

ISSN 2518-1483 (Online),  
ISSN 2224-5227 (Print)

2018 • 5

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ  
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

## БАЯНДАМАЛАРЫ

---

### ДОКЛАДЫ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК  
РЕСПУБЛИКИ КАЗАХСТАН

### REPORTS

OF THE NATIONAL ACADEMY OF SCIENCES  
OF THE REPUBLIC OF KAZAKHSTAN

ЖУРНАЛ 1944 ЖЫЛДАН ШЫҒА БАСТАҒАН  
ЖУРНАЛ ИЗДАЕТСЯ С 1944 г.  
PUBLISHED SINCE 1944



Бас редакторы  
х.ғ.д., проф., ҚР ҰҒА академигі **М.Ж. Жұрынов**

Редакция алқасы:

**Адекенов С.М.** проф., академик (Қазақстан) (бас ред. орынбасары)  
**Величкин В.И.** проф., корр.-мүшесі (Ресей)  
**Вольдемар Вуйцик** проф. (Польша)  
**Гончарук В.В.** проф., академик (Украина)  
**Гордиенко А.И.** проф., академик (Белорус)  
**Дука Г.** проф., академик (Молдова)  
**Илолов М.И.** проф., академик (Тәжікстан),  
**Леска Богуслава** проф. (Польша),  
**Локшин В.Н.** проф. чл.-корр. (Қазақстан)  
**Нараев В.Н.** проф. (Ресей)  
**Неклюдов И.М.** проф., академик (Украина)  
**Нур Изура Удзир** проф. (Малайзия)  
**Перни Стефано** проф. (Ұлыбритания)  
**Потапов В.А.** проф. (Украина)  
**Прокопович Полина** проф. (Ұлыбритания)  
**Омбаев А.М.** проф., корр.-мүшесі (Қазақстан)  
**Өтелбаев М.О.** проф., академик (Қазақстан)  
**Садыбеков М.А.** проф., корр.-мүшесі (Қазақстан)  
**Сатаев М.И.** проф., корр.-мүшесі (Қазақстан)  
**Северский И.В.** проф., академик (Қазақстан)  
**Сикорски Марек** проф., (Польша)  
**Рамазанов Т.С.** проф., академик (Қазақстан)  
**Такибаев Н.Ж.** проф., академик (Қазақстан), бас ред. орынбасары  
**Харин С.Н.** проф., академик (Қазақстан)  
**Чечин Л.М.** проф., корр.-мүшесі (Қазақстан)  
**Харун Парлар** проф. (Германия)  
**Энджун Гао** проф. (Қытай)  
**Эркебаев А.Э.** проф., академик (Қырғыстан)

«Қазақстан Республикасы Ұлттық ғылым академиясының баяндамалары»

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Меншіктенуші: «Қазақстан Республикасының Ұлттық ғылым академиясы» Республикалық қоғамдық бірлестігі (Алматы қ.)  
Қазақстан республикасының Мәдениет пен ақпарат министрлігінің Ақпарат және мұрағат комитетінде 01.06.2006 ж.  
берілген №5540-Ж мерзімдік басылым тіркеуіне қойылу туралы куәлік

Мерзімділігі: жылына 6 рет.

Тиражы: 500 дана.

Редакцияның мекенжайы: 050010, Алматы қ., Шевченко көш., 28, 219 бөл., 220, тел.: 272-13-19, 272-13-18,  
<http://nauka-nanrk.kz>, reports-science.kz

© Қазақстан Республикасының Ұлттық ғылым академиясы, 2018

Типографияның мекенжайы: «Аруна» ЖК, Алматы қ., Муратбаева көш., 75.

Главный редактор  
д.х.н., проф., академик НАН РК **М. Ж. Журинов**

Редакционная коллегия:

**Адекенов С.М.** проф., академик (Казахстан) (зам. гл. ред.)  
**Величкин В.И.** проф., чл.-корр. (Россия)  
**Вольдемар Вуйцик** проф. (Польша)  
**Гончарук В.В.** проф., академик (Украина)  
**Гордиенко А.И.** проф., академик (Беларусь)  
**Дука Г.** проф., академик (Молдова)  
**Илолов М.И.** проф., академик (Таджикистан),  
**Леска Богуслава** проф. (Польша),  
**Локшин В.Н.** проф. чл.-корр. (Казахстан)  
**Нараев В.Н.** проф. (Россия)  
**Неклюдов И.М.** проф., академик (Украина)  
**Нур Изура Удзир** проф. (Малайзия)  
**Перни Стефано** проф. (Великобритания)  
**Потапов В.А.** проф. (Украина)  
**Прокопович Полина** проф. (Великобритания)  
**Омбаев А.М.** проф., чл.-корр. (Казахстан)  
**Отелбаев М.О.** проф., академик (Казахстан)  
**Садыбеков М.А.** проф., чл.-корр. (Казахстан)  
**Сатаев М.И.** проф., чл.-корр. (Казахстан)  
**Северский И.В.** проф., академик (Казахстан)  
**Сикорски Марек** проф., (Польша)  
**Рамазанов Т.С.** проф., академик (Казахстан)  
**Такибаев Н.Ж.** проф., академик (Казахстан), зам. гл. ред.  
**Харин С.Н.** проф., академик (Казахстан)  
**Чечин Л.М.** проф., чл.-корр. (Казахстан)  
**Харун Парлар** проф. (Германия)  
**Энджун Гао** проф. (Китай)  
**Эркебаев А.Э.** проф., академик (Кыргызстан)

Доклады Национальной академии наук Республики Казахстан»

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Собственник: Республиканское общественное объединение «Национальная академия наук Республики Казахстан» (г. Алматы)

Свидетельство о постановке на учет периодического печатного издания в Комитете информации и архивов Министерства культуры и информации Республики Казахстан №5540-Ж, выданное 01.06.2006 г.

