% (the rest is telecommunications services and equipment, etc.) (International Data Corporation, 2019; JSC "National Infocommunication Holding "Zerde", 2019; Carrie Johnson, 2018).

The main factors, according to many scientists, in ensuring high rates of economic growth is the level of human capital (in fact, the level of education and skills of the workforce), the level of application of technological solutions, including digital technology.

Identified existing ICT problems require the search for possible solutions to the development of the ICT industry and, in general, the digital industry in the Republic of Kazakhstan. Based on the analysis of 4 sub-indices of the digital sector, a summary table 2 is compiled based on data from the digital industry of Kazakhstan.

Table 2. Indicators of the development of the digital industry in the Republic of Kazakhstan

Year	ICT industry production volume, mln KZT	Number of IT companies	The volume of ICT services, mln KZT	E-Gov (services provided)	E-Government Development Index	The level of computer literacy of the population, %
2019	2 400 000	16863	1 345 246	23 500 000	28	82,35
2018	2 125 624	13295	1 118 823	27 500 000	39	79,6
2017	1 866 000	15288	1 034 849	34 000 000	32	78,2
2016	1 652 000	15720	944 398	26 000 000	33	76,2
2015	1 606 000	14849	882 915	24 500 000	31	74,2
2014	1 557 000	11668	830 486	34 500 000	28	64,1

*Note – compiled by the authors based on the data from "National Infocommunication Holding "Zerde" JSC, 2019; Carrie Johnson, 2018)*

Based on the analysis of the digital economy indices of Kazakhstan (Figures 1, 2) and the data in Tables 1, 2, it became possible to assess the level of development of the digital economy in Kazakhstan and the prospects for its development in the coming period.

### Conclusions

As a result of the study, the following trends were identified and conclusions were drawn on the development of the digital economy of Kazakhstan:

1. According to the assessment of the current state of the ICT sector in Kazakhstan, it has been established that the ICT market is developing one-sidedly and weakly, sector development is dominant - the acquisition of hardware (78.7%).

2. They have not received proper development in the ICT industry: e-commerce, software development, digital services, and the digital economy indices such as government services and digital literacy of the population have a good pace of development, but, nevertheless, these positions lag behind the level of developed countries;

3. The level of the “innovative opportunities” indicator remains low compared to many countries; accordingly, such indices as R&D expenses, research, and the growth of domestic innovative companies are weak.

4. It is necessary to adopt a set of digital legislation in order to remove the stiff administrative, organizational, legal and other obstacles that impede, first of all, the development of ICT technology sectors.

5. It is necessary to step up the creation of a full-fledged digital infrastructure for the effective development, in general, of digitalization in the country. It is necessary to actualize the solution of issues of financial support for high-tech digital projects, R&D, the introduction of innovative digital business models and ICT.

6. The effectiveness of interaction is becoming relevant: 1) the state, 2) enterprises and 3) universities. Based on the study, the education system in Kazakhstan should take into account modern changes in the economic trend of national development in order to meet the requirements of digital transformation:

1) to give priority attention to the problems of the development of human capital on a systematic basis. To take into account the mistakes of state policy in the training of specialists in higher education, to eliminate business approaches in the educational process.

2) a financial support model for venture technology solutions should be created, support for start-up projects of young scientists, investments in educational programs of the digital economy.

3) special attention should be paid to the problems of training and professional development of working specialists in economic sectors. Particular measures should be taken to prevent "brain drain", attract and retain talented specialists, as well as return them to the country.

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### **Қазақстанның цифрлық экономикасы: теориялық аспектілері, даму мүмкіндіктері**

#### **Аңдатпа**

**Мақсаты:** Зерттеудің мақсаты ұлттық экономиканың цифрлық түрлену жағдайын талдау, бар қайшылықтар мен қауіптерді анықтау болып табылады. Цифрлық экономиканың даму болжамын құра отырып, Қазақстан Республикасының цифрлық экономикасының индекстерін зерттеу.

**Әдісі:** Зерттеу барысында келесідей әдістер қолданылған: бақылау, жалпылау, салыстыру, талдау, жүйелік тәсілдеме, ақпараттарды жүйелеу, өңдеу.

**Қорытынды:** Зерттеу нәтижесінде «цифрлық экономика» терминін анықтаудағы теориялық алғышарттарға салыстырмалы талдау жүргізіліп, анықтамаға қатысты ғалымдар мен сарапшылардың көзқарастары мен пікірлерін зерттеу негізінде айырмашылықтар жалпыланып, цифрлық экономиканың эволюциялық даму заңдылықтары анықталған. Мақалада «цифрлық экономика» түсінігіне авторлық анықтама негізделіп ұсынылған. «Цифрлық Қазақстан» мемлекеттік бағдарламасының жүзеге асырылу жағдайына талдау жүргізіліп, цифрлық экономиканың негізгі үрдістері, даму қайшылықтары мен Қазақстанның цифрлық даму үрдістерінің өрлеуін тежеуші басқа да мәселелер айқындалған.

**Тұжырымдама:** Басқа елдердің цифрландыру тәжірибелерін зерттеу негізінде елдегі цифрлық экономиканың негізгі даму көрсеткіштері қарастырылып, олардың дамуындағы болжамды бағалар есептелінді. Соның негізінде цифрлық экономиканың келешектегі даму болжамы ұсынылған. Қорытындылай келе, орта мерзімді болашаққа Қазақстан цифрлық экономикасының дамуына қатысты негізгі тұжырымдар жасалып, ұсыныстар келтірілген.

**Кілт сөздер:** цифрландыру, цифрлық экономика, үрдістер, ұлттық бағдарламалар, индекстер, цифрлық бәсекеге қабілеттілік, ақпараттық-коммуникациялық технологиялар, болжау.



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## **Цифровая экономика Казахстана: теоретические аспекты, возможности развития**

### **Аннотация**

*Цель:* Целью исследования является анализ состояния цифровой трансформации национальной экономики, выявление существующих противоречий и рисков. Проведение исследования индексов цифровой экономики Республики Казахстан, построение прогноза развития цифровой экономики.

*Методы:* В ходе исследования были использованы методы: наблюдение, обобщение, сравнение, анализ, системный подход, систематизация материалов, обработка.

*Результаты:* В результате исследования проведен сравнительный анализ теоретических предпосылок к определению термина «цифровая экономика», обобщены различия к определению на основе изучения мнений, взглядов ученых, экспертов, выявлены закономерности эволюционного развития цифровой экономики. В статье обосновано и предложено авторское определение понятия «цифровая экономика». Проведен анализ состояния цифровой экономики Казахстана, выявлены основные тенденции противоречий развития цифровой экономики, другие «узкие» места, тормозящие прогресс развития цифровой тенденции. Представлена прогнозная оценка развития цифровой грамотности населения на ближайшую перспективу.

*Выводы:* На основе изучения опыта цифровизации других стран рассмотрены основные показатели развития цифровой экономики страны, рассчитаны их прогнозные оценки развития. На этой основе предложен прогноз развития цифровой экономики на будущее. В заключении сделаны основные выводы и рекомендации развития цифровой экономики Казахстана в среднесрочной перспективе.

*Ключевые слова:* цифровизация, цифровая экономика, тенденции, индексы, информационно-коммуникационные технологии, цифровая грамотность, прогноз.

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## **The tax policy of the Republic of Kazakhstan in the context of modernization**

### **Abstract**

*Object:* The aim of the study is to identify the results of tax reforms, assess the current state of the tax system of the Republic of Kazakhstan, as well as to identify problems and determine the main directions for improving the tax system of Kazakhstan.

*Methods:* The research methods – system analysis, economic and statistical data processing, comparison and generalization, scientific analysis and synthesis.

*Findings:* The article analyzes the current tax policy in the Republic of Kazakhstan, namely the impact of tax reforms on the economy of Kazakhstan, with an emphasis on recent tax reforms. An analysis of tax revenues and a comparative analysis of structural changes in the budget in recent years, with an emphasis on the main production taxes, such as corporate income tax, value added tax, taxes on international trade and foreign operations.

*Conclusions:* The study revealed the problems of the effectiveness of tax reforms in Kazakhstan from the standpoint of their compliance with modern requirements. The article notes that the modern tax policy of Kazakhstan should be aimed at supporting small and medium-sized businesses, stimulating the non-resource sector of the economy. In particular, it proposes a policy to stimulate the production of agricultural processing enterprises and the food industry, justifies the need for tax incentives for food producers in terms of reducing the value added tax. In the context of the EAEU integration trade, it is necessary to adopt tax incentives to reduce the total tax burden on products of the non-resource sector of the economy, and to resolve the administrative and customs problems of the union.

*Keywords:* tax reforms, tax revenues, tax benefits, budget revenues, tax rate, taxes, tax policy, income.

### **Introduction**

Taxation is an important public policy tool. In the state's financial policy, tax policy is one of the most important factors in ensuring economic growth, developing entrepreneurial activity, eliminating the shadow economy, and attracting full-scale foreign investment to the country. In order to overcome the negative consequences of the impact of taxes on economic development, an objective need arose to analyze the structure and dynamics of tax revenues in the country's budget. In this regard, it is relevant to determine the impact of tax reforms on state budget revenues, since a properly constructed tax policy has a positive effect on increasing tax revenues to the budget, increasing the welfare of the country as a whole, and improving the living standards of the population. In this regard, the chosen research topic is relevant.

### **Literature Review**

The research methodology was based on the study of the works of the economic science classics, modern scientific works of foreign and domestic scientists and economists in the field of analysis of tax reforms using theoretical generalization, system and comparative analysis, and the method of statistical data processing. Among the theoretical researchers who have made a real contribution to the development of the general theory of taxation, one can distinguish such scientists as: N. Machiavelli, T. Hobbes, F. Bacon, S. Montesquieu, F-M Voltaire; J. Locke, P.A. Holbach, P. Prudon, B. Franklin, in whose works much attention is paid to the importance of taxation; U. Petgi, A. Smith, D. Ricardo, J. Ciamond de Sismondi, N. Canard, D. Mill, whose works contain a deep justification of the economic nature of taxes, principles of taxation, and the distribution of the tax burden. Among modern foreign researchers working on tax reform issues, one cannot fail to mention M. Alle, C. Heidi, J. Slemrod, N. Stem, R. Gesneri, H. Aaron.

Thus, the English economist John Maynard Keynes (1883-1946) made an outstanding contribution to the development of tax theory. He paid much attention to tax regulation, emphasizing that tax policy can have a powerful effect on economic growth, increasing employment, stimulating the propensity to consume, etc. J. Keynes believed that with the help of taxes it is useful to take out the income placed in savings, to finance current public expenditures from them, and, most importantly, to invest. Considering the role of taxes in regulating the economy, Keynes drew attention to the positive role of relatively high taxes, citing the fact that lower tax rates are accompanied by lower budget revenues and economic instability of the state (Keynes, 1936)

A vocal supporter of Keynesianism was Nobel laureate Paul Samuelson. P. Samuelson considered taxes and tax policy as important tools in regulating the economy and believed that with the help of taxes macroeconomic growth and stability are stimulated, unemployment and inflation are reduced, and economic growth is encouraged. Analyzing the role of fiscal policy in regulating the economy, Samuelson pointed out the contradictory processes that must be considered when building the tax system (Samuelson, 1952).

If we consider modern foreign scientists and economists, the greatest interest are caused by the works related to tax reform in the field of supporting the business sector and stimulating the non-resource sector of the economy. Thus, such scientists as J. Feehan and M. Matsumoto, who in their works consider tax instruments to support industrial infrastructure, including the processing of raw materials and materials, agriculture (Feehan, Matsumoto, 2002), should be noted. Jack. Diamond, Fiorella Fiore, Werner Roger also emphasize the direct impact of fiscal regimes on population growth and employment, and emphasize the stimulating function of taxes (Fiore, 1999; Diamond, 2003).

In 2000, many foreign economists advocated tax cuts and thus boost the economy and remove entrepreneurs from the shadow business. Thus, J. Toy, in his article “The Financial Crisis and Budget Reforms in Developing Countries”, proposes to optimize the tax policy of the state by cutting individual income taxes (Toye, 2000).

D.V. Jorgenson is a supporter of social modernization. In his textbook on investments, he talks about the need for tax reform by reducing the tax burden on industrial infrastructure (Jorgenson, 2001).

Stephen M. Rosenthal, Victor A. Canto, Andy Wiese are not supporters of excessive tax benefits, since they believe that such a policy is not fair enough and can adversely affect the state budget, but nevertheless, they are for a reasonable tax policy and moderate tax rates (Rosenthal, 2017).

Among the scientific works in which, along with the problems of formation and functioning of taxes, as an area of knowledge of financial science, the economic content and importance of taxation in national economic systems are considered, it is worth noting the work of such Russian scientists as N.P. Biryukov, L.P. Golubeva, L.I. Goncharenko, R.S. Greenberg, Yu.B. Ivanov, M.V. Karaseva, N.L. Lykova, I.A. Maybuurov, L.P. Pavlova, S.G. Pepelyaev, M.V. Romanovsky, B.M. Sabanti, D.G. Chernik, A.S. Sharov, S.D. Shatalov, E.B. Shuvalova, T.F. Yutkina et al.

Ruta Banelene, Borisas Melnikas, Rolandas Strazdas, Eligius Tolochka in their article “Innovation Activities and the Impact of R&D Investments on Economic Growth: Evaluation and Modeling” offer effective tools to support innovation (Banelene, 2018).

In Kazakhstan, the works of R.A. Alshanov, T.A. Ashimbayev, A.D. Baiduysenova, R.E. Elemesova, B.Zh. Ermekbaeva, A.B. Zeynelgabdina, E.K. Idrissova, N.I. Inkerbayeva, A.K. Koshanova, V.D. Melnikova, N.E. Nauryzbayev, A.A. Nurumova, F.S. Seidakhmetova etc. are devoted to the issues of analyzing the reform of the tax system.

### **Methods**

The study analyzed the impact of tax reforms on the economy of the Republic of Kazakhstan, conducted a comparative analysis of tax revenues to the budget and highlighted the main taxes in the state budget.

During the study, the object was the tax system of the Republic of Kazakhstan. The subject of the study was the tax reforms carried out in the Republic of Kazakhstan and their effectiveness.

The research methodology is based on the principles of systemic structural analysis, based on the application of the methods of economic and statistical data processing, comparison and generalization, scientific analysis and synthesis.

The problems of the tax reforms effectiveness in Kazakhstan are studied from the standpoint of their compliance with the requirements of modern realities. Quantitative parameters (volume, dynamics and structure of tax revenues to the budget) led to the conclusion about the structure of tax revenues in the budget, the completeness of their collection, and the lack of targeted tax benefits. The dynamics of tax revenues over a number of years has shown an analysis of the effect of tax changes on tax collection.

### Results

In recent years, significant changes have occurred in the tax legislation of the Republic of Kazakhstan, which have positively affected both the development of the tax system and the stimulation of the production infrastructure, including business environment as a whole. Thus, under special tax regimes the burden on small businesses has been significantly reduced. Such a measure has positively affected the growth of entrepreneurs in the country and the increase in tax revenues to the budget.

The dramatic changes in tax legislation that have taken place in recent years have affected changes in tax revenues. This can specifically be seen in the examples of such major budget-forming taxes as CIT, VAT, taxes on international trade and foreign operations, etc.

Let us analyze the tax revenues for basic taxes over the past 5 years. Thus, in 2014 tax revenues accounted for KZT 5,115,743 million. In 2018 tax revenues increased and reached KZT 7,890,048 million. Over the past two years, the state budget has increased significantly. Thus, in 2018 the growth rate of tax revenues compared to 2014 amounted to 154%. In 2018 the annual revenue plan was exceeded at all budget levels (State Budget, SB - 102.2%, Republican Budget, RB - 101.2% and Local Budget, LB - 104.6%). The largest increase in state budget revenues is observed in 2017, and the growth is 20% or KZT 1,674 billion.

The share of taxes in budget revenues over the past 5 years averages 66.2% (Table 1). In general, the created favorable conditions for doing business allowed to involve additional 72 thousand enterprises in the economic turnover. The number of operating enterprises exceeded 1.5 million (1,448,414 in 2017, 1,520,101 in 2018).

Table 1. The share of tax revenues in state budget revenues in recent years

Indicators	Report for 2014	Report for 2015	Report for 2016	Report for 2017	Report for 2018
Revenues, million KZT	7 321 277	7 634 805	9 308 485	11 567 691	10 808 573
Tax revenues, million KZT	5 115 743	4 883 913	6 023 263	6 810 851	7 890 048
The share of taxes in budget revenues, %	69,9	64,0	64,7	58,9	73 %

*Note : Compiled by the author according to the Ministry of Finance of the Republic of Kazakhstan*

Considering tax revenues over the past few years by type of tax, we get the following picture (Table 2). The first place in the volume of tax revenues is occupied by CIT – its share is 25%, VAT takes the second place with 19%, taxes on international trade and foreign operations account for 18% and take the third place, individual income tax takes the fourth place on receipt with 12% and one more budget-forming tax – social tax is the fifth, its share is 9.5% in budget tax revenues (Chaplinska, 2016). Only 8.0% falls on social tax, 3.1% on property taxes (including land tax, transport tax, property tax), and 2.2% falls on excise taxes.

