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**CENTRAL ASIAN GUARANTEE FUND AS AN INSTITUTION TO SUPPORT AND DEVELOP
MUTUAL TRADE BETWEEN CENTRAL ASIAN COUNTRIES**

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Abstract

This article examines factors affecting trade among Central Asian countries and assesses the trade potential of the region. Using open data, a gravity model is used to estimate Central Asian countries' trade over the past 2-3 years. The results obtained from the mathematical gravity model showed the presence of the trade potential between the Central Asian countries. According to the results, GDP of the exporting and importing country has a positive impact on trade, while distance has a negative impact. The trade potential shows the opportunities for economic growth and the development of entrepreneurship. Lower-middle-income countries, being less developed economies even by Central Asian standards, can only reduce poverty and become more developed by increasing their trade with neighboring Central Asian countries. At the same time, this article proposes a tool for realizing trade potential - the Central Asian Guarantee Fund. This institution will aim to increase the level of trade between countries by providing private sector access to finance, expand trade finance instruments, and support national guarantee funds. Thus, the article can help Central Asian governments formulate policies to expand regional trade in the face of geopolitical tensions. This article is the first experience of applying the gravity model to Central Asian countries in order to estimate trade potential, and to realize it with the help of the Central Asian Guarantee Fund.

Keywords: trade, gravity model, Central Asia, Central Asian Guarantee Fund, Kyrgyzstan, Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan.

**ЦЕНТРАЛЬНО-АЗИАТСКИЙ ГАРАНТИЙНЫЙ ФОНД КАК ИНСТИТУТ ПОДДЕРЖКИ И
РАЗВИТИЯ ВЗАИМНОЙ ТОРГОВЛИ МЕЖДУ СТРАНАМИ ЦЕНТРАЛЬНОЙ АЗИИ**

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Аннотация

В данной статье исследуются факторы, влияющие на торговлю между странами Центральной Азии, и проведена оценка торгового потенциала региона. Используя открытые данные, применяется гравитационная модель для оценки торговли стран Центральной Азии за последние 2-3 года.

Результаты, полученные на основе математической гравитационной модели, показали наличие торгового потенциала между странами Центральной Азии. Согласно результатам, ВВП страны-экспортера и страны-импортера оказывают положительное влияние на торговлю, в то время как расстояние между ними оказывает отрицательное влияние. Торговый потенциал показывает возможности для обеспечения роста экономики, развития предпринимательства. Страны с доходом ниже среднего, будучи менее развитыми экономиками даже по стандартам Центральной Азии, могут снизить уровень бедности и стать более развитыми только за счет увеличения своей торговли с соседними странами Центральной Азии. Вместе с тем в данной статье предлагается инструмент для реализации торгового потенциала – Центрально-Азиатский гарантийный фонд. Данное учреждение способствует повышению уровня торговли между странами путем обеспечения доступа частного сектора к финансированию, расширению инструментов торгового финансирования, поддержки национальных гарантийных фондов. Таким образом, статья может помочь государственным органам стран Центральной Азии сформулировать политику расширения региональной торговли в условиях геополитической напряженности. Данная статья является первым опытом применения гравитационной модели торговли к странам Центральной Азии с целью оценить торговый потенциал, а также реализовать его с помощью Центрально-Азиатского гарантийного фонда.

Ключевые слова: торговля, гравитационная модель, Центральная Азия, Центрально-Азиатский гарантийный фонд, Кыргызстан, Казахстан, Узбекистан, Таджикистан, Туркменистан.

БОРБОРДУК АЗИЯ КЕПИЛДИК ФОНДУ БОРБОРДУК АЗИЯ ӨЛКӨЛӨРҮНҮН ОРТОСУНДАГЫ ӨЗ АРА СООДАНЫ КОЛДОО ЖАНА ӨНҮКТҮРҮҮ ИНСТИТУТУ КАТАРЫ