Периодичность: 6 раз в год.

Тираж: 500 экземпляров

Адрес редакции: 050010, г.Алматы, ул.Шевченко, 28, ком.218-220, тел. 272-13-19, 272-13-18

<http://nauka-nanrk.kz> [reports-science.kz](http://reports-science.kz)

---

©Национальная академия наук Республики Казахстан, 2018 г.

Адрес типографии: ИП «Аруна», г.Алматы, ул.Муратбаева, 75

**E d i t o r i n c h i e f**doctor of chemistry, professor, academician of NAS RK **M.Zh. Zhurinov****E d i t o r i a l b o a r d :****Adekenov S.M.** prof., academician (Kazakhstan) (deputy editor in chief)**Velichkin V.I.** prof., corr. member (Russia)**Voitsik Valdemar** prof. (Poland)**Goncharuk V.V.** prof., academician (Ukraine)**Gordiyenko A.I.** prof., academician (Belarus)**Duka G.** prof., academician (Moldova)**Iolov M.I.** prof., academician (Tadjikistan),**Leska Boguslava** prof. (Poland),**Lokshin V.N.** prof., corr. member. (Kazakhstan)**Narayev V.N.** prof. (Russia)**Nekludov I.M.** prof., academician (Ukraine)**Nur Izura Udzir** prof. (Malaysia)**Perni Stephano** prof. (Great Britain)**Potapov V.A.** prof. (Ukraine)**Prokopovich Polina** prof. (Great Britain)**Ombayev A.M.** prof., corr. member. (Kazakhstan)**Otelbayv M.O.** prof., academician (Kazakhstan)**Sadybekov M.A.** prof., corr. member. (Kazakhstan)**Satayev M.I.** prof., corr. member. (Kazakhstan)**Severskiy I.V.** prof., academician (Kazakhstan)**Sikorski Marek** prof., (Poland)**Ramazanov T.S.** prof., academician (Kazakhstan)**Takibayev N.Zh.** prof., academician (Kazakhstan), deputy editor in chief**Kharin S.N.** prof., academician (Kazakhstan)**Chechin L.M.** prof., corr. member. (Kazakhstan)**Kharun Parlar** prof. (Germany)**Endzhun Gao** prof. (China)**Erkebayev A.Ye.** prof., academician (Kyrgyzstan)**Reports of the National Academy of Sciences of the Republic of Kazakhstan.****ISSN 2224-5227****ISSN 2518-1483 (Online),****ISSN 2224-5227 (Print)**

Owner: RPA "National Academy of Sciences of the Republic of Kazakhstan" (Almaty)

The certificate of registration of a periodic printed publication in the Committee of Information and Archives of the Ministry of Culture and Information of the Republic of Kazakhstan N 5540-Ж, issued 01.06.2006

Periodicity: 6 times a year

Circulation: 500 copies

Editorial address: 28, Shevchenko str., of.219-220, Almaty, 050010, tel. 272-13-19, 272-13-18,

<http://nauka-nanrk.kz> / [reports-science.kz](http://reports-science.kz)

**REPORTS OF THE NATIONAL ACADEMY OF SCIENCES  
OF THE REPUBLIC OF KAZAKHSTAN**

ISSN 2224-5227

<https://doi.org/10.32014/2018.2518-1483.16>

Volume 5, Number 321 (2018), 105 – 110

UDC 339.56.055

**E. Tlessova, A. Khoich, N. Kurash**L.N. Gumilyov Eurasian National University  
t.ilvira@mail.ru, ayjika@mail.ru, naz-9393@list.ru**ECONOMY OF CENTRAL ASIAN COUNTRIES**

**Abstract.** The modern world is characterized by instability, a change in balance sheets and a change in the system of international relations. After the collapse of the Soviet Union, Central Asia was at the center of attention of various external forces. The region was at the intersection of interests of both regional and global players. For the world economy, the Central Asian region is interesting, first of all, as a source of raw materials. Oil, gas, coal and metals are currently the most popular exported goods, in turn, agricultural products also provide dynamic growth for last years.

During the quarter century independence Central Asian countries has developed in different ways and trajectories. One has made big economic impulse and other one has slow down and face big crises. But all the time period Central Asian countries have common priorities in economy and development. Because those countries are connected not only by geographically, at the same time culturally, mentally even in some cases economic political issues.

Article is about economic development and tendencies of Central Asian states as whole and separately. Author gives from general to detailed analyses of GDP growth and its structure. On the other hand analyzes investment climate and investment attractiveness of countries. Which explains countries' and region's current economic situation.

**Key words:** Central Asia, Central Asian economy, economic development, economic growth, investment.

**INTRODUCTION**

In modern political understanding, Central Asia is Kyrgyzstan, Uzbekistan, Turkmenistan, Tajikistan and Kazakhstan. There are other definitions, in particular - according to the UNESCO version - the region includes Mongolia, Western China, northern India and northern Pakistan, northeastern Iran, Afghanistan, areas of Asian Russia to the south of the taiga zone and five former Soviet republics of Central Asia. We will use a narrower first interpretation of the region and consider the situation in the economies of these post-Soviet Asian republics. To some extent, the socio-economic situation, mentality and cultural background in these countries can be called similar [1].

The Central Asian region has a modest share in the global economy - about 0.3%. With a share in the world population of about 1%, the economy is about 3 times behind in terms of GDP.

The new economic role of this region is caused by a number of factors:

- the region has many valuable resources, primarily large hydrocarbon reserves;
- located in the center of the Eurasian continent, the region plays an important role in maintaining the security and stability of the mainland,
- as well as due to the presence of a wide transport and communication network, the countries of the region use their full potential as transit states.