Table 2. Analysis of the main taxes in the state budget of the Republic of Kazakhstan in recent years, million KZT

Indicators	2014	2015	2016	2017	2018
Revenues	7,321,277	7,634,805	9,308,485	11,567,691	10,808,573
Tax Revenues	5,115,743	4,883,913	6,023,263	6,810,851	7,890,048
Corporate income tax	1,169,667	1,224,645	1,437,365	1,538,785	1,687,577
Individual income tax	552,280	598,807	691,778	750,212	838,394
Social tax	427 985	464 674	530 440	576 607	618 505
Value added tax	1 198 170	944 438	1 495 682	1 664 699	2 034 314
Taxes on international trade and foreign operations		880 063	951 807	1196 919	1422717
Excise taxes	147 057	161 068	205 231	255 994	311 856

*Note: Compiled by the author according to the Ministry of Finance of the Republic of Kazakhstan*

It should be noted that over the past 5 years the budget has been executed, but with a deficit. If we consider the dynamics of tax revenues over the past few years, then overall growth is observed (Figure 1).

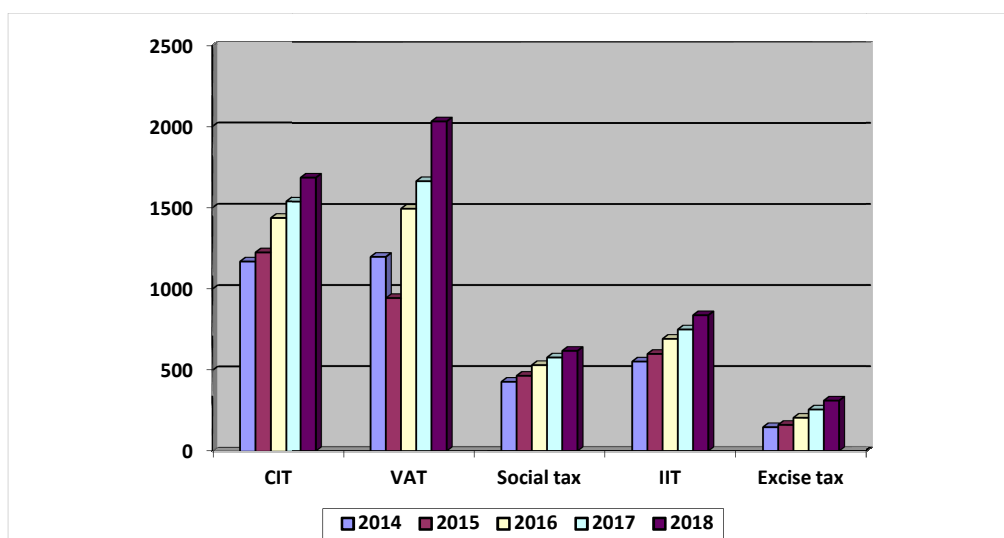


Figure 1. Dynamics and structure of tax revenues of the state budget of the Republic of Kazakhstan for 2013-2018, billion KZT

Note: Compiled by the author according to the Ministry of Finance of the Republic of Kazakhstan

In general, taxes occupy 64% of budget revenues, 32% account for official transfers. Non-tax revenues account for only 2.9%, and about 1% account for the proceeds from the sale of fixed capital (Table 3).

Next, we consider the impact of changes in the main types of taxes. The most significant tax is corporate income tax. The payment of this tax is the highest burden for entrepreneurs. The share of CIT is increasing from year to year. For example, in 2018 the plan for CIT was 1,595 billion KZT, and revenues amounted to 1,687 billion KZT, so the percentage of completion is 105.7%.

The payment of this tax represents the highest burden for entrepreneurs, therefore, the share of CIT in the tax revenues of the RB is quite high.

Table 3. Analysis of the actual CIT income and its share in the republican budget in recent years, mln. KZT

Indicators	Report for 2015	Report for 2016	Report for 2017	Report for 2018
Revenues	6,136,968	7,662,220	9,691,789	8,789,005
Tax revenues, including	3,332,925	4,275,887	4,848,028	5,694,904
Corporate income tax	1,224,645	1,437,365	1,538,785	1,687,577
The CIT share in revenues of the RB	19.9	18.8	15.8	19.2
The CIT share in tax revenues of the RB	36.7	33.6	31.7	29.6

Note: Compiled by the author according to the Ministry of Finance of the Republic of Kazakhstan

Another main production payment is VAT, its share is 23.9%. Since January 1, 2009, there have also been changes in the mechanism for calculating and collecting VAT. The VAT rate has been reduced from 13% to 12%. (Tax Code of the Republic of Kazakhstan, 2017). This made Kazakhstan's VAT rate one of the lowest in the world among the standard rates of this tax.

In 2018, the VAT was executed at 103.5% and revenues amounted to 2034.3 billion KZT. The data show the non-fulfillment of the VAT plan in 2015, this is due to the fact that the amount of VAT refunds from the budget has increased in recent years, as well as due to the release of VAT on goods transported within the Eurasian Economic Union (Table 4).

Table 4. Forecast fulfillment of VAT receipts to the state budget for 2015-2018, billion KZT

Year	Forecast-plan	Actual receipt	Execution percentage
2015	945.7	944.4	99.9
2016	1,445.2	1,495.7	103.5
2017	1,650.5	1,664.7	100.9
2018	1,965.0	2,034.3	103.5

Note: Compiled by the author according to the Ministry of Finance of the Republic of Kazakhstan

The next largest tax revenues are taxes on international trade and foreign operations, which in 2015 amounted to 880 billion KZT, the share in tax revenues of the Republican Budget amounted to (24.6%), 2016. - 951.8 billion KZT (22.3%), 2017 - 1,196.9 billion KZT (24.7%) (Table 5).

Table 5. Analysis of the actual receipt of taxes on international trade and foreign operations in the republican budget in recent years, million KZT

Indicators	Report for 2015	Report for 2016	Report for 2017	Report for 2018
Revenues	6,136,968	7,662,220	9,691,789	10,808,573
Tax revenues, including	3,332,925	4,275,887	4 848 028	7,890,048
Taxes on international trade and foreign operations	880,063	951,807	1,196,919	1,422,717
The share of taxes on international trade and foreign operations in RB revenues	14.3	12.4	12.3	13.2
The share of taxes on international trade and foreign operations in RB tax revenues	26.4	22.3	24.7	18.0

*Note: Compiled by the author according to the Ministry of Finance of the Republic of Kazakhstan*

### Discussion

In general, the analysis of tax revenues indicates the stability of the tax system and the established control and economic work of the tax authorities. If we analyze the audit work over the past two years, it should be noted that the emphasis in administration is aimed at the voluntary fulfillment by the taxpayer of his obligations. Thus, in 2018, according to notifications of desk audit without access to facilities, more than 171 billion KZT was accrued, which is 19% more than in the previous year (144 billion KZT). Tax assessment efficiency has increased. By notifications 123 billion KZT or 34% more than in 2017 has been collected.

In the reporting year, it was finally possible to reverse the trend of a decrease in tax revenues relative to GDP. If in 2016 this indicator fell to 15.2%, then last year it already significantly exceeded 16%, against the planned 15.8%. Today, the state revenue authorities have been given the task of increasing the level of consolidated budget revenues to GDP to 25% by 2025 (Lukpanova, 2017). In the current 2019, it is planned to reach 18% of GDP.

Thus, the analysis of budget execution for 2014-2018 showed that revenues are increasing from year to year. Basically, the budget is executed at the expense of production taxes, such as CIT, VAT, IIT, for which significant changes have been made in recent years.

Today, tax relations in the republic are regulated by the new Code of the Republic of Kazakhstan "On taxes and other obligatory payments to the budget" (Tax Code), adopted in 2017 (Tax Code of the Republic of Kazakhstan, 2017). Thus, in the tax legislation that entered into force on 01.01.2018, a new principle - the principle of good faith is introduced, which means:

- any inaccuracies or ambiguities, unresolved issues in tax legislation are interpreted in favor of the taxpayer
- there will be appropriate justifications (arguments and disclosure of circumstances) in the acts of tax audits
- fines and penalties were canceled if the taxpayer acted in accordance with the explanation of the tax authority, and subsequently the position of the tax authorities was changed.

In 2019, the marginal income for individual entrepreneurs under a simplified declaration increased to KZT 298 million. In order to develop the infrastructure for the development of non-cash payments, the law also provides an increase in the VAT threshold by 114,184 MCI (minimum calculated indicator) for those working on a simplified declaration, and a marginal income on a simplified declaration by 70,048 MCI. Starting this year, individual entrepreneurs applying a special tax regime based on a patent and a simplified declaration have the opportunity to reduce the amount of IIT in the amount of KZT 60 thousand, but not more than 50% of the calculated tax amount, if they purchase a new online cash register or a three-component integrated system (online cash register + ERP system + POS terminal) [3].

For those who do not meet the criteria for working on a simplified declaration, a new alternative regime has been introduced - Special tax regime using a fixed deduction.

This regime provides for a fixed deduction of 30% without the availability of supporting documents. A deduction is also provided for the payroll. The tax base will be calculated as the difference between income and expenses, with the obligatory keeping of their records. Moreover, not all expenses and incomes will be

taken into account, only the most basic ones. Keep in mind that there is a prerequisite - if a fixed deduction is applied, then the amount of expenses should not exceed 70% of income.

For the application of this regime, higher (compared with the simplified declaration) criteria are established:

- marginal income in the amount of 12,260 times the minimum wage (346,761,840 KZT)
- the number of employees in the amount of 50 people.

Tax benefits to subsoil users are provided. With processing ratios of more than 35%, subsoil users are exempted from corporate income tax (CIT) at the source of dividend payment and value growth. The commercial discovery bonus has been canceled, and now subsoil users have the right to compensate for the costs of exploration for one field under other contracts where production began. Based on Russia's experience, Kazakhstan introduced a production tax - mineral extraction tax (MET) (Sembekov, 2016). The introduced subsoil use tax for offshore and deep oil fields is an alternative tax (instead of tax for reimbursement of historical costs, rental tax and excess profit tax). An alternative subsoil use tax has been introduced for offshore and deep oil fields (instead of the mineral extraction tax (MET), historical costs, rental tax and excess profit tax). The excess profit tax has been abolished with the transfer of the burden on coal rental export tax. The MET rate for tin was revised (from 6% to 3%).

If we consider the experience of Russia, the tax policy in 2010-2013, on the one hand, was aimed at counteracting the negative effects of the economic crisis, and on the other hand, at creating conditions for restoring positive rates of economic growth. The main directions of the development of the tax system and improvement of the tax policy of the Russian Federation during this period were support for investment and the development of human capital.

Preferential taxation has been introduced for certain categories of taxpayers. Thus, entrepreneurs have the right to reduce the amount of CIT by 100% if they carry out the following activities:

- electronic trade in goods;
- transportation of cargo by a ship registered in the international ship registry of the Republic of Kazakhstan;
- Activities for the organization and holding of an international specialized exhibition in the Republic of Kazakhstan.

There are a lot of changes in tax legislation:

- the number of tax audits is reduced;
- new deductions and types of income are added;
- the conditions for the application of benefits have been expanded for FEZ participants;
- part of ineffective VAT benefits are canceled;
- VAT refund procedures are changed;
- Amendments regarding exports to the EAEU countries are made;
- places of sale have been supplemented in order to calculate VAT;
- and many more different amendments. However, there are still many problems left overboard (Shakirova, 2019).

Let's consider the most pressing problems to date. One of the problems is that enterprises operating in the production infrastructure and produce regionally significant products do not have additional tax benefits. While nowadays this is just necessary, since the most developed activities in our country are trade and intermediary activities, and entities in the manufacturing sector and non-resource sector of the economy are the least involved (Sembekov, 2016).

Another problem is the lack of tax benefits for domestic entrepreneurs producing import-substituting products. We have a lot of high-quality domestic products, especially among food products, but, unfortunately, they do not withstand price and other competition, since there are no special incentives for them from state support, including tax benefits.

Also, in the tax legislation there are practically no methods and mechanisms for stimulating innovation (R&D), that is, for organizations engaged in new technologies and creating new scientific and technical developments there are practically no tax features compared to enterprises in other industries. For example, many countries have established special taxation regimes for subjects of scientific and innovative activities, as a result of which these countries have developed the production of new products, the production of new manufacturing, technological, household, computer and other equipment that meets modern requirements.



To solve these problems it is necessary to:

- stimulate manufacturers (producing regionally significant or import-substituting products) with additional tax incentives;
- establish an attractive (simplified) taxation regime for subjects of scientific and innovative activities in order to stimulate science-intensive and high-tech industries, provide tax incentives to individuals who invest in domestic production;
- create stimulating tax conditions for taxation of scientific and technological discoveries, as it is done in many foreign countries.

### **Conclusion**

Thus, the application of tax benefits should not be limited to lowering tax rates. It is necessary to apply a reduction factor for innovative products and production profitable enterprises. In the world practice, a tax investment loan is used as a benefit, i.e. deduction from the income tax of a part of the company's investment expenses (often subject to the use of this loan for subsequent investments). That is, in the context of the growing dependence of the state budget of the Republic of Kazakhstan on the taxation of the commodity sector against the background of negative dynamics in prices on world commodity markets, there is a need to study new trends and problematic issues that may affect the development of the tax system in Kazakhstan in the future.

There is also a need to pursue a policy to stimulate the production of agricultural processing enterprises and the food industry, and to understand the specifics of agriculture - the main supplier of raw materials for these industries. Meanwhile, producers understand that co-production on the local market can come from many countries. Thus, the need has arisen for changing tax legislation in favor of food producers, in particular, reducing the tax burden on value added tax.

The application of a similar taxation scheme for this industry will significantly reduce the tax burden on enterprises processing agricultural raw materials. Accordingly, these funds can be used for investment and reinvestment of own fixed assets, which will lead to a reduction in the cost of processed products offered to consumers.

Thus, to summarize it should be noted that in the future it is necessary to direct tax incentives to create a favorable investment climate in Kazakhstan, reduce the overall tax burden on the non-resource sectors of the economy, and resolve administrative issues that impede the free development of private enterprise. The implementation of the above tasks to improve tax legislation will contribute to the modernization and diversification of the economy, which will increase the competitiveness of the economy of Kazakhstan.

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**А.К. Сембеков, Ж.О. Лукпанова, Ж.А. Тойжигитова, Н.Н. Тюпакова**

### **Жаңғырту жағдайындағы Қазақстан Республикасының салық саясаты**

#### **Аңдатпа**

**Мақсаты:** Зерттеудің мақсаты өткізілген салық реформаларының нәтижелерін анықтаудан, Қазақстан Республикасының салық жүйесінің қазіргі таңдағы жағдайын бағалаудан, сонымен қатар Қазақстан салық жүйесінің мәселелерін айқындап, жетілдірудің негізгі бағыттарын анықтаудан тұрады.

**Әдісі:** Зерттеу әдістері – жүйелі талдау, мәліметтерді экономикалық және статистикалық өңдеу, салыстыру мен жалпылау, ғылыми талдау мен жинақтау.

**Қорытынды:** Мақалада Қазақстан Республикасында өткізілетін заманауи салық саясатының, атап айтқанда соңғы салықтық түрлендірулер екіпінмен Қазақстан экономикасына салық реформаларының әсеріне талдау жүргізілген. Корпоративті табыс салығы, қосылған құн салығы, халықаралық саудаға және сыртқы операцияларға салынатын салық сияқты негізгі салықтарға баса назар аударып, салық түсімдерінің және соңғы жылдардағы бюджеттегі құрылымдық өзгерістердің салыстырмалы талдауы жүзеге асырылған.

**Тұжырымдама:** Зерттеу нәтижесінде заманауи талаптарға сәйкестігі тұрғысынан Қазақстандағы салық реформаларының нәтижелілік мәселелері анықталған. Мақалада Қазақстанның қазіргі таңдағы салық саясаты шағын және орта бизнес субъектілерін қолдауға, экономиканың шикізаттық емес секторын ынталандыруға бағытталуы тиіс екені жайлы айтылған. Әсіресе, қосылған құн салығын төмендету бөлігінде азық-түлік өнімдерін өндірушілерді салықтық ынталандырудың қажеттілігі негізделіп, азық-түлік өнеркәсібі мен ауыл шаруашылық шикізатын қайта өңдеу өнеркәсіптерінің өнімдерін ынталандыру бойынша саясатын жүргізу ұсынылған. ЕАЭО интеграциялық саудасының жағдайында одақтың әкімшілік және кедендік мәселелерін шешу, экономиканың шикізаттық емес секторының өнімдеріне жалпы салық жүктемесін азайту бойынша салық ынталандырмасын қабылдау қажет.

**Кілт сөздер:** салық реформалары, салықтық түсімдер, салық жеңілдіктері, бюджеттік кірістер, салық мөлшерлемесі, салықтар, салықтық саясат, кіріс.

**А.К. Сембеков, Ж.О. Лукпанова, Ж.А. Тойжигитова, Н.Н. Тюпакова**

### **Налоговая политика Республики Казахстан в условиях модернизации**

#### **Аннотация**

**Цель:** Цель исследования состоит в выявлении результатов проведенных налоговых реформ, оценке современного состояния налоговой системы Республики Казахстан, а также проблем и определении основных направлений совершенствования налоговой системы Казахстана.

**Методы:** Методы исследования: системный анализ, экономико-статистическая обработка данных, сравнения и обобщения, научного анализа и синтеза.

**Результаты:** В статье проведен анализ современной налоговой политики, проводимой в Республике Казахстан, а именно влияния налоговых реформ на экономику Казахстана, с акцентом на последние налоговые преобразования. Проведен анализ налоговых поступлений и сравнительный анализ структурных изменений в бюджете за последние годы, с акцентом на основные производственные налоги, такие как корпоративный подоходный налог, налог на добавленную стоимость, налоги на международную торговлю и внешние операции.

**Выводы:** В результате исследования раскрыты проблемы результативности налоговых реформ в Казахстане с позиций их соответствия современным требованиям. В статье отмечено, что современная налоговая поли-

тика Казахстана должна быть направлена на поддержку субъектов малого и среднего бизнеса, стимулирование несырьевого сектора экономики. В частности, предлагается проведение политики по стимулированию продукции предприятий по переработке сельхозсырья и пищевой промышленности, обоснована необходимость налогового стимулирования производителей пищевой продукции, в части снижения налога на добавленную стоимость. В условиях интеграционной торговли ЕАЭС необходимо принять налоговые стимулы по снижению общей налоговой нагрузки на продукты несырьевого сектора экономики, разрешению административно-таможенных проблем союза.

*Ключевые слова:* налоговые реформы, налоговые поступления, налоговые льготы, доходы бюджета, ставка налога, налоги, налоговая политика, доход.

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## **Influence of human capital on the competitiveness of the economic system**

### **Abstract**

*Object:* The object of the research is to study the problems of efficient use of human capital and develop on this basis recommendations for the formation of a competitive economic system in Kazakhstan.

*Methods:* We have applied methods of economic and comparative analysis, classification, economic and statistical methods were used to process the information.

*Findings:* The results of the study confirm the effectiveness of the development of human capital in the context of globalization and openness of the global economic space that can bring the country to a higher level of development. The authors also consider the problems of forming a modern competitive society in Kazakhstan. Based on a synthesis of foreign experience and an assessment of the competitiveness of Kazakhstan, recommendations are given on improving the mechanism for the formation and development of the economic system. It also offers specific recommendations for improving the quality of intellectual capital in the framework of the formation of a competitive cluster. The influence of human capital on the development of a modernly open economy is quite clearly revealed, which determines the direct relationship between the main socio-economic indicators.

*Conclusions:* The development of innovative infrastructure is necessary to increase the competitiveness of the Republic of Kazakhstan in the domestic and international markets of high-tech products and scientific and technical services.

*Keywords:* economic system, innovation, human potential, human capital, human development, competitiveness, intellectual potential.

### **Introduction**

In the context of socio-economic modernization of the Republic of Kazakhstan, the formation of a competitive market economy, which implies the formation of the necessary conditions for the effective use of new incentives and mechanisms of economic growth through the implementation of economic policy programs, is particularly relevant.

The specifics of human development in the republic requires a policy in which state regulation and state support play a greater role than in other areas of the economy. A high level of educational potential is seen as creating a country's competitive advantages in various fields - economic, social, political or cultural (Samat, 2019).

It is known that in countries with a market economy, the need for highly qualified specialists is increasing, since the availability of an educated qualified workforce can increase the competitiveness and efficiency of the national economy. In this regard, the development of the economic system should take place in accordance with the laws of a socially oriented economy, where the priority should be indicators of the effectiveness of the country's intellectual potential, the competitiveness of domestic specialists, and the equality in line with international standards (Ramazanov, 2018).

Thus, based on a study of the problems of the efficient use of human capital, it is necessary to develop recommendations on the formation of a competitive economic system in Kazakhstan.

### **Literature Review**

The study of the problem of the formation and effective use of human capital as a factor in increasing the competitiveness of the economic system has been the subject of many works by Western researchers.

The authors of the works in the field of developing this concept are M. Porter (Porter, 2010), G. Becker, W. Hubbard, K. Murphy (Becker, Hubbard, Murphy, 2010), A. Savvides, T. Stengos (Savvides, Stengos,

2009), Erik A. Lenderman (Lenderman, 2017), Kamelia Moh'd Khier Al Monani, Nurasyikin Jamaludin, Wan Zalani Wan Zanani Wan Abdullah, Abdual-Naser Ibrahim Nour (Momani, Nurasyikin, Zanani, Nour, 2020), Ramanauskaitė A., Rudžionienė K. (Ramanauskaitė, Rudžionienė 2013).

The methodological foundations of various approaches and studies of the magnitude of human potential were considered in a number of works by Kazakh and Russian authors, in particular, in the works of S.A. Dyatlov (Dyatlov, 2017), Butkenova A.K. (Butkenova, 2018), Batalov, Yu.V., Kolos E.A. (Batalov, Yu.V. and Kolos E.A., 2011), B. Yessengeldin, (B. Yessengeldin, 2019), G. Aymukhanbetova (G. Aymukhanbetova 2019), and others.

In the Republic of Kazakhstan, questions of the effectiveness of the use of human potential have already received sufficient coverage, and have been reflected in the works of Kazakhstani scientists. At the same time, the multifaceted nature of the studied problem, the presence of unexplored issues that need further scientific, theoretical and practical developments, were the motivation for the authors to conduct this study.

### **Methods**

In the research process, general scientific methods were used: causal analysis, economic and comparative analyzes, classifications, economic and statistical methods.

The basis of the economic and comparative analysis was the ranking of the Global Competitiveness Index, which is derived on the basis of a combination of factors determining the level of labor productivity in a particular country and, thus, the degree of development that can be achieved in the economy.

The economic and statistical method is based on attempts to determine and quantify the degree of economic efficiency of investments in the development of human capital and on this basis to propose measures, the implementation of which would increase the efficiency.

To determine the effectiveness of investments in the development of human capital, the indicators of education efficiency at the macro level (EE) and the intellectual intensity (II) of production in the Republic of Kazakhstan in recent years were calculated.

Sources of statistics for this group of dependencies were statistics from organizations such as the World Economic Forum (WEF), International Institute for Management Development, World Bank, UN.

### **Results**

Such organizations as the World Economic Forum (WEF), the International Institute for Management Development, the World Bank, the United Nations and others are engaged in assessing the competitiveness of different countries.

The World Economic Forum (WEF) experts use the Global Competitiveness Index (GIC), which is derived from an assessment of several dozen key components that are most critical for a country's productivity and competitiveness, as the main ranking tool (Porter, 2010).

According to the WEF, competitiveness is a set of factors that determine the level of labor productivity in a particular country and, thus, the degree of development that can be achieved in the economy. The most competitive is an economy that will grow faster in the medium and long term.

In the methodology of the Global Competitiveness Index for 2010 – 2019, those components that play an increasing role in the country's competitiveness as the economy develops have a greater share.

The components are grouped into three sub-indexes, each of which plays a role at a certain stage of economic development:

- sub-index “Basic requirements” - 37.7% (37.8% in the GIC 2018-2019);
- sub-index “Efficiency Factors” - 50.0% (50.0% in the GIC 2018-2019);
- sub-index “Factors of innovation and complexity” - 12.3% (12.2% in the GIC 2018-2019).

In 2018 and 2019, Kazakhstan ranks 59th in the WEF report with an average score of 61.8 and is in the intermediate group (2-3), located between the categories of countries driven by “Management efficiency” and “Innovation”. This group includes 24 countries: Argentina, Brazil, Hungary, Malaysia, Latvia, Poland, the Russian Federation, Turkey and others.

Compared to the UIS countries, Kazakhstan has a competitive advantage in such factors as “ICT”, “Macroeconomic stability”, “Labor market”, “Market size” and “Business dynamism”.

Kazakhstan demonstrates the weakest positions by factors: healthcare and primary education, development of the financial market, competitiveness of companies and innovation.

For the remaining six factors, the competitiveness of the Republic of Kazakhstan is at an average level: institutions, infrastructure, higher education and training, the effectiveness of the goods market, and technological readiness.

Out of 12 factors of competitiveness, improvement came about on five factors – “Institutes” (+12), “Commodity Market” (+10), “Infrastructure” (+3), “Labor Market” (+3), “Financial System” (+ 2). On three factors, the positions have not changed – “ICT”, “Market Size”, “Innovation Potential”.

In general, the World Economic Forum determined the competitive advantages of Kazakhstan as factors such as the “Labor Market” - 30th place and “Dynamic business” - 37th place. At an average level, factors such as “ICT” (44), “Market Size” (45), “Education and Skills” (57), “Commodity Market” (57), “Institutes” (61), “Macroeconomic Stability” (62) ) and “Infrastructure” (69). The most problematic factors for doing business in Kazakhstan, respondents noted corruption (16.7%), access to finance (14.6%), inefficient state bureaucracy (8.0%), tax regime (7.8%).

Compared to last year, the share of respondents reporting low qualifications of employees as the most problematic aspects of doing business decreased significantly - 6.8% (in 2018 - 13.3%).

Table 1. Kazakhstan's position in the Global Competitiveness Index

Indicators	2011-2012	2012 - 2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
The number of countries in the ranking	131	134	133	139	142	144	148	144
GCIRK	61	66	67	72	72	51	50	50
Basic conditions	66	74	74	69	62	47	48	51
Performance factors	58	64	69	71	76	56	53	48
Factors of innovative development	84	77	78	102	114	104	87	89
Companies competitiveness	85	86	88	102	109	99	94	91
Innovation potential	75	62	64	101	116	103	84	85

*Note: Made up by authors based on The Global Competitiveness Report 2017-2018*

According to experts of the Institute of Economic Research, the most important factors for the growth of Kazakhstan's competitiveness are:

- growth in the share of the private sector in GDP and job creation;
- introduction of innovations;
- development of policies aimed at supporting competition in the market;
- improvement of the institutional system;
- growth in labor productivity;
- attraction of direct foreign and domestic investments;
- expansion of the domestic and foreign market.

However, in the production structure of the Republic of Kazakhstan, the production of extractive industries predominates. The main component of Kazakhstan's exports are fuel and energy products, of which 64.6% are oil and gas condensate. This indicates the preservation of the factor dependence of the country, which does not allow to attribute the economy of Kazakhstan to the group of countries at a more effective stage of development.

Of greatest interest is the analysis of the sub - index “Factors of innovation and complexity”, which consists of two factors: “Conditions for the development of business” and “Innovation”. The leading positions in the WEF ranking are countries with the highest scores for precisely these factors.

In 2014, Kazakhstan was ranked among the 30 most developed countries in terms of two factors that determine its competitiveness: labor market efficiency - 15th place, and macroeconomic environment - 27th place.

A decrease in indicators by the Innovation factor indicates a decrease in the level of technological development of the republic. The dependence of Kazakhstan on external technologies and developments is growing, while the level of development of the country directly depends on the intensity of innovation. The five leaders in the Innovation factor in 2017-2018 included Switzerland, Sweden, Finland, Japan and the USA.

The state is the main source of funding for research and development in Kazakhstan, while in developed countries the share of state funding does not exceed 40%.

According to the statistics of the RK Committee on Statistics, in 2018 the level of innovative activity of Kazakhstani enterprises amounted to 8.0%.

The share of small and medium-sized businesses in the GDP of the Republic of Kazakhstan did not exceed 20%, while in developed countries this indicator is at least 40% of GDP.

Most enterprises buy ready-made technological solutions embodied in technology and equipment. Only 4% of enterprises acquire licensed technology and patents (Butkenova, 2018).

In many countries of the world there is an active process of cluster formation. The cluster approach allows us to consider not a separate enterprise, but a set of interconnected enterprises as a “growth point” in a region. The enterprises that make up the cluster have the opportunity to collaborate and to use resources more efficiently together, which results in a synergistic effect when the potential of the cluster exceeds the sum of the potentials of its constituent elements (Thurow, 1970).

The USA has the largest number of clusters, where about 380 clusters are created. More than half of all US enterprises operate within clusters. A large number of clusters formed in European countries (Italy, Great Britain, France). Clustering of small business in Italy is widespread, providing jobs for 43% of all employed in the economy. Clusters are actively forming in Southeast Asia and China.

In Kazakhstan, the creation of clusters is aimed at creating the necessary conditions for the development of competitive industries in the non-resource sector of the economy. According to experts, today in the republic there is a favorable situation for the development of small business clusters. Strengthening the support of the sector from the state and local authorities will allow to concentrate the allocated resources in specific areas, implement joint projects, and strengthen technological and supply-value inter-regional ties.

The availability of natural resources is an important but insufficient condition for successful competition. Orientation to natural resources makes Kazakhstan's enterprises uncompetitive in international markets. In this regard, it is necessary to create unique products that will be in demand both domestically and in international markets.

For this, Kazakhstan has such a favorable factor as human capital. Human capital is an opportunity to acquire knowledge, creative potential, physical, moral, psychological and social health, spiritual qualities, human mobility, that is, a set of properties that can provide income to the owner (carrier) of human potential and increase profit for the entrepreneur (Kocherbaeva, Stybaeva, 2018).

In a certain sense, under the “bearer of human capital” one can consider both an individual individual, an enterprise, and the state as a whole. In any case, revenue growth has a positive effect on the level of economic development of the state. The carrier of human capital is also its owner. Therefore, the use of human potential is controlled to a certain extent by its owner. For the formation of human potential is not enough material means. The work of the carrier of this potential, as well as the spiritual and cultural investments of the family and society are necessary. Human potential cannot be separated from its owner, therefore it is less liquid (Pulic, 2004).

Correspondence of human capital to the requirements of the economic and scientific-technical situation allows ensuring the efficiency of the economy as a whole, as well as of individual enterprises and organizations. Therefore, at the present stage of socio-economic development of Kazakhstan, the most important task is to manage the process of investing in the development of human potential. Social development programs involve the development of a set of measures to improve the structure of human capital, identifying priority areas, and calculating investment costs. Investments in human capital increase labor productivity and contribute to the growth of a competitive economic system.

Recently, scientists from different countries have repeatedly made attempts to determine and quantify the degree of economic efficiency of investments in the development of human capital and, on this basis, propose measures whose implementation would increase the efficiency. The strategic importance of such a task is very great.

To determine the effectiveness of investments in the development of human capital, it is advisable to calculate the effectiveness of education at the macro level (EE) and indicators of intellectual intensity (II) of production in the Republic of Kazakhstan in recent years:

2017 year:  $EE = 3200,2 / 912,026 = 35$ ;

2018 year:  $EE = 3528,4 / 926,6 = 38$ ;

2019 year:  $EE = 3803,3 / 106,9 = 36$ .

Therefore, in the Republic of Kazakhstan from 2017 to 2018 there is an increase in the size of GNP per 1 tenge of the educational fund. In 2019, compared with 2018, this indicator decreased.

2017 year:  $\Pi = 912,026/3200,2 = 0,028$ ;

2018 year:  $\Pi = 926,6/3528,4 = 0,0026$ ;

2019 year:  $\Pi = 106,9/3803,3 = 0,028$ .

Therefore, in the Republic of Kazakhstan from 2017 to 2018, the educational fund is decreasing for each GNP unit. However, in 2019, the intellectual intensity of production has a positive trend.

This proves the need for intellectualization of production, as well as increasing costs in areas that contribute to the development of human potential, namely: education, science, healthcare and culture.

### **Discussion**

The results of our study in the context of the effective use of human capital are a factor in increasing the competitiveness of the economic system of Kazakhstan.

The results achieved by B. Yessengeldin, (Yessengeldin, 2019) consider human capital as the most important factor in the development of a modern innovative economy that ensures the development of the economy and society, including human resources, their knowledge, tools of intellectual and managerial work, living environment and labor activity, ensuring effective and rational functioning of human capital as a productive factor of development. Our approach to the efficient use of human capital is more multifactorial, confirming the fact that training is not always considered only from an economic point of view, and it is also necessary to consider the social effect.