**MAIN PART**

For the world economy, the Central Asian region is interesting, first of all, as a source of raw materials. Oil, gas, coal and metals are currently the most popular exported goods, in turn, agricultural products also provide dynamic growth.

According to confirmed data, the total volume of oil reserves in the countries of Central Asia reaches 15-31 billion barrels, and the total volume of natural gas reserves is 230-360 trillion. cubic meters, which

is 7.2% of the world's oil resources and 7% of gas resources. The region ranks 10th in the world in terms of coal mining, and the 19th generation of electricity. It accounts for the large reserves of ferrous, non-ferrous and rare metals, for the total gold production (Uzbekistan - 90 tons, Kyrgyzstan-24, Kazakhstan - 18.9), takes 9th place [2].

The states of Central Asia have a powerful mining, fuel and energy, metallurgical and chemical industries concentrated mainly in Kazakhstan, Uzbekistan and Turkmenistan. In terms of oil production, Kazakhstan ranks first (80 million tons); The second is Turkmenistan (6 million tons) and the third is Uzbekistan (5 million tons). The deposits of natural gas are rich in Turkmenistan, which by reserves ranks second in the CIS after Russia. Deposits of coal are available in all the republics, with the exception of Turkmenistan.

Electric power in the countries of Central Asia is developed relatively well. Kazakhstan produces up to 90 billion kW / h; Uzbekistan is 52-54 billion kW / hour.

Metallurgy is unevenly developed. Kazakhstan is singled out, smelting up to 2.0 million tons of steel per year, and Uzbekistan (0.6 million tons). The polymetallic products are diverse: lead, zinc, copper, chromium (Kazakhstan); lead, zinc, copper, gold, silver, etc. (Uzbekistan)[3].

The chemical industry is concentrated on the production of mineral fertilizers. The exception is Kyrgyzstan, where the chemical industry has not developed.

Mechanical engineering is developing rapidly. It is concentrated in Kazakhstan and Uzbekistan, where cars and trucks, buses are produced [4].

The light and food industries are more or less developed everywhere. Agriculture plays a significant role in the economy of Central Asia. The leading place belongs to agriculture. The main arrays of irrigated land are in Uzbekistan, Turkmenistan and Tajikistan, which specialize in the production of industrial crops and, mainly, cotton. In turn, Kazakhstan and Kyrgyzstan specialize in the production of grain crops. Grain growing is also developed in Uzbekistan.

Sheep breeding occupies a leading position in livestock breeding. This applies to a greater extent to Kazakhstan, Kyrgyzstan, Uzbekistan and Turkmenistan. Breeding cattle is characteristic of suburban areas and densely populated oases.

Table 1 - GDP 2012-2017 by countries, (USD billion)

	2012	2013	2014	2015	2016	2017
Kazakhstan	208	236,6	221,4	184,4	137,3	159,41
Uzbekistan	51,82	57,69	63,07	66,9	67,01	48,72
Turkmenistan	35,16	39,2	43,52	35,8	36,18	42,36
Kyrgyzstan	6,61	7,34	7,47	6,68	6,81	7,56
Tajikistan	7,63	8,51	9,24	7,85	6,95	7,15

The last 3 years, the leader of the region of Kazakhstan, the GDP in US dollars is falling. This is due to both the depreciation of the national currency and the problems in the economy of the republic. The second largest economy - Uzbekistan - on the contrary, is growing steadily.

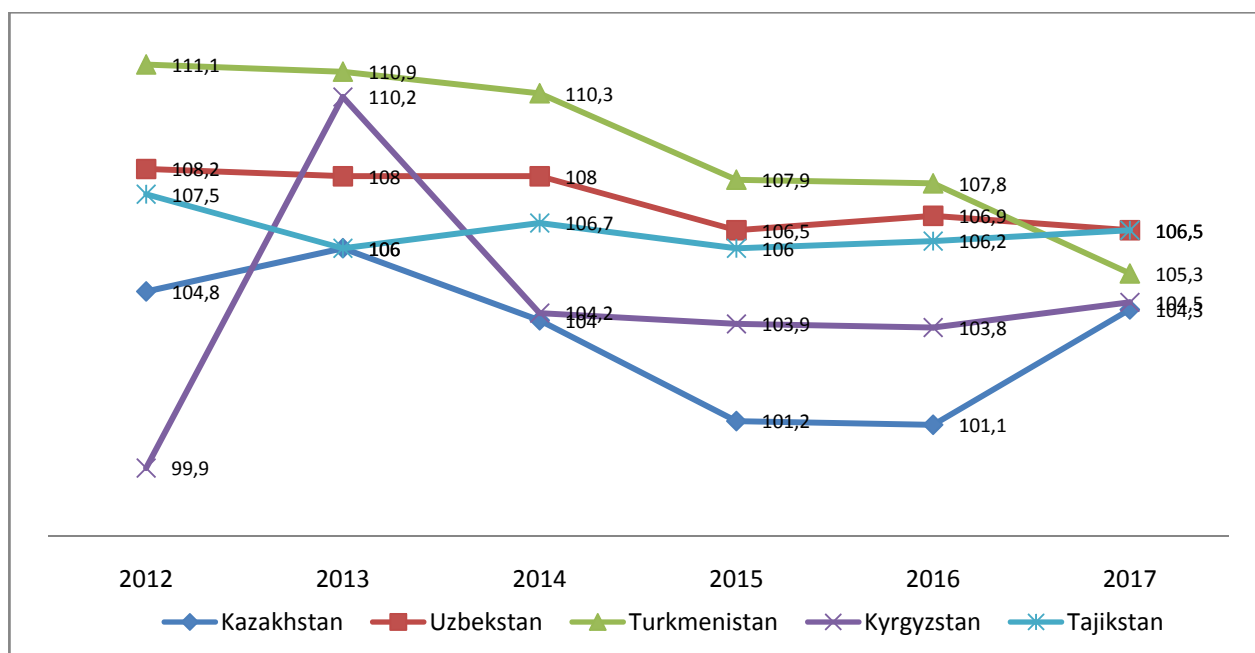
If you look at GDP growth, you can see that Kazakhstan has the smallest growth, which is associated with large volumes of this country, while small economies can more easily achieve high growth due to the "low base" [5].