Our results confirm the conclusions of G. Aymukhanbetova (Aymukhanbetova, 2019), who argue that the development of intellectual capital in combination with innovation is the key development factor in an innovative economy.

The author allocates innovative and creative capital as the main internal factor of innovative activity. It is shown that for the realization of intellectual potential in intellectual capital, the presence of three resource components is necessary: personal, informational and innovative potentials. The transformation of intellectual potential into intellectual capital occurs in the process of active activity using the appropriate resources and market opportunities, as a result of which intellectual capital is formed, consisting of innovative, human and structural capital.

We also agree with the results achieved by Kamelia Moh'd Khier, Nurasyikin Jamaludin, Wan Zanani, Wan Abdullah, Abdunaser Ibrahim Nour (Moh'd Khier, Nurasyikin, Zanani, Abdullah, Nour, 2020), which confirmed that intellectual capital, measured using the intellectual coefficient of value added significantly affects the competitiveness of the economic system. The authors show that industrial companies in the commodity economy should have practical experience and knowledge, since it is vital for their competitive advantage, and should reduce unemployment by hiring new employees with experience and skills.

Our results also show the degree of economic efficiency of investments in the development of human capital and on this basis, measures have been proposed whose implementation would increase the efficiency. The strategic importance of this task is very great.

### **Conclusion**

Summarizing all the results of a study of the problems of the efficient use of human capital, it is necessary to note the most significant points:

- it is determined that one of the main factors affecting the competitiveness of the economic system is a person and related social categories such as “human potential”, “human capital”, “human development”;
- it was revealed that the development of the economic system should take place in accordance with the laws of a market-oriented economy; therefore, priority should be given to indicators of the effectiveness of the country's intellectual potential, the competitiveness of domestic specialists, and their quality in line with international requirements;
- it is proved that in modern conditions the development of human capital provides economic efficiency at various levels: national, enterprise, individual. Moreover, measures aimed at developing human capital through a chain of market interactions inevitably lead to competitiveness and economic growth in the country;
  - features of competitiveness of Kazakhstan in comparison with other countries are revealed;
  - identified and analyzed the indicator of the effectiveness of education at the macro level and the indicator of intellectual intensity of the Republic of Kazakhstan;
  - organizational and economic mechanisms have been developed to stimulate Kazakhstan's competitiveness growth factors.



The proposed methods and solutions in the study should increase the effectiveness of the country's competitiveness, its ability to quickly translate research and development into final competitive products.

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**Е.С. Ситникова, И.В. Бордияну, Х.К. Браувайлер**

### **Экономикалық жүйенің бәсекеге қабілеттілігіне адам капиталының әсері**

#### **Аңдатпа**

**Мақсаты:** Зерттеудің мақсаты адам капиталын тиімді пайдалану мәселелері және осы негізде Қазақстанда бәсекеге қабілетті экономикалық жүйені қалыптастыру бойынша ұсыныстар әзірлеу болып табылады.

**Әдісі:** Мақаланы жазу кезінде экономикалық және салыстырмалы талдау, жіктеу тәсілдері, ақпаратты өңдеу үшін экономикалық-статистикалық әдістер қолданылған.

**Қорытынды:** Зерттеу нәтижелері жаһандану және әлемдік экономикалық кеңістіктің ашықтығы жағдайында елді неғұрлым жоғары даму деңгейіне шығаруға қабілетті адам капиталының даму тиімділігін растайды. Авторлар сондай-ақ Қазақстандағы қазіргі заманғы бәсекеге қабілетті қоғамды қалыптастыру мәселелерін қарастырған. Шетелдік тәжірибені жинақтау және Қазақстанның бәсекеге қабілеттілігін бағалау негізінде экономикалық жүйені қалыптастыру және дамыту тетігін жетілдіру бойынша ұсынымдар берілген. Сонымен қатар, бәсекеге қабілетті кластерді қалыптастыру шеңберінде зияткерлік капиталдың сапасын арттырудың нақты ұсыныстары қаралған. Қазіргі заманғы ашық экономиканың дамуына адами капиталдың әсері жеткілікті түрде айқын анықталады, бұл негізгі әлеуметтік-экономикалық индикаторлардың тікелей өзара байланысын негіздейді.

*Тұжырымдама:* Инновациялық инфрақұрылымды дамыту ҚР-ның ғылымды қажетсінетін өнімдер мен ғылыми-техникалық қызметтердің ішкі және халықаралық нарықтарында бәсекеге қабілеттілігін арттыру үшін қажет.

*Кілт сөздер:* экономикалық жүйе, инновациялар, адами әлеует, адам капиталы, адами даму, бәсекеге қабілеттілік, зияткерлік әлеует.

**Е.С. Ситникова, И.В. Бордияну, Х.К. Браувайлер**

### **Влияние человеческого капитала на конкурентоспособность экономической системы**

#### **Аннотация**

*Цель:* Целью исследования являются изучение проблем эффективного использования человеческого капитала и разработка на этой основе рекомендаций по формированию в Казахстане конкурентоспособной экономической системы.

*Методы:* При написании статьи использованы приемы экономического и сравнительного анализа, классификации, для обработки информации использовались экономико-статистические методы.

*Результаты:* Результаты исследования подтверждают эффективность развития человеческого капитала в условиях глобализации и открытости мирового экономического пространства, способного вывести страну на более высокий уровень развития. Авторы также рассматривают проблемы формирования в Казахстане современного конкурентоспособного общества. На основе обобщения зарубежного опыта и оценки конкурентоспособности Казахстана даны рекомендации по совершенствованию механизма формирования и развития экономической системы. Также рассмотрены конкретные рекомендации повышения качества интеллектуального капитала в рамках формирования конкурентоспособного кластера. Достаточно четко выявляется влияние человеческого капитала на развитие современной открытой экономики, что обуславливает прямую взаимосвязь основных социально-экономических индикаторов.

*Выводы:* Развитие инновационной инфраструктуры необходимо для повышения конкурентоспособности РК на внутреннем и международном рынках наукоемкой продукции и научно-технических услуг.

*Ключевые слова:* экономическая система, инновации, человеческий потенциал, человеческий капитал, человеческое развитие, конкурентоспособность, интеллектуальный потенциал.

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## **Cryptocurrency: permanent money substitute or another temporary trend**

### **Abstract**

*Purpose:* To identify that the cryptocurrency can be distinguished as a real-money equivalent in Kazakhstan in the near future.

*Methods:* a SWOT (strengths– weaknesses– opportunities- threats) analysis supported with the results of a survey in Nur-Sultan city.

*Results:* The majority of surveyed people claim that they refuse to use cryptocurrency due to its complexity and it demonstrably illustrates that people are not sure in new technologies' potential, while the SWOT analysis proved that there certainly is a chance for the cryptocurrency to substitute money due to numerous possibilities.

*Conclusions:* Undoubtedly, the cryptocurrency is capable to carry out ordinary cash's functions and fully supplant it in the nearest future, offering such focal points as mechanized tax collection, robotized protections, and becoming globally acknowledged money. Although there are several obstacles as the cryptocurrency's instability, administrative weight, and unwillingness of individuals to its integration into our everyday lives, the cryptocurrency can be a lasting money substitute, but the humankind needs more time to acknowledge it as the chief device.

**Keywords:** cryptocurrency, blockchain, bitcoin, decentralization, transaction, database, privacy, encryption.

### **Introduction**

This article examines various features of the cryptocurrency, a matter of which blew out in the middle of 2017 after its prices' skyrocketing. It sparked a heated discussion all around the globe in order to figure out whether this invention is an ultimate money substitute or a regular transitory trend. It is assumed that the cryptocurrency is expecting high amount of uncertainty towards itself and there is no wonder why.

In this section of the article, background information about cryptocurrency will be presented. A cryptocurrency is a type of digital currency that is registered by a decentralized payment system meaning there is no internal or external administrator or any equivalent (Garrick and Michel, 2017). The cryptocurrency represents a number indicating the amount of data of settlement units, which is recorded in the corresponding position of the information package of the Data Transfer protocol and is often not even subject to encryption, as well as all other information about transactions between addresses of the system (Arvind et al., 2016).

Although cryptocurrency got its fame in mid-2017, developers designed this currency a long time ago. The idea of encrypting confidential payments had been in use since 1990 at DigiCash company, founded by David Chaum until his company bankrupt in 1998. However, it was not close to cryptocurrency we know today as it was centralized. The term "cryptocurrency" risen in usage after the appearance of the "Bitcoin" payment system, which was developed in 2009 by a person or group of people under the pseudonym Satoshi Nakamoto (no identity has been established) (Arvind et al., 2016). The financial crisis of 2008 contributed to the success of Bitcoin as the population has lost trust in banking and controlled financial organizations. At that time, Bitcoin offered independence from the government or any other centralized influence from the third parties, which made it appealing for people.

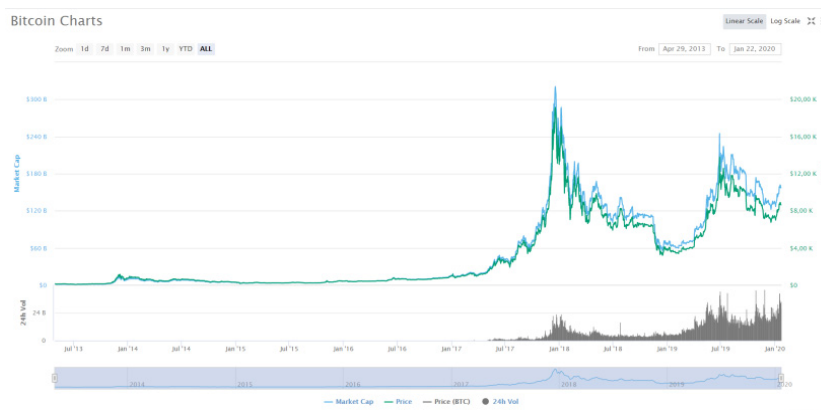


Figure 1.0 Bitcoin's capitalization and price over time

Note – Source (Singh and Singh, 2016)

The Figure 1.0 demonstrates the Bitcoin's capitalization and price starting from the April of 2013 until the January of 2020. The Bitcoin's price depends on its demand; therefore, we can identify the popularity of Bitcoin by looking at its price. From the April of 2013 until the March of 2017, the price remained at the same level of 300-400 USD. Then, it rose exponentially until it reached the peak of over 18,000 USD in the December of 2017. After that, it was falling in price explosively until the January of 2019. Again, the price started to rise steadily until the July of the same year and started to unpredictably fluctuate until now. The overall trend shows that the price of Bitcoin is unstable and unpredictable (Coinmarketcap company, 2020).

Bitcoin uses some essential technologies. Cryptographic methods are often used to provide the system protection, but all transactions between addresses of the system can be seen online. Bitcoin uses a continuous sequential chain of blocks containing information known as Blockchain to protect the system and provide confidential transactions (Ryan, 2015). Bitcoins exist only as records in a replicated distributed database, in which all transactions are stored online, indicating the bitcoin addresses of senders/recipients, but with no information about the real owner of these addresses (Ryan, 2015). There are no separate records in the database about the current number of bitcoins held by any owner. However, the user can easily calculate the total amount of money using information about transactions. For instance, you got two bitcoins from your first transaction, one bitcoin from the second transaction, and sent one bitcoin to another user as your third transaction overall resulting in two bitcoins in your wallet.

The cryptocurrency has its specific features:

1. Decentralization. The blockchain technology works based on peer-to-peer transactions that are not controlled or influenced by third parties. It develops trust between the users and the system.
2. Immutability. Any information remains immutable and constant after being encrypted in the blocks. The further changes are saved to the next block connected to the previous block creating a chain of blocks.
3. Transparency. You can easily find the open source code of Bitcoin, the information about transactions, and the data about the credibility of the users.
4. Confidentiality. The transaction does not contain any confidential information: it contains data only about address of sender/recipient, but no information about who owns them.

### Literature Review

Cryptocurrencies have considered a relatively low profile in 2019 following an outstanding increase in 2017 and then huge crash in 2018. What are expectations in 2020? Here are presented opinions of several experts of this sphere.

Tim Draper, legendary VC, founder of Draper Associates and DFJ, and author of "How to Be the Startup Hero" says that the globe is almost ready for a financial and banking transformation. Engineers and product developers have put their efforts together to bring Bitcoin to general usage and distribution. Within a short time, there will be no reason to pay credit card fee for banks from 2.5 percent up to 4 percent every time. Bitcoin is a frictionless transaction. Similar to other tokens like Tezos, Ethereum, and Bitcoin Cash become more prevalent. My forecast is a \$250,000 Bitcoin price by 2022 or the first quarter of 2023.

Judd Rosenblatt, founder and CEO of AE Studio, an Agile web development and data science consulting firm states that whether you are currently investing in cryptography should depend upon whether you believe in the future of blockchain. It did not meet all expectations at once because almost any other destruc-

tive technology improves along the path. Investing in crypto now could be like picking up Amazon stock for less than IPO price, or it could be like stocking up on Betamax on clearance. Only time will tell. Our developers at AE Studio work with blockchain companies like Protocol Labs, and we're constantly impressed with the progress and innovation that's happening in the space. Blockchain technology is developing fast and expected to be essential; so, I think of crypto as an excellent long-term opportunity, despite high-risk, investment. If you think so as well, my No. 1 piece of exhortation is to contribute no more than you will bear to lose in things like BTC and ETH, which can likely emphatically connect with blockchain selection. And hodl long term!"

Lorenzo Pellegrino, CEO of Skrill, NETELLER, and Income Access at Paysafe; connect with Lorenzo on LinkedIn" "While the markets may have slammed, the development of the foundation empowering cryptocurrency has never truly moderated down, particularly at Skrill. Concurring to numerous industry specialists, the space is presently steady, more develop, and prepared to move into its following stage. To see something that begun as no more than a thought within the profundities of the web produce an unused environment and develop into a multibillion-dollar resource lesson is nothing brief of momentous to me. The largest companies and nations within the world now discuss cryptocurrency as a reasonable cash of long term. I would fairly remind budding financial specialists that exchanging in such an energetic space implies the stakes are higher. Legitimate investigate and chance administration are essential."

Dan Schatt, co-founder and CEO of Cred: "Remember the noteworthy financial crash 10 a long time back, when numerous people's life reserve funds were wiped out? That's when Bitcoin was born; a cryptocurrency made mostly in reaction to the driving monetary mediators that made a difference bring down the economy. Bitcoin has ended up more broadly received for a few reasons. It encompasses an unsurprising swelling rate since as it were 21 million will ever be delivered. It is borderless, with straightforwardness that no bank can coordinate. And it is not trusted because the framework was planned so you do not believe anybody else for it to operate. It has been pronounced dead by journalists 378 times, counting 40 times this year. But Bitcoin will not pass on since it can be trusted more than most government monetary forms. There is no middle person. And in a world full of fizzled money related mediators, that is an enormous deal."

Johann Polecsak, co-founder and CTO of QAN blockchain platform: "The cryptocurrency decay was great for the showcase since it instructed speculators that not all coins are as glossy as they might appear. We continuously empower making choices based on genuine showcase esteem rather than theory. How do you degree the esteem of a token without profound information? Seek for stages that can be coordinates into undertaking forms to upgrade their workflows. That's how mass selection happens. When the web begun, companies had to coordinate the innovation to convey substance for clients to expend. That is where we are presently with cryptocurrency, but we lost stages that companies can use and are able of working on a worldwide scale. That is likely why the ROI of tokens from the best 11 blockchain stages (WAVES, EOS, NEO, ETH, LSK, ADA, MATIC, FTM, ZIL, TRX, and ALGO) midpoints more than 1,000 percent."

Alex Althausen, CEO of StormGain, a cryptocurrency trading platform: "In 1997, Amazon went open at \$18 per share. The stock developed to over \$300 per share some time recently falling to beneath \$6 when the dot-com bubble burst in 2001. Quick forward to 2018: Amazon comes to \$2,050 per share and got to be the moment U.S. company to obscure \$1 trillion in stock advertise esteem. Numerous speculators see this design happening with cryptocurrency. Bitcoin skyrocketed from approximately \$3,600 per coin to over \$19,000 in 2017. At that point it fell underneath \$3,500 sometime recently climbing to \$12,000 in 2019. My counsel is to keep an eye on the Bitcoin splitting in 2020, which can drastically alter the cryptocurrency supply and request condition. I accept it will be recollected as an authentic point of reference for Bitcoin and the whole industry. It might be the turning point that takes Bitcoin from a specialty, unsteady resource to a standard frame of payment" (Oracles, 2019).

"We are approximately to roll out a few critical modern requirements," Mr. Mnuchin said amid a hearing some time recently the Senate Back Committee. "We need to create beyond any doubt that innovation moves forward; on the other hand, we need to create beyond any doubt cryptocurrencies are not utilized for the comparable of ancient Swiss mystery number banking." Mr. Mnuchin did not give points of interest of what the controls would involve. He said that they would give more noteworthy straightforwardness so that law authorization might see where cash was going and guarantee that it was not being utilized to help cash washing (Rapporteur and Smialek, 2020).

Erik Voorhees, cryptocurrency entrepreneur says, "It is that narrative of human development under which we now have other fights to fight, and I would say in the realm of Bitcoin it is mainly the separation of money and state."

Caleb Chen London Trust Media: “In the next few years, we are going to see national governments take large steps towards instituting a cashless society where people transact using centralized digital currencies. Simultaneously, the decentralized cryptocurrencies – that some even view as harder money – will see increased use from all sectors” (Rosic and Blockgeeks, 2020).

What is a blockchain? In short, it is a disintermediating technology or it removes the necessity for middlemen and trusted third-parties. In combination with other technologies, blockchains have the potential to disintermediate many areas of life, from banking to information storage to voting to the making and sharing of goods and services (Clendaniel, 2017).

Some economic analysts foresee a huge alter in crypto is forthcoming as institutional money enters the market. Besides, there is the possibility that crypto will be drifted on the Nasdaq, which would further add credibility to blockchain and its uses as an alternative to conventional currencies. Some people anticipate that all that crypto needs is a verified exchange traded fund (ETF). An ETF would certainly make it easier for individuals to invest in Bitcoin, but there still should be the demand to want to contribute in crypto, which some say may not automatically be created with a fund.

In the beginning of 2017, there were only a few small operational crypto funds trading coins for limited partners. In June, there have been seen pitches for dozens of them. Traditional institutions with traditional bases are raising some of these funds. Others are running or planning to run ICO processes themselves (Sam Lessin, 2020).

Bitcoin could be a decentralized cash that employs peer-to-peer innovation, which empowers all capacities such as money issuance, exchange handling and confirmation to be carried out collectively by the arrange. Whereas this decentralization renders Bitcoin free from government manipulation or obstructions, the flipside is that there's no central specialist to guarantee that things run easily or to back the esteem of a Bitcoin. Bitcoins are made carefully through a “mining” handle that requires capable computers to fathom complex calculations and crunch numbers. They are as of now made at the rate of 25 Bitcoins each 10 minutes and will be capped at 21 million, a level that's anticipated to be come to in 2140.

These characteristics make Bitcoin distinctive from a fiat currency, which is backed by the full confidence and credit of its government. Fiat currency issuance is an exceedingly centralized movement directed by a nation's central bank. While the bank controls the amount of currency issued according to its monetary policy objectives, in theory, there is no upper limit to the amount of such currency issuance. Moreover, local currency deposits are generally insured against bank failures by a government body. Bitcoin, on the other hand, has no such support mechanisms. The value of a Bitcoin is entirely dependent on what investors are willing to pay for it at a point in time. As well, if a Bitcoin exchange folds up, clients with Bitcoin balances unable to return them back.

The future viewpoint for bitcoin is the subject in heat debate. Whereas the financial media is proliferated by so-called crypto-evangelists, Harvard University Professor of Economics and Public Policy Kenneth Rogoff recommends that that the “overwhelming sentiment” among crypto advocates is that the whole “market capitalisation of cryptocurrencies seem detonate over the another five a long time, rising to \$5-10 [trillion].”

The noteworthy instability of the resource course is “no reason to panic,” he says. Still, he tempered his positive thinking which of the “crypto evangelist” see of Bitcoin as computerized gold, calling it “nutty,” expressing its long-term esteem is “more likely to be \$100 than \$100,000.”

Rogoff contends that not at all like physical gold, Bitcoin's utilize is constrained to exchanges, which makes it more defenseless to a bubble-like collapse. Also, the cryptocurrency's energy-intensive confirmation handle is “vastly less efficient” than frameworks that depend on “a trusted central specialist like a central bank.”

Some of the impediments that cryptocurrencies presently confront – such as the fact that one's digital fortune can be eradicated by a computer crash, or that a hacker may scour a virtual vault – may be overcome in time through innovative progresses. What will be more difficult to overcome is the fundamental conundrum that bothers cryptocurrencies – the more well known they gotten to be, the more control and government investigation they are likely to pull in, which dissolves the basic premise for their existence.

Whereas the number of vendors who acknowledge cryptocurrencies has constantly expanded, they are still exceptionally much in the minority. For cryptocurrencies to become more widely utilized, they ought to begin with picking up far reaching acceptance among buyers. However, their relative complexity compared to customary monetary standards will probably deter most individuals, except for the technologically adept.

A cryptocurrency that tries to become a small piece of the mainstream financial framework may force to satisfy broadly unique criteria. It ought to be mathematically complex (to maintain fraud and attacks from hacker) but simply understand by customers; decentralized but with adequate consumer shields and security; and preserve user anonymity without being a conduit for tax evasion, money laundering and other nefarious activities. Since these are imposing criteria to fulfill, is it conceivable that the foremost popular cryptocurrency in a number of years' time might have qualities that drop in between heavily-regulated fiat monetary forms and today's cryptocurrencies? Whereas that plausibility looks farther, there's small question that as the driving cryptocurrency at show, Bitcoin's victory (or need thereof) in overseeing the challenges it faces may decide the fortunes of other cryptocurrencies inside the long time ahead (Barone, 2020).

### Methods

To examine the potential of this trend, it was decided to make a SWOT-analysis to figure different sides of the cryptocurrency issue. The benefits of using this exact method will be useful in the further conclusions. It will contribute in understanding if strengths outweigh weaknesses or if it is possible to overcome threats using possibilities or strengths. The SWOT analysis will be presented and supported by the results of a survey (conducted by the authors).

The survey was conducted during the summer of 2019 in Nur-Sultan, the capital of the Republic of Kazakhstan. The number of participants is 342 with 47 percent being female. Participants age ranges from 10 to 54 equally distributed. Survey contained five closed-ended questions and two open-ended questions on the topic of cryptocurrency and its use. The limitation of the survey is that more than 95 percent of participants were the residents of Nur-Sultan, meaning the results might be applied only to the residents of that city.

### Results

The SWOT analysis:

**Strengths.** According to, the maximum number of bitcoins is twenty-one million and it cannot be changed. The limited number of bitcoins gives it a strength of preventing inflation and problems caused by monetary policy of the government.

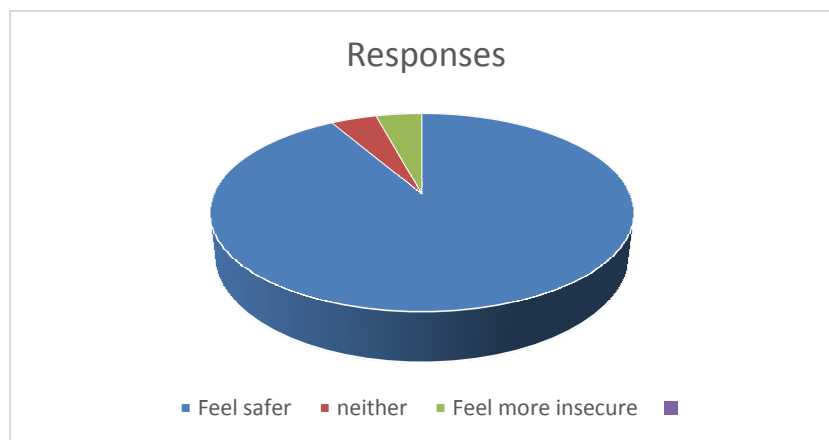


Figure 2.0 Responses on feeling safety using cryptocurrency.

Note – made by authors

In addition, the decentralization of the system makes the users more comfortable and safer using the currency. This was proven by the survey showing that 91.7 percent of cryptocurrency users feel safer that transactions are not influenced by third parties (Figure 2.0). Next, the currency can be used globally without any boundaries, meanwhile other currencies are used within the boundaries of the countries. 6 out of 24 participants who are using cryptocurrencies reported that they made international transactions, and all of them reflected positively on the speed of the transactions. Moreover, the cryptocurrency provides financial services to users with low access to banking systems (Zheng Z. et al, 2017). It gives more people opportunity to use financial services catalyzing the economic processes in the country and provides the equality among people opportunities.

**Weaknesses.** Even though Bitcoin is very popular across the Internet users, the actual usage of cryptocurrency is not widely spread. This was proven by the results of the survey indicating that out of all 342 participants only 24 participants use or have used any kind of cryptocurrency.



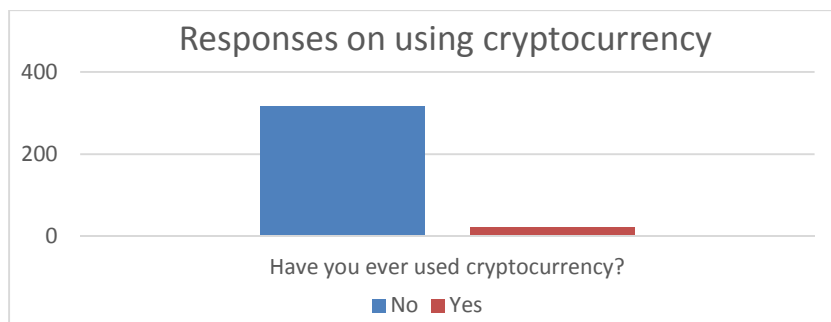


Figure 3.0 Responses on using cryptocurrency

Note – made by authors

Next, the cryptocurrency is dependent on its reputation. For instance, the number of cryptocurrency users dropped after the ‘Silk road’ incident happened at which people started using cryptocurrency to buy drugs on the Darknet (the illegal side of the Internet). In addition, one of the weaknesses is vulnerability to cyberattacks such as social engineering and DDoS (Singh and Singh, 2016). The cryptocurrencies can carry out the limited number of transactions simultaneously meaning that DDoS attacks can stop the work of the server for other users. The social engineering might be the way the hackers get the private keys from the asymmetric encryption of the wallet. However, the survey contradicts this fact as it shows that none of cryptocurrency users faced the DDoS attack and never experienced losing private keys. Even though cryptocurrencies do not share the information about the users, there are still ways to track the location from which the transaction was initiated. The great example is ‘Silk road’ incident that shows that illegal transactions can be tracked.

**Opportunities.** The cryptocurrency can be used to facilitate processes within the country using smart contracts (electronic algorithm that runs the several instructions after the certain conditions being fulfilled). The taxation can be automated using smart contract: the receiver of the transaction can be government, and the transaction will be sending the taxes each week automatically. In addition, cryptocurrency can change the world economy by replacing all the other currencies eliminating the dependencies of other currencies on USD (David et al., 2018). In addition, the insurance can be automated with smart contracts. If the insurance company enters a smart contract with the client, the contract will be executed automatically when an insured event occurs, and the policyholder will receive a refund immediately and without visiting the office. Finally, the automation of penalties/fines (automation of accrual of fines when performing (non-performing) certain actions.

**Threats.** The cryptocurrency providing everyone with ability to use financial services and privacy can stimulate shadow economy in the country. In addition, the people might be not ready to use blockchain as they are not used to it.

The results of the **survey** showcase that slightly more than two fifths (41.5%) are not using cryptocurrencies because they believe that it is too complex. Just under two fifths (39%) claim that this system is almost the same as e-money, and approximately one in ten (10.5%) say that they prefer other assets (Figure 4.0).

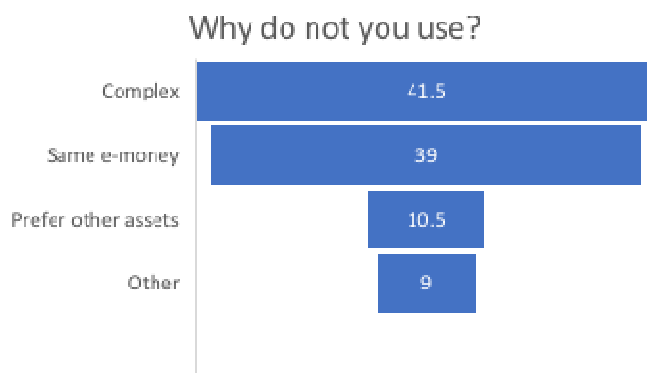


Figure 4.0 The reasons of not using cryptocurrency

Note – made by authors

### **Discussions**

The results of the survey show that society is not ready to accept cryptocurrency as the part of their everyday life. Moreover, cryptocurrency can change in price extremely fast making it unreliable for the constant use. For the crypto market, there are threats from regulatory authorities. Just as the Internet is censored in some parts of the world. Cryptocurrencies face regulatory pressure when it threatens local currencies and governments. For example, China has tried to restrict cryptocurrency activity with limited success (Yukun and Aleh, 2018). The majority believes that using cryptomoney is too sophisticated, and it is much easier to continue using traditional money. However, it is clear that we need to keep up with the times, and one way or another a different system will replace the current inefficient one. There is no point in delaying the inevitable. As the financial medium, the cryptocurrency provides high security, adaptability and many business benefits such as lower transaction fees.

The SWOT analysis made it possible to identify the main advantages, disadvantages, as well as opportunities and threats in the execution of this project. The revealed opportunities strongly suppress weaknesses and make it possible to turn them into strengths of the cryptocurrency. However, some of them can still pose a threat, and thereby cause fear in people. For instance, financial loss will definitely be a disaster for any person. This can be a result of the data loss in the web that a certain genius hacker or high-skilled programmer is easily able to do. In case the system of cryptocurrency is upgraded, it will become the most secure system out of all ever existing, showing its dominance towards others. By improving safety the disadvantage can turn into a strong benefit.

### **Conclusion**

According to the results of both SWOT analysis and survey, it can be concluded that cryptocurrency has its potential in replacing conventional money because it is able to carry out all the functions that the usual money does and can bring several benefits such as automated taxation, automated insurance, and being internationally accepted currency. However, there are numerous risks as the cryptocurrency is not stable, faces regulatory pressure, and people are not ready to use it in their daily lives. Nevertheless, these kinds of threats do not need to be feared of, as their further development would easily assist in getting rid of the main weaknesses. The main point is that people are still having trouble in comprehension and adjustment to new technologies, which is considered to be the most significant idea out of all presented in the list. The fact that humankind are not ready plays the key role in implementation cryptocurrency into everyday use. It is preferable that before the full introduction there would be some guide and briefing, so that people will understand what they need to do, thus making it clear that the system only looks complex at the first sight. Therefore, the cryptocurrency definitely can be a permanent money substitute, but the humanity needs time to accept it as the main tool.

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**А.Ж. Тыштикбаева, А.Т. Жансейтов, Е.В. Борисова, А.Е. Турусбеков**

### **Криптовалюта: тұрақты ақша ауыстыру немесе басқа уақытша тренд**

#### **Аңдатпа**

*Мақсаты:* Қазақстандағы нақты ақшаның баламасы ретінде криптовалютанан бөліп алуға болатынын анықтау.

*Әдісі:* SWOT-талдау (күшті жақтары-әлсіз жақтары-мүмкіндіктер-қауіптер), сауалнама нәтижелері.

*Қорытынды:* Сұралғандардың көпшілігі криптовалютаның күрделілігіне байланысты қолданудан бас тартады және бұл адамдар жаңа технологиялардың әлеуетіне сенімді емес екенін көрнекі көрсеткен, ал SWOT-талдау криптовалютаның көптеген мүмкіндіктеріне байланысты ақшаны ауыстыру мүмкіндігі бар екенін дәлелдеген.

*Тұжырымдама:* Криптондық валюта әдеттегі қолма-қол ақша функциясын орындауға және жақын болашақта оларды толығымен ығыстыруға қабілетті, механикаландырылған салық жинау, роботталған қорғау және дүниежүзілік танылған ақша ретінде үйлестіру орталықтарын ұсынады. Криптовалюта тұрақсыздығы, әкімшілік салмағы және жеке тұлғалардың біздің күнделікті өмірімізге интеграциялауды қаламайтыны сияқты бірнеше кедергілер бар болса да, криптовалюта ұзақ уақыт ақша алмастыруы мүмкін, бірақ адамзат оны басты құрылғы деп тану үшін көп уақыт қажет.

*Кілт сөздер:* криптовалюта, блокчейн, орталықсыздандыру, транзакция, деректер қоры, құпиялылық, шифрлау.

**А.Ж. Тыштикбаева, А.Т. Жансейтов, Е.В. Борисова, А.Е. Турусбеков**

### **Криптовалюта: постоянная денежная замена или другой временный тренд**

#### **Аннотация**

*Цель:* Определить, можно ли выделить криптовалюту как эквивалент реальных денег в Казахстане.

*Методы:* SWOT-анализ (сильные стороны-слабые стороны-возможности-угрозы), подкрепленный результатами опроса.

*Результаты:* Большинство опрошенных утверждают, что они отказываются использовать криптовалюту из-за ее сложности, и это наглядно иллюстрирует, что люди не уверены в потенциале новых технологий, в то время как SWOT-анализ доказал, что у криптовалюты, безусловно, есть шанс заменить деньги из-за многочисленных возможностей.