GDP per capita, also show that the leaders are the exporters of Kazakhstan and Turkmenistan. Although Uzbekistan is also an oil exporter, its GDP per capita is lower both due to smaller production volumes and more population.

The level of inflation in the region is at a fairly high level. On average, by 6-7% in the period under review. It is also necessary to note the volatility of the price dynamics. So in 2016 there was a sharp jump in prices to Kazakhstan and in the same period a fall in prices in Uzbekistan and Kyrgyzstan.

The leader in terms of foreign trade is Kazakhstan. Although in 2014-2016 years the decline of this indicator was noted due to the depreciation of the national currency against the dollar and the fall in prices for Kazakhstan's main export commodity - oil. On the second place in terms of foreign trade are quite industrially developed Uzbekistan and Turkmenistan. At the same time in Uzbekistan this indicator is the most stable (about 25 billion US dollars). The least volumes of foreign trade are observed in countries with less developed industry and economies in the region: Kyrgyzstan and Tajikistan.

Graph 1 - GDP growth rate 2012-2017 by countries, (%)



**KAZAKHSTAN.** Kazakhstan is undoubtedly the leader among other countries in Central Asia in terms of the level of development and capacity of the economy. In 2016, Kazakhstan occupied 56th place among the 191 countries in terms of GDP. More than half of the total GDP of the Central Asian region is in Kazakhstan. At the same time, the dynamics of GDP growth is lower than in other countries of the region due to a higher comparison base. The Republic of Kazakhstan has significant deposits of mineral and energy resources - 99 of the 110 elements of the Mendeleev table have been discovered in the bowels of the country, 70 have been explored, more than 60 have been used, including 8% of the world's iron ore reserves and about 25% of uranium. The country has one of the most powerful oil and gas potentials in the Caspian region: Kazakhstan accounts for about 3% of the world's oil reserves and 1.2% for natural gas, and the country continues to increase energy production and exports. Kazakhstan is also one of the main producers of wheat in the region.

**UZBEKISTAN.** Uzbekistan also has significant natural and production potential, based on natural gas reserves (7.8 trillion m<sup>3</sup>), oil (1 million tons), copper, uranium, phosphorites, rare earths and precious metals. The republic holds the fourth place in the world for gold reserves, and the seventh for its extraction.

Uzbekistan is one of the top three countries in the world for the production and export of cotton, in addition, also exports gold, uranium ore, mineral fertilizers, natural gas, textile and food products, metals, cars. The amount of exports in 2010 amounted to more than 13 billion dollars, imports (mainly industrial products) - 8.8 billion dollars. One of the main articles of foreign exchange earnings in the economy of Uzbekistan is a powerful mineral and raw materials base. In the city of Asaka there is a large plant "GM Uzbekistan" for the production of cars under the licenses of Daewoo and Chevrolet, in addition, the only aircraft plant in Central Asia was opened in the country.

Among modern priorities of development of Uzbekistan is to ensure stable and balanced growth rates, structuring and modernization of the economy, technical and technological renewal of its most important branches, further liberalization of the tax policy; creating a maximum of favorable conditions for private business and a gradual decrease in the state's presence in the economy; attraction of foreign investments; expansion of the scale of reforms in the banking and financial system and in the municipal economy. The focus is on fuel and energy and gas and petrochemical complexes, energy, gold mining and non-ferrous metallurgy, chemical and textile industries, and the sphere of information and communication technologies.

**TURKMENISTAN.** In Turkmenistan, oil, gas, sulfur and potassium are abundant. The main branches of industry in Turkmenistan include refining and processing of oil and natural gas; production of glass, fabrics (mainly cotton) and clothing; the food industry. Turkmenistan actively encourages interested foreign companies to participate in the development of gas fields on the Caspian Sea shelf - the current gas production figures in the republic should grow three times by 2030 [6]. Therefore, one of the most important events in Turkmenistan is the annual International Gas Congress demonstrating continued by the current leadership of Turkmenistan to reduce the level of foreign policy and external economic isolation of the country that took place during the presidency of Parmurat Niyazov.

This small country in terms of natural gas reserves ranks 4th in the world, having the second largest gas field. There are also rich oil reserves. In addition to oil and gas, Turkmenistan has significant reserves of sulfur, iodine, bromine, mirabilite, lead, various raw materials for the construction and finishing industry.

The basis of the economy of Turkmenistan at present is the fuel and energy complex, which includes oil and gas, as well as oil refining industries, they bring the main foreign exchange earnings and form the basis of external commodity turnover. According to various estimates (OPEC, the independent US agency EIA, the British oil giant BP), Turkmenistan produces about 200-260 thousand barrels of oil daily (28-36 thousand tons) and annually - about 70 billion cubic meters of gas, 11th place in the world.