*Выводы:* Несомненно, криптовалюта способна выполнять функции обычных наличных денег и полностью вытеснить их в ближайшем будущем, предлагая такие координационные центры, как механизированный сбор налогов, роботизированная защита и став всемирно признанными деньгами. Хотя существует несколько препятствий, таких как нестабильность криптовалюты, административный вес и нежелание отдельных лиц интегрировать ее в нашу повседневную жизнь, криптовалюта может быть длительной заменой денег, но человечеству нужно больше времени, чтобы признать ее главным устройством.

*Ключевые слова:* криптовалюта, блокчейн, биткойн, децентрализация, транзакция, база данных, конфиденциальность, шифрование.

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## **World experience in organizing deposit guarantee systems**

### ***Abstract***

*Object:* To identify possible ways to improve the deposit insurance system in the Republic of Kazakhstan on the basis of studying the world practice of deposit insurance and identifying the functioning of various models of deposit insurance systems.

*Methods:* Used such basic methods of cognition as the method of description and comparison, periodization, generalization and logical analysis.

*Results:* A retrospective review of the establishment of deposit insurance systems in different countries of the world and integration associations was carried out, differences in the organization of deposit insurance according to the American and continental models were identified, suggestions were made for further improvement of the practice of deposit insurance in the Republic of Kazakhstan.

*Conclusions:* The author defines further directions for the development of the global practice of deposit insurance by unifying deposit guarantee systems and the emergence of superstructure deposit protection systems within integration associations and the functioning of cross-border insurance systems. Based on international experience, the author formulated a conclusion about the need to change the legislative conditions for guaranteeing deposits in the Republic of Kazakhstan in terms of recognition by entities of the deposit insurance system of non-bank organizations, the extension of insurance liability to deposits of legal entities, and increasing the maximum security for guaranteed deposits. The author proposes a change in the practice of forming a deposit guarantee fund in order to improve the conditions for participation in the deposit guarantee system for second-tier banks.

*Keywords:* world models of deposit insurance systems, unification of deposit insurance systems, mandatory deposit guarantee system, deposit guarantee fund, financing methods, objects and subjects of deposit insurance, maximum insurance coverage.

### ***Introduction***

In the face of intensified crisis manifestations in the global financial markets and their negative impact on the solvency of banks, it becomes relevant to study the mechanisms for ensuring the financial stability of banking markets. In world practice, the creation of deposit insurance systems has become a tool to solve the problem of maintaining the financial stability of banking markets, maintaining the confidence of depositors in banks and other credit organizations, and preventing the massive withdrawal of bank deposits in the context of economic crises.

This study will allow us to summarize the global experience of deposit insurance, to identify features of the organization of deposit insurance within the framework of various models of these systems in order to identify possible ways to improve the deposit guarantee system in the Republic of Kazakhstan. In the literature, a number of authors discuss changes to the conditions of deposit insurance in order to provide the most reliable insurance protection for depositors of banks in their countries. It is a merit of the author that he allocated the best conditions for deposit insurance in various national practices and made proposals for amending domestic legislation. It is especially important to discuss the issue of changing the method of financing the deposit guarantee fund in the Republic of Kazakhstan in order to improve the conditions for participation in this system for second-tier banks.

As a scientific hypothesis, it can be assumed that, precisely, world experience in building deposit insurance systems will allow organizing the most optimal deposit guarantee system in the Republic of Kazakhstan.

### ***Literature Review***

The theoretical basis of the study was the scientific works of leading Kazakhstani, Russian and foreign economists on the study and comparison of deposit insurance systems in different countries of the world. Foreign scholars dedicated their work to the study of various aspects of theory, world practice and the analy-

sis of deposit insurance systems: Demirgyuch-Kunt A., Kane E., Laeven L., Boyle G., Stover R., Tivana A., Zhilievsky O. (2015), Zimovtsev V.I., Snytko A.E., Khodanchik G.E., Arzamastsev A., Kotina O. et al. (2019, 2020). The authors consider the historical aspect of creating deposit insurance systems in various countries, spend periodization phases of development of the deposit insurance system, classified deposit insurance systems that take place in the practice of foreign countries. Among foreign authors, the most famous is the work of Garcia Gillian G.H., devoted to a review of best practices for deposit insurance and their use in crisis management (2000).

Detailed study of US deposit insurance practices was conducted by Robb T. (2001). The banking crisis during the Great Depression led to the creation of a unified deposit insurance system in the United States represented by the Federal Deposit Insurance Corporation, which went through a series of development stages and successfully continues to this day. Russian scientists devoted their work to the study of American experience Turbanov A.V. and Evstratenko N.N. (2008), Zemtsov A.A. and Tsibulnikova V.Yu. (2017).

The study of the German model of deposit insurance is dedicated to the work of Beck T. (2001), which traces the history of deposit insurance against the existence of regional schemes until the creation of an insurance system for private commercial banks in 1974, and subsequently insurance systems for savings institutions and cooperative banks were created. A review of the current state and development prospects of deposit insurance systems in European countries was carried out by Kohlert W. (2015), Snell J. (2017), Scheible V., Zahari D., Bumsma P.J. et al. (2019).

The work of many scientists, including Kovalenko SB, Shernina PG, is devoted to the study of the organization of modern deposit insurance systems in the countries of the former Soviet Union. (2016), Urazova S.A., Isaeva P.G., Makhacheva D.M., Nurgazy A.R. (2017), Kononenko O.V., Zemtsova A.A., Tsibulnikova V.Yu. (2018). The works of these authors carry out a comparative analysis of the American and European models of deposit insurance systems, examine the practice of deposit insurance in the CIS countries and countries of the Eurasian Union, formulate suggestions for improving modern deposit guarantee practices in the Russian Federation and the Republic of Kazakhstan. Scientists' proposals are related to the justification of such basic conditions of deposit insurance as objects and subjects of deposit insurance, deposit currency, differentiation of tariff rates, the size of the maximum insurance coverage, etc.

### **Methods**

The object of the study was the historical processes of organizing deposit insurance systems in world banking practice.

The subject of the study was economic relations regarding the functioning of deposit insurance on the example of different countries and integration associations.

When writing the article, we used both general scientific methods of cognition, such as historical and logical methods, analysis and synthesis, induction and deduction, the method of scientific abstractions, the use of analogies, and empirical methods of cognition such as methods of generalization, periodization, description and comparison.

### **Results**

In world practice, two main models of the functioning of deposit insurance systems have formed: American and German. The American system involves the creation of a state corporation that provides insurance for deposits attracted by banks from private and corporate clients. The German system is focused on the creation of a number of deposit insurance funds associated with associations of banks of certain types. In this case, insurance is carried out on a voluntary basis and the initiative to create insurance funds belongs to banks and their associations, associations.

The first experience in creating a system of guaranteeing deposits in the form of insurance took place in the USA in the 19th century. Initially, legislation was drafted to regulate banking at the state level and various insurance systems appeared that attracted funds from banks. Subsequently, during the period of the Great Depression, in the midst of the most acute banking crisis and the massive bankruptcies of banks and other savings institutions, a unified deposit insurance system was created in the United States. For deposit insurance in commercial and savings banks, the Federal Deposit Insurance Corporation (FDIC) was founded, for deposit insurance of individuals in specialized savings institutions, the Federal Deposit Insurance Corporation in loan and savings associations (which was merged with the FDIC in 1989), for credit unions deposit insurance other funds and insurance companies operate.

Currently, the FDIC is an independent federal agency reporting to Congress, and banks and other credit organizations are not eligible to participate in the management of the system. The Federal Deposit Insurance

Corporation insures all deposit products, including current and savings accounts, deposit accounts, and certificates of deposit. The sum insured up to 250 thousand US dollars is calculated separately for each category of accounts owned by the client. The funds of individuals and corporate clients are subject to insurance. (Urazova, 2017) Until 1995, the USA was the only country that used contribution rates differentiated by degree of risk. Since then, the number of countries applying differentiated contribution rates has increased significantly (Republic of Kazakhstan, Argentina, Canada, Finland, Hungary, Italy, Sweden, Taiwan, Turkey, etc.)

Currently, the US deposit protection system is universal by the mid-90s. The FDIC insurance system covered up to 98% of all deposits, representing over 99% of the country's assets. A historical retrospective has shown that this particular model of deposit insurance turned out to be the most effective organization for protecting deposits of the population, and therefore was used in banking practice in many countries of the world.

The second model of the deposit insurance system operates in Germany and a number of its characteristics are also used in other countries of continental Europe (Austria, Switzerland, the Netherlands, and in part France). Deposit insurance is organized here by the banks themselves through their industry associations without the direct participation of the state, although with its indirect assistance. In Germany, the corresponding insurance funds are formed from formally voluntary contributions from banks and other savings institutions, but their sizes are small, and banks' contributions amount to about 0.03% of deposit balances per year. However, banks and savings institutions commit themselves to making additional contributions if necessary.

There are currently three insurance systems in Germany created by private banks, savings institutions and cooperative banks. All of these systems are voluntary and funded by participating banks. Deposit insurance is carried out by nine specialized organizations. Each of the three main banking groups in Germany has its own deposit insurance system. The funds of individuals and corporate clients are subject to insurance. Insurance indemnity is provided in the amount of up to 100 thousand euros, but in some cases the indemnity increases to 500 thousand euros.

It is believed that the advantages of continental deposit insurance systems are their independence from state policy, voluntary participation of banks, a minimum of formalism and red tape. (Table) In the period after the Second World War, the savings systems of Western Europe functioned satisfactorily and without losses for investors, which to some extent is associated with the competent organization of the deposit insurance system.

Table. Comparative analysis of the world's main Deposit insurance models.

American model criteria	Continental model Criteria
Insurance principle of protection of depositors (principle of formation of an insurance Fund)	Limited or no formal insurance Fund
State ownership and management of the insurance	Fund is a private (non-state) system
Almost complete coverage of the country's banking institutions	Low or no regular contributions from banks
Significant financial support from the state	The principle of voluntary and close cooperation of banks
Close cooperation with the FDIC, the state banking supervisory authorities	Strict supervision over banks by the Central banks and special government agencies
<i>Note-compiled by the author</i>	

The intensification of the spread of the practice of developing deposit insurance systems in various countries led to the creation of the International Association of Deposit Insurers (IASD) in May 2002. The "Guidelines for Effective Deposit Insurance Systems" developed by the Association are applied in various countries and are used by the International Monetary Fund and the World Bank as part of the Financial Sector Assessment Program to determine the effectiveness of deposit insurance systems.

The Islamic deposit insurance system, created in Bahrain in 1993, can be considered a special model. This system provides for fundraising to reimburse affected bank depositors only after recognition of the fact of bankruptcy. Later, a system of insurance of Islamic deposits was created, involving the preliminary formation of a fund of funds necessary for deposit insurance (Sudan, Turkey, Malaysia). The difference from traditional deposit insurance is that insurance premiums received from Islamic banks are accounted for separately from the traditional cash desk and are invested only in accordance with Sharia principles, in the event of a bankruptcy of a financial institution for Islamic deposits, payment priorities exist for various accounts.

(Kalieva, 2010) In 2007, the Islamic Deposit Insurance Group (IDIG) was established under the auspices of the Research Committee of the International Association of Deposit Insurers.

During the global financial crisis of 2008, deposit insurance has become even more common in world practice. According to the International Association of Insurers, in 2016, deposit insurance was carried out in 125 countries and another 34 countries were in the process of creating similar systems. For comparison: in 1974, deposit insurance was valid in 12 countries. The overwhelming majority of organizations that manage deposit insurance systems are created by governments and are under their control, the second largest number are organizations introduced by the government legislatively, but managed by private companies. At the same time, the number of organizations managed by central banks is growing.

A special stage in the development of deposit insurance systems was the creation of integration associations in the world, within the framework of which many national practices began to be coordinated. First, European national deposit insurance systems began to operate - in Norway since 1921, in Finland and Czechoslovakia since 1924, and subsequently this process began to become widespread. Since the 70s, when a common economic space began to take shape in Europe, one of the aspects of integration was the extension of the practice of guaranteeing deposits of individual European countries - EU members and to other countries of the Community.

By 1990, national deposit insurance systems (DIS) had been established in all countries of the European Union (EU). A study of deposit insurance systems in the EU countries shows that in some of them the American model with strong state regulation and the presence of a state deposit insurance fund is taken as a basis. In other countries, such as Germany, Italy, Austria, Belgium, France, and others, several deposit insurance systems operate simultaneously, both private and private, with state support.

In 1994, the European Parliament adopted the "EU Directives on Deposit Guarantee Systems", which prescribed the obligation for the presence of DIS in each country of the Union and the participation of all banks in it. The EU directives determined the types of guaranteed deposits, the terms for the payment of reimbursements, a phased increase in deposit guarantee limits (in 1994 no more than 20 thousand euros, from 2009 no less than 50 thousand euros). Currently, in most EU countries the guaranteed contribution is 100 thousand euros. It was envisaged to extend the protection to deposits in branches of foreign banks if the parent bank is registered in another EU country. At the same time, there were no strict restrictions on the choice of a financing system and the use of funds from guarantee funds for depositors.

Currently, the EU countries, in order to bring their DIS closer together, which have significant differences in governing bodies, the procedure for forming guarantee funds, the borders and conditions of compensation, etc. At this stage of integration, reinsurance and co-insurance mechanisms between the EU member states are used to ensure the stability of national deposit guarantee systems and make the transition to a single European DIS. As a result of the creation of a unified deposit insurance system, centralization of the funds of deposit guarantee funds will be centralized at the European level and a unified insurance cover will be provided for depositors throughout the EU.

In the countries of the former Soviet Union, such a long history of the existence of deposit insurance systems did not exist, and similar mechanisms to protect the stability of the banking market began to appear relatively recently. Currently, nationwide deposit insurance systems have been created in the countries of the Eurasian Economic Union (EAEU): in the Republic of Belarus in 1995, in the Republic of Kazakhstan in 2000, in the Russian Federation and the Republic of Armenia in 2003, in the Republic of Kyrgyzstan in 2008 year.

The EAEU member countries have created almost identical mandatory state deposit insurance systems (the so-called American model), there are unified institutions that ensure the formation and use of bank deposit guarantee funds. At the same time, there are certain differences in the conditions of deposit insurance in the member countries of this integration association. The identity of national deposit insurance systems in the EAEU countries will greatly facilitate the integration of these systems in order to create a single banking space and protect the interests of depositors of banks in these countries.

The deposit guarantee system created in the Republic of Kazakhstan ensures the protection of deposits and their guaranteed return (including deposit remuneration) in the event of bank bankruptcy. The deposit guarantee system in Kazakhstan is mandatory; it includes all second-tier banks licensed to accept deposits, open and maintain bank accounts of individuals, including individual entrepreneurs. The central element of the deposit guarantee system in the country is the Kazakhstan Deposit Guarantee Fund, the founder and sole shareholder of which is the National Bank of the Republic of Kazakhstan. The formation of the funds of the deposit guarantee fund is carried out at the expense of deductions of commercial banks, differentiated de-



pending on the risk of their operations. If there is a lack of funds for the full payment of deposits, the state often provides temporary financial support on the terms of the mandatory repayment of funds issued.

### ***Discussion***

The study of world experience in deposit insurance has revealed the features of its functioning in the practice of various countries. Foreign best practices in organizing deposit insurance systems require critical reflection and subsequent application in practice of the Republic of Kazakhstan.

The system of guaranteeing deposits operating in Kazakhstan complies with all the principles proclaimed by the International Association of Deposit Insurers. Nevertheless, we consider it appropriate to make a number of changes to the conditions for organizing and conducting deposit insurance:

1. To recognize subjects of the deposit insurance system along with second-tier banks and non-bank financial institutions, the list of operations of which includes attracting deposits of individuals. In world practice, two different approaches are used with respect to insurance of non-bank organizations: either they are included in the national deposit insurance system, or separate funds or insurance organizations are created for them. In order to ensure the stability of the deposit market in the Republic of Kazakhstan, it makes sense to include non-banking organizations in a single deposit guarantee system.

2. Extend insurance liability to deposits of not only individuals and individual entrepreneurs, but, according to the experience of other countries, guarantee deposits to legal entities, including institutional investors, whose funds are also modified deposits of the population (for example, in pension deposits and insurance payments for accumulative types of insurance). The experience of the Russian Federation, where the phased introduction of deposit insurance of legal entities is carried out, is indicative. At the first stage, insurance liability was extended to small enterprises (with the exception of individual entrepreneurs whose deposits were already insured), and at subsequent stages, medium and large enterprises will be provided with insurance cover. The introduction of legal entities deposit insurance will help increase the confidence of this category of customers in Kazakhstan banks and will lead to an increase in the deposit base.

3. To carry out a gradual increase in the size of the maximum security for guaranteed deposits. Currently, in the post-Soviet space, Kazakhstan provides its citizens with one of the highest levels of insurance coverage for deposits (about 40 thousand US dollars). As world experience shows, in most developed countries insurance limits are set at a higher level, and there are also examples of countries where deposits are guaranteed in full (UAE, Austria, Greece, Belarus). Raising the limits of insurance coverage in Kazakhstan will provide protection to large private capital, and subsequently to the capital of institutional investors.

4. Change the method of financing the deposit guarantee system. So, in accordance with the documents of the International Association of Deposit Insurers (IASB), there are three possible methods of financing the deposit insurance system: advance, ex-post and hybrid (combined). In the practice of the Republic of Kazakhstan, a combined method for the formation of a deposit guarantee fund is defined by law, which combines elements of advance financing and ex-post financing. This method provides for credit organizations to pay advance insurance contributions (advance financing) and, in addition, it is expected to receive funds from participants in deposit insurance after the fact - as special charges (additional and emergency) in the event of an unfavorable situation in the banking market. As a result of this, all extraordinary risks are completely transferred from the insurer to other participants of the deposit insurance system (banks).

We consider it expedient to introduce into practice the advance method of forming a deposit guarantee fund in Kazakhstan, which does not provide for the payment of additional and extraordinary contributions by banks in case of insufficient funds for the target reserve to fulfill obligations to investors. This will reduce the financial burden on participants in the deposit insurance system during periods unfavorable for them and will not contribute to the onset of a systemic crisis. In the event that the funds of the formed trust reserves are insufficient to fulfill the obligations on guaranteed deposits, we consider it possible to use the reinsurance mechanism as is assumed in traditional insurance, as well as to attract state sources of financing.

### ***Conclusion***

As a result of a retrospective study of world experience in building deposit insurance systems, it can be assumed that the following directions of development of the world deposit guarantee practice will be: ubiquitous creation of deposit insurance systems in various countries of the world as the most important factor in maintaining the financial stability of the state banking market; the functioning of cross-border insurance systems that ensure the free movement of capital across the territory of the member countries of the integration association; the emergence of superstructure deposit protection systems within the framework of integration

associations in order to coordinate national deposit insurance systems and unify the insurance coverage of depositors in the territory of the participating countries.

The study of world experience in the organization of deposit insurance systems and the identified prospects for its development made it possible to formulate certain conclusions and proposals in order to improve the practice of deposit insurance in the Republic of Kazakhstan. So, according to the experience of foreign countries, it is necessary to gradually extend the practice of deposit insurance to both bank and non-bank credit organizations; extending insurance liability to operations to attract deposits of legal entities; gradual increase in maximum security for guaranteed deposits; application of the advance method of forming a deposit guarantee fund.

As a hypothesis of this study, the assumption was made that, world experience in building deposit insurance systems will allow to organize the most optimal deposit guarantee system in the Republic of Kazakhstan. The formulated conclusions and suggestions confirm this hypothesis, since the most advanced ideas in organizing protection systems for deposits of citizens are introduced into the practice of the domestic banking market. Moreover, examples of other national practices make it possible to use their experience to optimize further the deposit guarantee system in the Republic of Kazakhstan.

The practical significance of the results of the study lies in the fact that the proposals developed can be used by the state supervisory authority for regulation and development of the financial market of the Republic of Kazakhstan to amend domestic legislation governing the organization of the deposit insurance system in order to further improve it.

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### **С.М. Воробьева**

#### **Салымдарға кепілдік беру жүйесін ұйымдастырудың әлемдік тәжірибесі**

##### **Аңдатпа**

*Мақсаты:* Депозиттерді сақтандырудың әлемдік тәжірибесін зерделеу және депозиттерді сақтандыру жүйесінің әртүрлі модельдерінің жұмыс істеуін анықтау негізінде Қазақстан Республикасында депозиттерді сақтандыру жүйесін жетілдірудің мүмкін жолдарын анықтау.

*Әдісі:* Танымның сипаттау және салыстыру, периодтау, жалпылау және логикалық талдау әдісі сияқты негізгі әдістері қолданылған.

*Қорытынды:* Әлемнің әртүрлі елдерінде және интеграциялық бірлестіктерде депозиттерге кепілдік беру жүйесін құруға ретроспективті шолу жасалған, американдық және континенталды модельдерге сәйкес депозиттерді сақтандыруды ұйымдастырудағы айырмашылықтар анықталған, Қазақстан Республикасында депозиттерді сақтандыру практикасын одан әрі жетілдіру бойынша ұсыныстар жасалған.

*Тұжырымдама:* Автор депозиттерге кепілдік беру жүйелерін біріктіру және интеграциялық бірлестіктер аясында жоғары деңгейдегі депозиттерді қорғау жүйелерінің пайда болуы, трансшекаралық сақтандыру жүйелерінің жұмыс істеуі арқылы депозиттерді сақтандырудың әлемдік тәжірибесін дамытудың болашақ бағыттарын анықтаған. Халықаралық тәжірибеге сүйене отырып, автор Қазақстан Республикасындағы депозиттерге кепілдік берудің заңнамалық шарттарын банктік емес ұйымдардың депозиттерін сақтандыру жүйесінің субъектілері деп тану, заңды тұлғалардың депозиттері алдындағы сақтандыру жауапкершілігін кеңейту және кепілдендірілген салымдардың максималды қауіпсіздігін арттыру тұрғысынан өзгерту қажеттілігі туралы тұжырым жасаған. Автор екінші деңгейдегі банктер үшін депозиттерге кепілдік беру жүйесіне қатысу шарттарын жақсарту мақсатында депозиттерге кепілдік беру қорын құру тәжірибесінде өзгерісті ұсынған.

*Кілт сөздер:* депозиттерді сақтандыру жүйесінің әлемдік модельдері, депозиттерді сақтандыру жүйесін біріздендіру, міндетті кепілдік беру жүйесі, депозиттерге кепілдік беру қоры, қаржыландыру әдістері, депозиттерді сақтандыру объектілері мен субъектілері, сақтандырудың ең жоғарғы деңгейі.

### **С.М. Воробьева**

#### **Мировой опыт организации систем гарантирования вкладов**

##### **Аннотация**

*Цель:* Определить возможные пути совершенствования системы страхования депозитов в Республике Казахстан на основе изучения мировой практики депозитного страхования и выявления особенностей функционирования различных моделей систем страхования вкладов.

*Методы:* Использовались такие основные методы познания, как метод описания и сравнения, периодизации, обобщения и логического анализа.

*Результаты:* Осуществлен ретроспективный обзор становления систем страхования депозитов в различных странах мира и интеграционных объединениях, выявлены различия в организации депозитного страхования по американской и континентальной моделям, выработаны предложения по дальнейшему совершенствованию практики страхования депозитов в Республике Казахстан.

*Выводы:* Автор определяет дальнейшие направления развития мировой практики страхования вкладов путем унификации систем гарантирования депозитов и появления надстроечных систем защиты вкладов в рамках интеграционных объединений, функционирования трансграничных систем страхования. С учетом мирового опыта автором сформулирован вывод о необходимости изменения законодательных условий гарантирования депозитов в Республике Казахстан в части признания субъектами системы страхования вкладов небанковских организаций, распространения страховой ответственности на вклады юридических лиц, повышения максимального обеспечения по гарантированным вкладам. Автор предлагает изменение практики формирования фонда гарантирования депозитов в целях улучшения условий участия в системе гарантирования депозитов для банков второго уровня.

**Ключевые слова:** мировые модели систем страхования депозитов, унификация систем страхования вкладов, обязательная система гарантирования вкладов, фонд гарантирования вкладов, методы финансирования, объекты и субъекты депозитного страхования, максимальное страховое обеспечение.

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### **Virtual business' opportunities and advantages for economy**

#### **Abstract**

*Objects:* The principal goal of this article is to gather data about virtual business' potential and distinguish its benefits for daily lives of people.

*Methods:* SWOT-analysis that will correspond on identifying four main aspects of this phenomenon: its strengths, weaknesses, opportunities and threats in the long-term.

*Results:* Virtual business seems to have many advantages compared to a regular one, as it is relatively cheaper to start, provides high efficiency and satisfaction of the workers. Nevertheless, it is clear that there are its own weaknesses such as lack of full trust between workers, scheduling conflicts and tough communication. There are many opportunities in this modern direction as getting work from a far-distanced locations and thus getting a wider choice of specialists in the company, also dealing with the unemployment issue in some countries. The main threats are loss of reputation, security and connection issues.

*Conclusions:* Proposing a set of elements for the development of a business model for virtual enterprises is the trend of the world. We were able to identify some elements needed to define the business model of a virtual enterprise. Which can stimulate economic growth of developing countries.

*Keywords:* entrepreneurs, virtual business, digital technologies, economy, benefits.

#### **Introduction**

It is clear that in the age of modern technologies and scientific development, achievements are rapidly involved into every sphere of our lives, and economics is not an exception. Virtual business is receiving lots of admire nowadays, and it can be noticed that it is transforming business and economics irreversibly. The main aim of this article is to determine whether virtual business is beneficial or cruel for society.

One of the first internet-shops was Amazon.com; it was founded in the year of 1995 (Amazon opens for business, 2015). Amazon.com was a virtual commerce pioneer. As an internet bookstore, it conveyed and brokered bookstore administrations without a physical retail store nearness; proficiently interfacing buyers and venders without the overhead of a brick-and-mortar area. As Web 2.0 administrations have risen in notoriety, numerous businesses have started to utilize these communicative and collaborative innovations to reach their clients. With increased security, PCI DSS compliance controls and more rigid observing capacities, credit card exchanges through the Web are indeed more secure than other choices such as phone or fax. Alongside interfacing clients with physical items, virtual businesses are beginning to supply imperative administrations as well. As of late, the online conveyance of proficient administrations such as organization, plan, and showcasing administrations have risen in notoriety. Such companies have refined their offerings to incorporate administrations such as a Virtual Right hand, in which the individual giving the benefit works out of his/her possess office and gives administrations through the Web or other innovation (McFadden, 2019).

#### **Literature Review**

A virtual business goes through all or most of its business done via the internet and with no physical premises to interact with customers face-to-face. A fully virtual company may outsource almost all of its business functions including product development, marketing, sales, shipping, etc. Nevertheless, most virtual businesses maintain some activities in-house. This type of business may still require a physical presence in the form of headquarters, warehouses, shipping and delivery hubs, and other functions.

Virtual retailing is widely spread form of virtual business. It started from early 1980s (before the wide-spread adoption of the internet and world-wide-web) as companies such as AOL and CompuServe began offering subscription-based, dial-up services such as email, chat, electronic bulletin boards, and forums, all delivered through primitive text-based interfaces on various computer platforms. Available services eventu-

ally expanded to include newswire, stock quotes, and online shopping (The Advantages and Disadvantages of Virtual Organization Design, 2018).

The emergence of the Internet opened up a tremendous online commercial center for virtual commerce. The advancement of security conventions such as SSL in 1994 empowered touchy information such as credit card data to be securely transmitted over the World Wide Web (WWW) and e-commerce detonated as a result. Shockingly, the move to web retailing was a case of as well much as well quick and amid the dot-com crash of 2000 – 2002, few web retailers survived. Those that did such as Amazon, eBay, Priceline, etc. got to be e-commerce mammoths and nowadays are flourishing.

Amazon is the foremost popular virtual retailer and the biggest within the world, with over 150,000 workers and over US\$90 billion in yearly income. Established by Jeff Bezos in 1994, it started as a virtual bookstore and with the approach of advanced books (ebooks) and e-readers has turned the distributing industry on its head. Conventional “bricks and mortar” booksellers such as Borders (who at its top had over 600 retail stores) were incapable to compete with Amazon’s colossal determination, more costs, and free shipping. Borders recorded for liquidation in 2011. In expansion to ebook deals, Amazon markets its possess line of Encourage ebook readers. On normal, 12 unused books are included to Amazon’s catalog each hour of the day. Amazon rapidly extended their online offerings to incorporate deals of CDs/DVDs, video recreations, hardware, and a tremendous assortment of dry merchandise in nearly each retail category counting attire, domestic, and plant, car, equipment, etc. In 2002 Amazon started offering cloud computing administrations and is presently the world’s biggest cloud computing supplier.

Non-retail businesses are moreover grasping the virtual trade show. One case is the IT division. These days it is common for program improvement firms to have workers in different distinctive geographic regions working collaboratively on differing ventures. This permits for the conveyance of labor to lower-cost wards as well as progression of client bolster over distinctive time zones. Mail and online meeting/conferencing encourage communication and decrease or dispose of the require for face-to-face interaction.

Numerous businesses virtualize portion of their operations by, for illustration, permitting representatives to work from domestic or outsourcing trade capacities such as human assets. Call/contact centers are another perfect candidate for virtualization and numerous organizations such as IBM and JetBlue permit their call center workers to work from domestic.

A Virtual Trade could be a company working with a really restricted physical nearness. Regularly these non-conventional organizations are built from scratch, depending much on the utilize of data and communication innovation, in specific Web innovation (E-Business). But they can too be shaped from an existing conventional firm through Outsourcing most or all of its capacities, such as planning, fabricating, showcasing, offering its products and administrations. Outsourcing happens when company employments an exterior firm to supply a vital trade work that might something else be done in-house. In its most progressed frame, outsourcing makes it conceivable to construct a completely virtual company with as it was one single representative: the businessman (Rebecca, 2020).

One of the primary issues facing startups and home businesses is having a separate physical address for their companies. Some choose to use PO Boxes, but that can create a lack of flexibility, privacy, and credibility to your business. So, what is another option for a startup looking to make a big impact?

A virtual business address is an ideal solution that will provide the best value with the benefits of having a commercial business address while working from home. It is a real physical street address that can be used for almost all purposes.

Numerous virtual business visionaries are being fruitful right now. I have assembled a rundown of eight online business visionaries that I for one follow and have worked with - people that all businessmen can take in something from, particularly those keen on beginning or growing an online business.

Jeff Taylor: As CEO of DEVISE, Jeff Taylor has broad experience building beneficial online organizations. What started as a website architecture and promoting firm in the long run changed into a substance that makes, markets, adapts and afterward in the end sells sites. Taylor and his accomplice Evan Lisabeth can develop online organizations at a fantastic rate.

Taylor focuses on the significance of making a move promptly, expressing, "I've had a large number of thoughts, however except if you put activity behind them, nothing will happen to the thought. There's no motivation to trust that the ideal time will begin a venture. Begin chipping away at it today."

Tim Seidler: Tim Seidler is a spouse and father of two kids that utilized online enterprise to totally turn his life around. He was once in a spot that numerous people get themselves - utilities killed and charges he

was unable to pay. He accomplished something that many do not have the mental fortitude to do - Seidler quit his place of employment and put 100 percent of his time and exertion into making an online salary, as of late selling an arrangement of sites for six figures!

Through his site, Get Niche Quick, Seidler writes about the highs and lows of his enterprising excursion. His straightforward methodology is useful, as businessmen will see that there are acceptable days and terrible days in any business. Seidler shares his present and future tasks and furthermore straightforwardly talks about his salary - sharing the two his best month-to-month profit just as day-by-day income. There certainly is not an absence of motivation and I energetically prescribe following Seidler's online business venture.

Dom Wells: Associate promoting is a colossal business, however in all actuality numerous business visionaries quit in light of the fact that they get debilitated when they don't see moment results. It requires some investment and a very much idea out technique to make sizeable income through subsidiary advertising. Dom Wells, an exceptionally fruitful online advertiser, offers direction to business visionaries that need to figure out how to bring in cash on the web.

His site, Human Proof Designs, offers preparing through its blog to the individuals who need to figure out how to begin a specialty site the right way - everything from specialty research to adaptation is secured. Wells does not simply talk the discussion. He strolls the walk, continually making new specialty locales to add to his portfolio and transforming his encounters into contextual analyses for his perusers (Gaille, 2017).

Steve Rendell: Steve Rendell is the man behind Texfly, an online asset for businessmen who are keen on making beneficial specialty sites and positioning them high in query items utilizing the intensity of private blog systems. Rendell's site stands apart in light of the fact that he is not hesitant to discuss what truly works.

A few SEO experts will move around the subject of private blog systems, rather trying to say that quality substance ought to be the principle center. Overall, private blog systems rank sites and a large number of the world class SEOs utilize similar strategies - they simply don't transparently examine it. The blog and private blog arrange outline that Rendell makes open on Texfly are certainly justified regardless of the read and something anybody with an online nearness will profit by incredibly.

Stuart Walker: A businessperson that works in online specialty promoting, Stuart Walker shares his understanding and information on his site, Niche Hacks. Walker is an under-30 business visionary that ventures to the far corners of the planet and brings in cash from a wide assortment of online resources. He is experiencing the fantasy many try to reach through online organizations.