Turkmenistan's plans for the further development of this industry are grandiose. Thus, according to the program of development of the oil and gas industry of Turkmenistan for the period up to 2030, it is planned to increase oil production to 110 million tons by 2030, and to 250 billion cubic meters of natural gas by 2030. To achieve these goals, the government of Turkmenistan is taking measures to attract foreign investments to this branch of the national economy. The official information is not available on the exact amount of foreign investment in the country's economy. According to some media reports, the amount of foreign investment in the oil and gas industry in 2014 was about 10 billion US dollars and continues to grow. Quite possibly, this is true, since Turkmenistan does increase oil and gas production from year to year.

In view of the widespread cotton production in Turkmenistan, the textile industry is well developed. There are enterprises of the chemical and metallurgical industry on the territory of the country, as well as the development of the Caspian shipbuilding industry. The agricultural branch of the economy is also developed in Turkmenistan. The leading agricultural sector is cotton growing, and grain growing is also highly developed - the production of wheat and rice. There are farms engaged in horticulture, melon growing, vegetable growing. Livestock breeding is represented mainly by horse breeding (Turkmenistan is the birthplace of Akhalteke horses), sheep breeding and camel breeding, the production of cattle is less developed.

**KYRGYZSTAN.** The economy of the republic consists mainly of industry, the agricultural sector of the service sector, and in the service sector employs less than half of the able-bodied population. In 2011, the volume of remittances made up 29% of the country's GDP. These are the dominant sectors that provide employment and economic growth in the country. The industry is represented by energy and mining. In the 1990s, the republic experienced de-industrialization and a large recession even by Central Asian standards: Kyrgyzstan's GDP in 1990-2001 declined 10.35 times (in neighboring Uzbekistan for the same time it was 3.45 times). A significant part of agricultural products is exported. An important part of Kyrgyzstan's income is tourism. In Kyrgyzstan, there are huge reserves of antimony, mercury, lead, zinc and other precious metals, as well as significant hydropower resources.

**TAJIKISTAN.** The economy of Tajikistan is oriented to agriculture, the country is rich in mineral resources (hard coal). In the structure of Tajikistan's exports, about 80% is occupied by raw materials and materials: aluminum, cotton, ready-made foods, precious and semiprecious metals and stones. Tajikistan possesses inexhaustible reserves of water resources, and also concentrated in itself more than 55% of all water resources of the region. During the years of independence the structure of employment has changed greatly, industrialization of the economy has taken place. Achievement of the status of the country, as an industrial-agrarian, will ensure the implementation of the National Development Strategy of the Republic of Tajikistan until 2030. Since 2000, there has been a steady economic growth of 5-7%. For the development of the economy, 4 free economic zone (FEZ) have been opened by the government and they are functioning well today. A number of economic privileges have been granted to FEZ subjects. They are



exempt from taxes and customs duties. All administrative barriers for the development of FEZ have been removed. In 1991 - 2013 the share of employed in agriculture decreased from 36% to 19%, while the share of employed in industry increased from 21% to 51%, in construction it decreased from 8% to 3%, in the service sector from 35% to 27% . The economy of Tajikistan is vulnerable to external shocks due to a narrow export structure and high import dependence. High level of labor migration. A fairly large proportion of the rural population lives in poverty.

The most significant sector of Tajikistan's economy is agriculture, its share in 2015 accounted for more than a quarter of GDP. Further (in descending order on the contribution to GDP) are: industry, trade, transport, communications, services, construction and other industries. The main agricultural crop of Tajikistan is cotton, up to ninety percent of the raw materials are exported. Also, Tajikistan grows grain, vegetables, fruits, tobacco, potatoes, developed cattle. On the territory of the country there are large reserves of silver, gold, iron, lead, antimony, coal, table salt, precious stones, oil and gas. Explored deposits provide raw materials for such industries as chemical, mining, metallurgical, engineering [7].

## CONCLUSION

A very well-developed and promising industry is the electric power industry, Tajikistan is a major exporter of electricity, in terms of hydropower reserves the country is on the eighth place in the world. But still the largest and most significant industry is light industry. In Tajikistan, a lot of enterprises that process agricultural raw materials: cotton, silk, as well as carpet weaving, sewing and knitting factories. The main foreign trade partners of Tajikistan are Russia, China, Kazakhstan, Turkey. The share of partner countries in the CIS accounts for almost half of the total foreign trade turnover. As in many other countries of the former USSR, labor migration in Tajikistan is very common. The bulk of labor migrants, and their number is more than half a million, is on earnings in Russia. The money transferred by means of money transfers is a significant part of GDP. Despite the fact that Tajikistan is not a rich state, analysts give a very successful forecast for the further development of its economy. The main thing that can favorably affect the pace of economic growth is Tajikistan's integration into the global economy. One of the ways of such integration is its entry into the Customs Union. In addition, analysts give favorable forecasts regarding the growth of prices for aluminum and cotton, which are the main export items in Tajikistan, which will bring additional revenues to the budget.

As a conclusion we can say that Central Asian countries are abandon in natural recourses and agricultural industry. At the same time government of these states making strong economic policy to diversify economy and transforming the GDP structure steady.

## REFERENCES

- [1] ADB. 2016. Technical Assistance for Enhancing Coordination of the Central Asia Regional Economic Cooperation Program. Manila.
- [2] ADB. 2016. Operational Plan for Regional Cooperation and Integration, 2016–2020: Promoting Connectivity,
- [3] Competitiveness, Regional Public Goods, and Collective Action for Asia and the Pacific. Manila.
- [4] The TA first appeared in the business opportunities section of ADB's website on 11 April 2018.
- [5] ADB. 2017. CAREC 2030: Connecting the Region for Shared and Sustainable Development. Manila.
- [6] Asian Economic Integration Monitor - July 2012 <http://www.adb.org/publications/asian-economic-integration-monitor-july-2012>
- [7] ESCAP (2014). Economic Diversification in Asian Landlocked Developing Countries: Prospects and Challenges <http://www.unescap.org/resources/economic-diversification-asian-landlocked-developing-countries-prospects-and-challenges>
- [8] Shakulikova G.T, Zhansagimova A.E. Agro-industrial integration in foreign countries. Actual problems of modern science and education materials of the international scientific and practical conference Issue 16 volume 1 Kirov 2017g. p.161-167 SBN 978-5-7139-0511-8 (In Russian)
- [9] Aubakirov Y.A, Maydyrova A.B. The role of man as a productive force in the labor market // Vestnik KazNU. Al-Farabi .- 2002.- No. 1 (29) .- P.41-43. . ISBN 978-601-04-2045-8 (In English)
- [10] Omarkhanova Zh.M, Integration of Financial Markets under the Conditions of the Eurasian Economic Union / Ed. - Journal of Advanced Research in Law and Economics, [S.l.], v. 8, n. 6, p. 1779-1784, mar. 2018. ISSN 2068-696. (in English)

УДК 339.56.055

Э. Тлессова, А. Хойч, Н. Кураш

Евразийский национальный университет им.Л.Н. Гумилева

### ЭКОНОМИКА ЦЕНТРАЛЬНО-АЗИАТСКИХ СТРАН

**Аннотация.** Современный мир характеризуется нестабильностью, изменением балансов и системы международных отношений. После распада Советского Союза Центральная Азия находилась в центре внимания различных внешних сил. Регион был на пересечении интересов как региональных, так и глобальных игроков. Для мировой экономики регион Центральной Азии интересен, прежде всего, как источник сырья. Нефть, газ, уголь и металлы в настоящее время являются наиболее популярными экспортируемыми товарами, в свою очередь, сельскохозяйственные продукты также обеспечивают динамичный рост за последние годы. В течении четверти век независимость стран Центральной Азии развивалась по разными путями и траекториями. Один из них сделал большой экономический импульс, а другой замедляется и сталкивается с большими кризисами. Но все время Центральные азиатские страны имеют общие приоритеты в экономике и в развитии. Потому что эти страны связаны не только географическим положением, еще и они связаны с культурой, мыслями и в некоторых случаях экономико-политическими проблемами.

Статья посвящена экономическому развитию и тенденциям Центрально-азиатских государств как целого, так и отдельно. Автор дает от общего подробный анализ роста ВВП и его структуры. С другой стороны, анализируются инвестиционный климат и инвестиционная привлекательность этих стран. Это объясняет нынешнее экономическое положение стран и регионов.

**Ключевые слова:** Центральная Азия, экономика Центральной Азии, экономическое развития, экономический рост, ВВП.

УДК 339.56.055

Э. Тлессова, А. Хойч, Н. Кураш

Л.Н. Гумилев атындағы Еуразия ұлттық университеті

### ОРТАЛЫҚ АЗИЯ МЕМЛЕКЕТТЕРІНІҢ ЭКОНОМИКАСЫ

**Аннотация.** Халықаралық қатынастар жүйесі мен төлем баланстарының өзгеруінің нәтижесінде қазіргі заман тұрақсыздығымен сипатталады. Кеңес одағының ыдырауынан кейін орталық азия елдері көптеген сыртқы күштердің назарында қалды. Аймақ ретінде өңірлік және жаһандық саясат мүддесінің тоғылысы болды. Жаһандық экономика үшін Орталық Азия бәрінен бұрын шикізат көзі ретінде қызықтырды. Мұнай, газ, көмір және металдар қазіргі кезде ең көп экспортталатын тауар болп табылады, өз кезегінде ауылшаруашылық өнімдері соңғы жылдары қарқынды өсу үстінде. Ширек ғасырлық тәуелсіздік ғұмырында Орталық Азия елдері әртүрлі жолдармен және траекториялармен дамыды. Бірі үлкен экономикалық импульс жасап жатса, келесі бірі бәсеңдеп әрі дағдарыстарға ұшырап жатты. Дегенмен, әрқашан Орталық Азия елдері экономикалық дамуды ортық мүддеде болды. Өйткені осы мемлекеттерді тек көршілес орналасу ғана емес, мәдени және рухани, тіпті кей жағдайларды экономикалық-саяси мәселелер де тығыз байланыстырады.

Мақала, Орталық Азия мемлекеттерінің біртұтас әрі жекелеген экономикалық дамуы мен тенденцияларына арналады. Автор ЖІӨ даму қарқыны мен құрылымында нақты талдаулар жасаған. Сонымен қатар, аталмыш елдердегі инвестициялық тартымдылық пен инвестициялық климатты да талдай кетеді. Бұл осы мемлекеттер мен аймақтың бүгінгі экономикалық даму жағдайын көрсетеді.

**Түйін сөздер:** Орталық Азия, Орталық Азия экономикасы, экономикалық даму, экономикалық өсім, ЖІӨ.

#### Information about authors:

Tlessova E. - L.N. Gumilyov Eurasian National University, t.ilvira@mail.ru, <https://orcid.org/0000-0001-7057-0461>;

Khoich A. - L.N. Gumilyov Eurasian National University, ayjika@mail.ru, <https://orcid.org/0000-0002-0128-3052>;

Kurash N. - L.N. Gumilyov Eurasian National University, [naz-9393@list.ru](mailto:naz-9393@list.ru), <https://orcid.org/0000-0002-9187-4306>.