Since such a significant number of individuals flame out and surrender before arriving at their latent capacity, Walker chose to begin a blog that centers around specialty look into and the alternate routes he by and by utilizes to make a sizeable full-time pay while living area free. His best data is free and something that every online businessperson can discover an incentive in - and his blog entries about developing traffic and advancing substance is something that each entrepreneur will gain from.

Tung Tran: To be fruitful online you must have a solid comprehension of how to rank naturally in the list items. This is gainful to business visionaries that need to begin their own online-based organizations just as those that need to rank their physical business sites. Tung Tran is an online businessperson that reports his prosperity and procedure on Cloud Living.

Tran talks about how to begin an online business and how to drive traffic utilizing a few methodologies. I hear such huge numbers of individuals talk about how they could not imagine anything better than to procure a living through an online business yet, they are not sure where to begin. Its business visionaries like Tran that give the motivation and handholding that helps various individuals become fruitful online entrepreneurs.

Alistair Gill: With an online nearness being such a critical piece of each business' displaying and special procedure you can never learn enough about substance the board frameworks, site improvement and web examination and measurements. I follow Alistair Gill to remain current with SEO patterns and in light of the fact that I make the most of his top to bottom logical posts on his own blog.

Gill's blog entries are pressed of helpful data and he gets a kick out of the chance to assemble bits of substance that highlight a while of information and research. I truly like perusing contextual analyses and aides with information - these are the kinds of blog entries that you can peruse and take the discoveries and apply them to your own business.

Melanie Duncan: Melanie Duncan is a genuine motivation to businessmen the world over. She refers to the accompanying as an issue huge numbers of us have: "In the event that you don't figure out how to ade-

quately take a shot at your business, rather than 'in' your business, you will always be unable to deliberately develop and you'll forfeit the personal satisfaction you merit." (Bernazzani, 2020).

An examination done by FlexJobs and Worldwide Work environment Analytics found that there has been a noteworthy upward design within the degree of individuals working remotely within the US. Within the run of one year, from 2016 to 2017, inaccessible work got to be 7.9% (DeRosa et al., n.d.). All through the foremost later five a long time, it got to be 44% and over the past 10 a long time it got to be 91%.

Between 2005 to 2017, there was a 159% expansion in remote work. In 2015, 3.9 million U.S. laborers were working remotely. Today that number is at 4.7 million, or 3.4% of the populace (Top Virtual Assistant Services Companies, n.d.).

In an article by Pragli, a virtual office item for remote groups, remote work was seen as progressively regular in urban communities with high salary levels. Why? "Remote work positions will in general be information work that pays more significant compensations, for example, programming building and bookkeeping."

Pragli additionally found that areas with little remote populaces for the most part have businesses "with physical work requirements, for example, farming and assembling." Many industrial employments like this is impossible from a home office.

80% of U.S. laborers state they would turn down an occupation that didn't offer adaptable working, and it's so critical to them that in excess of a third state they would organize such courses of action over having an increasingly lofty job. In another study, more than three-fourths of respondents referred to adaptable calendars and remote work as the best nonmonetary approaches to hold representatives.

Among execution based remote work insights, 85% of organizations affirm that profitability has expanded in their organization because of more prominent adaptability. In addition, 90% of representatives state considering progressively adaptable work courses of action and calendars would expand worker resolve, while 77% state permitting workers to work remotely may prompt lower working expenses.

Amerisleep's investigation of 1,001 telecommuters found that they are 57% almost certain than the normal American to be happy with their activity. In addition, about 80% of respondents portrayed their run of the mill anxiety during the weeks' worth of work as either "not focused" or just "modestly pushed."

FlexJobs' yearly overview found that 65% of respondents are gainful in their home office than at a customary work environment. Less interruptions and interferences, less worry from no drive, insignificant workplace issues, and a customized, calm condition are generally supporters of an increasingly gainful telecommuter.

In another overview, 47% said they firmly concur that adaptable work courses of action "would or do permit me to be progressively gainful" and 31% said they to some degree concur (Savitz, 2012).

Telecommuters will in general take less days off, likely because of less introduction to germs in a run of the mill office. As indicated by Indeed's Remote Work Survey, half of remote representatives said working from decreased their days off and 56% said it diminished their unlucky deficiencies.

In FlexJobs' Work-Life-Relationship overview, 86% of respondents figure an adaptable employment would lessen their pressure, and 89% said they figure they would have the option to care more for themselves.

As per a report done cooperatively with FlexJobs and Global Workplace Analytics, the normal yearly salary for most remote workers is \$4,000 higher than that of nontelecommuters. Along with that the capacity to set aside more cash—FlexJobs gauges \$4,000 every year—and telecommuters dominate the competition.

In the State of Remote Work 2019 study that pattern proceeded: "The pay breakdown of telecommuters overviewed was 74% gaining under \$100k every year, and 26% winning more than \$100k every year. In examination, the on location, laborer's pay breakdown was 92% winning under \$100,000 every year, 8% win over \$100k every year." (Andersen, 2018).

Adaptable work, particularly telecommuting, decreases traffic blockage, air contamination, and street mileage with either a diminished or wiped out drive into an office.

As indicated by the "2017 State of Telecommuting in the U.S. Worker Workforce" report: "Existing remote workers decrease ozone harming substance discharges by what could be compared to taking more than 600,000 autos off the street for a year. In the event that the work-at-home workforce extended to incorporate the individuals who could and needed to work from home portion of the time, the GHG reserve funds would like to take 10 million autos off the street."

Telecommuters have life span. As per the Remote Work Report, "42% of individuals who are 100% remote said they have been working remotely for over 5 years. 28% said they have been working remotely



for 3 to 5 years. 19% said they have been working remotely for 1 to 2 years. What's more, 11% said they had been working remotely for not exactly a year."

In ongoing report from Zillow, the greater part of home purchasers who work remotely state remote work affected a significant home change, regardless of whether that is moving to an alternate house (28%) or to an alternate area (24%) (Gaille, 2017).

Furthermore, 30% of home purchasers showed that a drive somewhere in the range of 15 and 29 minutes was their maximum. What's more, just 12% of home purchasers said they were happy to drive an hour or more.

Besides, 62% of Gen Z and millennial home purchasers work remotely in any event one day out of every week. Remote work gives the workforce's two most youthful ages, who are frequently troubled with understudy obligation, more alternatives with where they live, lessening the need to live approach enormous metropolitan downtown areas so as to expand profession potential.

At last, in an examination directed by Condeco Software, 41% of worldwide organizations studied state they effectively offer some level of remote working, while 60% give strategic scheduling openings that permit representatives to pick when to begin and end their workday. Upwork's "Future Workforce Report" predicts that 73% of all groups will have telecommuters by 2028.

It really is ideal, as well, since 75% of current telecommuters state that they intend to work remotely for the remainder of their vacation (DeRosa et al., n.d.).

Remote works measurements show benefits no matter how you look at it, running from natural to execution-situated benchmarks. In case you are keen on becoming familiar with remote work, we have you secured! Look at our blog to find out about the most recent in remote work, profession advancement, thus considerably more.

David Karney, who has been working at Virtual Business Partners full-time shares his opinion about his job and says that there are many advantages such as chill environment, friendly people, no dress code and accessibility of the location, also good HMO cover and several interest groups. However, he also states that the salary is not that competitive compared to other back offices, considering that out workload can be a bit much. There are too many extra-curricular company/squad activities and it can be quite distracting and puts unnecessary stress (Current Employee - Financial Planning Assistant, & Current Employee - Financial Planning Assistant, 2018).

Also, one of the current employees decided to share his opinion. "The activity is intricate with next to no help yet in the event that you catch on quickly and are open to inquiring about/showing yourself, you can do well here. HR is wonderful and I feel like they really pay special mind to their representatives and attempt to accomplish a reasonable work/life balance. Strategic scheduling, yearly raises, visit exercises/occasions (occasion party, family day, and so on), and astounding protection are the advantages of this activity. Then again, you are continually tossed new data and activities so you should act naturally spurred and sorted out. It can get upsetting. Progression is conceivable however you should have some karma and know the correct individual at the perfect time. The board tracks everything (efficiency, quality, and so forth) so they will know whether you are carrying out your responsibility and in the event that you are progressing admirably. So as to progress however, you must be near the perfect individual at a time they are hoping to advance. Turnover rate is high so despite the fact that there are coaches, you are all alone once you are never again new. Upper administration will in general spotlight on numbers and profitability and could think less about quality until the customer brings it up. Correspondence is poor. Heaps of compulsory additional time and they couldn't care less on the off chance that you have children or different commitments. Compel will in general stream down from upper administration so it is upsetting and tense. Mostly, the activity not well, the compensation is alright yet not extraordinary, and the structure is truly self-destructing. Nevertheless, strategic scheduling is decent, benefits are extraordinary, and there are acceptable collaborators there supporting each other to get past the day. It's a great job to get your foot in the entryway, get your experience, and get out (Columbia, n.d.)."

### **Methods**

To analyze this phenomenon, it was decided to use a SWOT-analysis method. This method was chosen due to various reasons. First idea to mention is that it will give a full see an overall picture of the virtual business, deduce why it is becoming trendy and obtain applicable data for further planning. This method also demonstrably illustrates the strengths of this type of business. Seeing them benefits in distinguishing possibilities and potential. in addition, while being provided with the weaknesses, there is a high chance and an

opportunity to try inverting them in order to take advantage and maximize the strength. It means that weak parts of the project might become insignificant if opportunities are incorporated.

### **Results**

In the result of the research work, the SWOT-analysis has been done.

**S:** The main strength of the virtual business is that it has lower overhead costs. It is no secret that money issue is known to be common these days, therefore people are widely searching for an alternative to a regular business, so they decide to conduct it online. Aetna Corporation was able to afford 2.7 million square feet of office space and save \$78 million due to a deviation toward virtual organizations and remote work. American Express also enjoyed lower overhead costs to the tune of nearly \$15 million due to a focus on hiring remote laborers (The Advantages and Disadvantages of Virtual Organization Design, 2018).

It is crucial to remember that employees are much more satisfied with their work. Operatives are more delighted when they are able to work from home. According to the results of the CoSo Cloud survey, 82% of remote workers have lower pressure levels. The research also proved that a shift toward remote work led to less absences and a higher morale (Briana, 2011). Not surprisingly, efficiency of their work highly increases due to their positive attitude towards work they do. Less than a third of the workers studied claim that they were able to gain achievements much faster.

**W:** There is an absence of mutual trust. Telecommuters occasionally talk up close and personal. Indeed, even organizations that utilize video visit arrangements frequently find that it is not sufficient to completely recreate fellowship that you construct when you cooperate in an office domain (Savitz, 2012). There is less open door for offhand discussions. You learn less about the individuals that you work with. Organizations with remote groups need to find a way to unite their groups and encourage that harmony. A Requirement for Expanded Spotlight on Correspondence. Since your groups will not have the option to pass data between themselves like they would in an office domain, you have to give them the apparatuses and strategies that guarantee that they effectively convey. Regardless of whether that implies setting up a leeway channel, jumping on every day calls, or basically reassuring them to email each other new data regularly — correspondence assumes a key job in the achievement of virtual associations.

**O:** Virtual business can be provided in developing countries, due to its relatively low costs. Residents who have an access to the worldwide web will be able to spread their ideas and share with the whole world.

Many services nowadays are almost impossible to reach due to high density of people, population experiences difficulties with such simple tasks, and virtual service is the key solution to this issue. There is an opportunity to technologize this kind of matter (Bernazzani, 2020).

Employers of the virtual businesses can afford themselves hire anyone from the world, opening boundaries and allowing to get more talented people from anywhere, receiving a variety of people and get better and more proficient people without limiting due to a certain geographical location. Therefore, it is also significant in organization's development and availability around the globe, so that this company will receive more customers than it would be possible if they were adhered somewhere (17 Stats About Remote Work in 2019, 2019).

**T:** There might roll up reputational dangers. An ineffectively run virtual group can prompt thumps to your notoriety. Some potential clients might be careful about working with an organization that has a virtual office with remote representatives and may not pay attention to your startup idea. Along with that, there are security and consistence Issues. Working remotely implies passing a ton of information to and from. In certain enterprises (wellbeing, money related, and so on.) it might be unreasonably dangerous for new businesses to decide on a virtual hierarchical structure.

### **Discussions**

We see a huge disadvantage in the lack of trust between employees and employer due to few face-to-face interactions. It is more preferred to have weekly or daily discussions online on such networks such as WhatsApp or Skype that allows having a video call between several people. This will not take a lot of time; however, it will contribute in improving relationships of people of one company, as they will get to know each other better and be able to operate a symbiosis. There is a high rise in educational services online and it will be very useful for people who cannot find time to go to a different place for studying so they prefer to stay home and still gain knowledge. Numerous shops are now working online and supplying goods in a couple of countries in a row. Virtual shopping is very popular nowadays without no reason. It is a fact that there are people who are searching for work very intensively and they find it almost impossible to get a job where

they live. It is expected that they are able to find a job online, whereas employers will be able to choose between bigger number of people and choose the one they find right for them.

### **Conclusions**

To sum up, many of daily activities of humankind are taken over by technologies. By improving the structure of business of today, virtual business is worth the fame it is receiving these days. In accordance with the SWOT-analysis results, it can be concluded that this type of business is just at the beginning of its development. There is a wide range of opportunities for entrepreneurs and people who are searching for a good job. Along with them, regular people are able to receive service just by ordering it online, which undoubtedly makes their lives easier. An innovative approach towards these kinds of jobs will contribute in technological development of humankind in the nearest future and opening of new vacancies for the new professions of the future. In CIS countries, these changes in virtual business happens slowly than in America and our article shows the technological advantage of USA.

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### **Экономика үшін виртуалды бизнестің мүмкіндіктері мен артықшылықтары**

#### **Аңдатпа**

*Мақсаты:* Виртуалды бизнес потенциалы туралы деректерді жинау және адамдардың күнделікті өмірі үшін оның артықшылықтарын қарастыру.

*Әдісі:* SWOT-талдау, ол осы құбылыстың төрт негізгі аспектілерін анықтауға сәйкес келеді: оның күшті және әлсіз жақтары, ұзақ мерзімді перспективада мүмкіндіктері мен қауіп-қатерлері.

*Қорытынды:* Виртуалды бизнес, шамасы, әдеттегі салыстырғанда көптеген артықшылықтары бар, өйткені ол іске қосу салыстырмалы түрде арзан, қызметкерлердің жоғары тиімділігі мен қанағаттануын қамтамасыз етеді. Дегенмен, қызметкерлер арасында толық сенімсіздік, жоспарлау қатқылғыстары және қатты коммуникация сияқты өзінің әлсіз жақтары да бар екені анық. Осы заманауи бағытта көптеген мүмкіндіктер бар: шалғай жерлерден жұмыс тауып, сол арқылы кейбір елдердегі жұмыссыздықпен айналысатын компаниядан мамандарды көптеп таңдауға болады. Негізгі қауіптер – беделді жоғалту, қауіпсіздік және байланыс мәселелері.

*Тұжырымдама:* Виртуалды кәсіпорындар үшін бизнес-модельді әзірлеу үшін элементтер жиынтығын ұсыну – бұл әлемдік үрдіс. Біз виртуалды кәсіпорынның бизнес-моделін анықтау үшін қажетті кейбір элементтерді анықтадық. Олар дамушы елдердің экономикалық өсуін ынталандыруы мүмкін.

*Кілт сөздер:* кәсіпкерлер, виртуалды бизнес, сандық технологиялар, экономика.

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### **Возможности и преимущества виртуального бизнеса для экономики**

#### **Аннотация**

*Цель:* Основная цель данной статьи — собрать данные о потенциале виртуального бизнеса и выделить его преимущества для повседневной жизни людей.

*Методы:* SWOT-анализ, который будет соответствовать выявлению четырех основных аспектов этого явления: его сильных и слабых сторон, возможностей и угроз в долгосрочной перспективе.

*Результаты:* Виртуальный бизнес, по-видимому, имеет много преимуществ по сравнению с обычным, так как он относительно дешевле в запуске, обеспечивает высокую эффективность и удовлетворенность работников. Тем не менее, очевидно, что есть и свои слабые стороны, такие как отсутствие полного доверия между работниками, конфликты планирования и жесткая коммуникация. Есть много возможностей в этом современном направлении, как получить работу из отдаленных мест и тем самым получить более широкий выбор специалистов в компании, также занимающейся проблемой безработицы в некоторых странах. Основные угрозы — это потеря репутации, проблемы с безопасностью и подключением.

*Выводы:* Набор элементов для разработки бизнес-модели для виртуальных предприятий — это мировая тенденция. Нам удалось выявить некоторые элементы, необходимые для определения бизнес-модели виртуального предприятия. Что может стимулировать экономический рост развивающихся стран.

*Ключевые слова:* предприниматели, виртуальный бизнес, цифровые технологии, экономика.

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