## МАЗМҰНЫ

### Техникалық ғылымдар

<i>Ахметов Б., Гнатюк С., Жмурко Т., Кинзерявий В., Юбузова Х.</i> Шуы бар кванттық арнада қауіпсіздік байланыстың детерминистикалық хаттама жұмысының имитациялық үлгісінің эксперименттік зерттеулер.....	5
<i>Усольцева Г.А., Әкбаров М.С., Акчил А., Яркова А.А.</i> Құрамында қалайы бар электролитті қожды физико-химиялық талдау.....	11
<i>Кенжебаева Ж.Е.</i> Түрлі жүйелердегі геоинформациондық технологиялар.....	20

### Биология ғылымдар

<i>Кершанская О.И.</i> Қазақстанда ауылшаруашылығы дақылдарының элиталы сорттарын құрастыру үшін CRISPR/CAS9 геномын редакциялаудың жаңа революциялық биотехнологиясы.....	24
--	----

### Аграрлық ғылымдар

<i>Әбуғалиев С.Қ., Сейдәлиев Н.Б., Дәлибаев Е.К., Жамалов Б.С., Муқа Ш.Б.</i> Сүтті сиыр шаруашылығында тапсырыспен шағылыстыруды және геномдық талдауды ұйымдастыру.....	41
---	----

### Қоғамдық ғылымдар

<i>Әмірбекұлы Е., М. Ф. Грела., Тазабекова А.</i> Кәсіпкерлік Алматы қаласының бәсекелестікке қабілеттілігінің факторы ретінде.....	48
<i>Абуов К.К., Абдильдинова Н.Е., Галиева А.Х.</i> Солтүстік Қазақстанның ауыл шаруашылық еңбек нарығын қалыптастыру және дамыту (Ақмола облысының мысалында).....	56
<i>Аюпова З.К., Құсайынов Д.Ө.</i> Қазақстан республикасындағы мемлекеттік пен құқықтың қалыптасу ерекшеліктері.....	61
<i>Бижанов Д.Т., Нургабылов М.Н., Абдрахманова Р.С., Дошан А.С.</i> Отын үнемді қауіпсіздік және еліміздің энергетикалық ресурстарды мәселелері.....	66
<i>Буткенова А.К.</i> Өнеркәсіптік кәсіпорында адам капиталды дамытудың мониторингі.....	73
<i>Ескалиева А. Ж., Дарискалиева М.С., Канатова А.Ж.</i> Адам капиталының сапасын қысқасының перспективалары..	78
<i>Иғалиева Л.Н.</i> Аймақтағы әлеуметтік-экономикалық дамуды және экологиялық қауіпсіздікті қамтамасыз етілуді бағалау (Атырау облысы мысалында).....	82
<i>Ищанова Р.К.</i> Мемлекеттің қаржылық жүйесінің құрылысы мемлекеттік бюджеті.....	89
<i>Панзабекова А.Ж., Мұсаева Д.М., Жанбозова А.Б.</i> Ақпараттық қоғамның тұрғындардың өмір сүру сапасына әсері тұрғысынан қалыптасуы мен дамуы.....	94
<i>Сабирова Р.К., Адиева Э.М., Бисембиева Ж.К.</i> Қазақстанның мемлекеттік бюджеті: қаржы және пайдалану Мәселелері.....	100
<i>Тлесова Э., Хойч А., Кураш Н.</i> Орталық азия мемлекеттерінің экономикасы.....	104
<i>Туякова А.Е.</i> «Рухани жаңғыру» бағдарламасындағы патриотизмні Қазақстандық даму тарихы факторы ретінде қалыптастыру.....	111

## СОДЕРЖАНИЕ

## Технические науки

<i>Ахметов Б., Гнатюк С., Жмурко Т., Кинзерявий В., Юбузова Х.</i> Экспериментальные исследования имитационной модели работы детерминистического протокола безопасной связи в квантовом канале с шумом.....	5
<i>Усольцева Г.А., Акбаров М.С., Акчил А., Яркова А.А.</i> Физико-химический анализ электролитического оловосодержащего шлама .....	11
<i>Кенжебаева Ж.Е.</i> Геоинформационные технологии в различных системах.....	20

## Биологические науки

<i>Кершанская О.И.</i> Новая революционная биотехнология редактирования генома CRISPR/CAS9 для создания элитных сортов сельскохозяйственных культур в Казахстане.....	24
---	----

## Аграрные науки

<i>Абугалиев С.К., Сейдалиев Н.Б., Далибаев Е.К., Жамалов Б.С., Муқа Ш.Б.</i> Организация проведения заказного спаривания и геномного анализа бычков в молочном скотоводстве.....	41
---	----

## Общественные науки

<i>Әмірбекұлы Е., М. Ф. Грела, Тазабекова А.</i> Предпринимательство как фактор роста конкурентоспособности г. Алматы.....	48
<i>Абуов К.К., Абдильдинова Н.Е., Галиева А.Х.</i> Формирование и развитие аграрного рынка труда в северном Казахстане (на примере Акмолинской области).....	56
<i>Аюпова З.К., Кусаинов Д.У.</i> Особенности формирования государственности и права в республике Казахстан.....	61
<i>Бижанов Д.Т., Нургабылов М.Н., Абдрахманова Р.С., Дошан А.С.</i> Проблемы экономической безопасности топливно-энергетических ресурсов страны.....	66
<i>Буткенова А.К.</i> Мониторинг развития человеческого капитала на промышленных предприятия.....	73
<i>Ескалиева А. Ж., Дарискалиева М.С., Канатова А.Ж.</i> Перспективы усиления качества человеческого капитала.....	78
<i>Игалиева Л.Н.</i> Оценка социально-экономического развития и обеспечения экологической безопасности региона (на примере Атырауской области).....	82
<i>Ицанова Р.К.</i> Государственный бюджет как ведущее звено финансовой системы государства.....	89
<i>Панзабекова А.Ж., Мусаева Д.М., Жанбозова А.Б.</i> Формирование и развитие информационного общества в контексте его влияния на качество жизни населения.....	94
<i>Сабирова Р.К., Адиетова Э.М., Бисембиева Ж.К.</i> Государственный бюджет Казахстана: проблемы финансирования и использования.....	100
<i>Тлесова Э., Хойч А., Кураш Н.</i> Экономика центрально-азиатских стран.....	105
<i>Туякова А.Е.</i> Формирование патриотизма в рамках программы «Рухани жаңғыру» как исторический фактор развития Казахстана.....	111

## CONTENTS

### Technical sciences

<i>Akhmetov B., Gnatyuk S., Zhmurko T., Kinzeryayy V., Yubuzova Kh.</i> Experimental research of the simulation model for deterministic secure communication protocol in quantum channel with noise.....	5
<i>Ussoltseva G., Akbarov M., Akchil A., Yarkova A.</i> Physico-chemical analysis of a tin-containing electrolytic slime.....	12
<i>Kenzhebayeva Zh.E.</i> Geoinformation technologies in various systems.....	20

### Biological sciences

<i>Kershanskaya O.I.</i> New breakthrough CRISPR/CAS9 biotechnology of genome editing for creation of elite crops in Kazakhstan.....	24
--	----

### Agrarian science

<i>Abugaliyev S.K., Seydaliyev N.B., Dalibayev E.K., Zhamalov B.S., Muka Sh.B.</i> Procedure of custom mating and genomic analysis of bull-calves in dairy cattle breeding.....	41
---	----

### Social sciences

<i>Amirbekuly Ye., Manuel Fernandez Grela, Tazabekova A.</i> Entrepreneurship as a driver of competitiveness of the city of Almaty .....	48
<i>Abuov K.K., Abdildinova N.E., Galiyeva A. K.</i> Formation and development of the agrarian labor market in northern Kazakhstan (on the example of the Akmola region).....	56
<i>Ayupova Z.K., Kussainov D.U.</i> Features of formation of statehood and law in the republic of Kazakhstan.....	61
<i>Bizhanov D.T., Nurgabylov M.N., Abdrakhmanova R.S., Doshan A.S.</i> Problems of economic security of the fuel and energy resources of the country.....	66
<i>Butkenova A.K.</i> Monitoring of human capital development in industrial enterprises.....	73
<i>Eskalieva A.Zh., Dariskalieva M.S., Kanatova A.Zh.</i> Prospects for strengthening the quality of human capital.....	78
<i>Igaliyeva L.N.</i> Assessment of socio-economic development and environmental security of the region (on the example of Atyrau region).....	82
<i>Ichshanova R.K.</i> State budget as the leading link of the financial system of the state.....	89
<i>Panzabekova A.Zh., Mussayeva D.M., Zhanbozova A.B.</i> Formation and development of information society in the context of its impact on quality of population life.....	94
<i>Sabirova R.K., Adietova E.M., Bisembieva Zh.K.</i> State budget of Kazakhstan: problems of financing and use.....	100
<i>Tlessova E., Khoich A., Kurash N.</i> Economy of central asian countries.....	105
<i>Tuyakova A.E.</i> Formation of patriotism in the framework of the program " ruhani zhangyru " as a historical factor of the development of Kazakhstan.....	111

---

---

**Publication Ethics and Publication Malpractice  
in the journals of the National Academy of Sciences of the Republic of Kazakhstan**

For information on Ethics in publishing and Ethical guidelines for journal publication see <http://www.elsevier.com/publishingethics> and <http://www.elsevier.com/journal-authors/ethics>.

Submission of an article to the National Academy of Sciences of the Republic of Kazakhstan implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see <http://www.elsevier.com/postingpolicy>), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. In particular, translations into English of papers already published in another language are not accepted.

No other forms of scientific misconduct are allowed, such as plagiarism, falsification, fraudulent data, incorrect interpretation of other works, incorrect citations, etc. The National Academy of Sciences of the Republic of Kazakhstan follows the Code of Conduct of the Committee on Publication Ethics (COPE), and follows the COPE Flowcharts for Resolving Cases of Suspected Misconduct ([http://publicationethics.org/files/u2/New\\_Code.pdf](http://publicationethics.org/files/u2/New_Code.pdf)). To verify originality, your article may be checked by the originality detection service Cross Check <http://www.elsevier.com/editors/plagdetect>.

The authors are obliged to participate in peer review process and be ready to provide corrections, clarifications, retractions and apologies when needed. All authors of a paper should have significantly contributed to the research.

The reviewers should provide objective judgments and should point out relevant published works which are not yet cited. Reviewed articles should be treated confidentially. The reviewers will be chosen in such a way that there is no conflict of interests with respect to the research, the authors and/or the research funders.

The editors have complete responsibility and authority to reject or accept a paper, and they will only accept a paper when reasonably certain. They will preserve anonymity of reviewers and promote publication of corrections, clarifications, retractions and apologies when needed. The acceptance of a paper automatically implies the copyright transfer to the National Academy of sciences of the Republic of Kazakhstan.

The Editorial Board of the National Academy of sciences of the Republic of Kazakhstan will monitor and safeguard publishing ethics.

Правила оформления статьи для публикации в журнале смотреть на сайте:

[www.nauka-nanrk.kz](http://www.nauka-nanrk.kz)

**ISSN 2518-1483 (Online), ISSN 2224-5227 (Print)**

<http://www.reports-science.kz/index.php/ru/>

Редакторы *М. С. Ахметова, Т.А. Апендиев, Аленов Д.С.*  
Верстка на компьютере *А.М. Кульгинбаевой*

Подписано в печать 13.10.2018.  
Формат 60x881/8. Бумага офсетная. Печать – ризограф.  
7 п.л. Тираж 500. Заказ 5.