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Кыскача мүнөздөмө

Бул макалада Борбордук Азия өлкөлөрүнүн ортосундагы соодага таасир эткен факторлор иликтенип, аймактын соода потенциалына баа берилет. Ачык маалыматтарды колдонуу менен акыркы 2-3 жыл ичинде Борбордук Азия өлкөлөрүндөгү сооданы баалоо үчүн гравитациялык модель колдонулат. Математикалык гравитациялык моделдин негизинде алынган натыйжалар Борбордук Азия өлкөлөрүнүн ортосунда соода потенциалынын бар экендигин көрсөттү. Натыйжалар боюнча, экспорттоочу өлкөнүн жана импорттоочу өлкөнүн ИДӨсү соодага оң таасирин тийгизет, ал эми алардын ортосундагы аралык терс таасирин тийгизет. Соода потенциалы экономикалык өсүштү жана ишкердикти өнүктүрүүнү камсыз кылуунун мүмкүнчүлүктөрүн көрсөтөт. Экономикасы Борбордук Азия стандарттарынан алып караганда дагы анча өнүкпөгөн, орточо кирешеси төмөн өлкөлөр коншулаш Борбордук Азия өлкөлөрү менен соодасын көбөйтүү аркылуу гана жакырчылыктын деңгээлин төмөндөтүп, өнүгө алышат. Ушуну менен катар, бул макалада соода потенциалын ишке ашыруунун инструменти катары Борбордук Азия Кепилдик фонду сунушталат. Бул мекеме жеке сектордун каржылоого жеткиликтүүлүгүн камсыз кылуу, соодалык каржылоо инструменттерин кеңейтүү жана улуттук кепилдик фонддорун колдоо аркылуу өлкөлөр ортосундагы сооданын деңгээлин жогорулатууга салым кошот. Ошентип, макала Борбордук Азия өлкөлөрүнүн мамлекеттик органдарына геосаясий чыңалуу шартында аймактык сооданы кеңейтүү саясатын түзүүгө жардам берет. Бул макала соода потенциалын баалоо жана ошондой эле Борбордук Азия Кепилдик фондунун жардамы менен жүзөгө ашыруу максатында Борбордук Азия өлкөлөрүнө карата сооданын гравитациялык моделин колдонуунун биринчи тажрыйбасы болуп эсептелет.

Негизги сөздөр: Соода, гравитациялык модель, Борбордук Азия, Борбордук Азия Кепилдик фонду, Кыргызстан, Казакстан, Өзбекстан, Тажикстан, Түркмөнстан.

1. Introduction

In 2022, there was an increase in tension in the geopolitical space, the supply chains of goods between Europe and Central Asian countries have been disrupted. There is a need to diversify commodity flows and strengthen cooperation with the closest neighboring Central Asian countries. The reorientation of trade relations towards the markets of Central Asian countries will give an impulse to increase trade turnover between the countries.

This paper also considers the factor of the private sector and its access to financial resources as the main deterrent to increasing local production volumes and creating export-oriented enterprises. The need for financing (credit resources) can reach up to 40% of the credit portfolio of the banking system of CA countries.

In order to realize the potential growth of mutual trade between the CA countries and expand access of the private sector to financial resources, it is proposed to create the Central Asian Guarantee Fund as a tool to increase the level of trade cooperation between the CA countries and strengthen the role of national guarantee funds in providing access of local SMEs to financial resources.

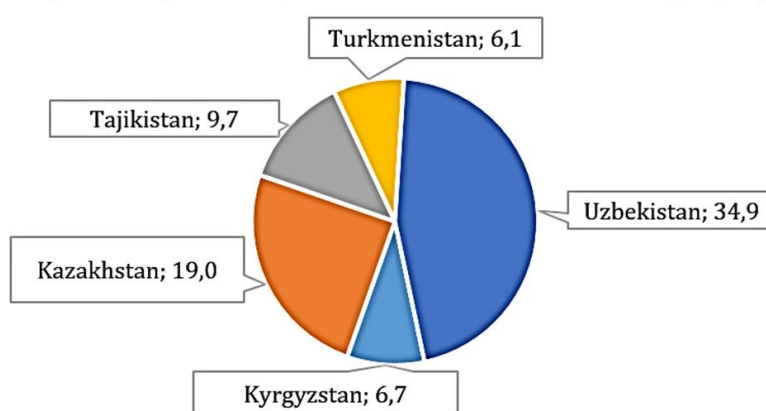
In this article, calculations of the potential increase in trade between Central Asian countries based on the gravity model of trade are carried out and a tool that allows realizing the trade potential between the Central Asian countries is described.

2. Review of the Central Asian countries

The CA region includes such countries as the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, the Republic of Uzbekistan and Turkmenistan. The economic situation in the region is quite different due to the presence of upper-middle income countries and low-income countries, however, all CA countries are of great strategic importance due to their geographical location and availability of natural resources.

The Central Asian countries are home to 76.4 million people (Fig. 1) and about 48% of the population lives in urban areas. Central Asia remains one of the youngest regions of the world, with an average age of 27.6 years.

Figure 1. Population by Central Asian countries (million people)

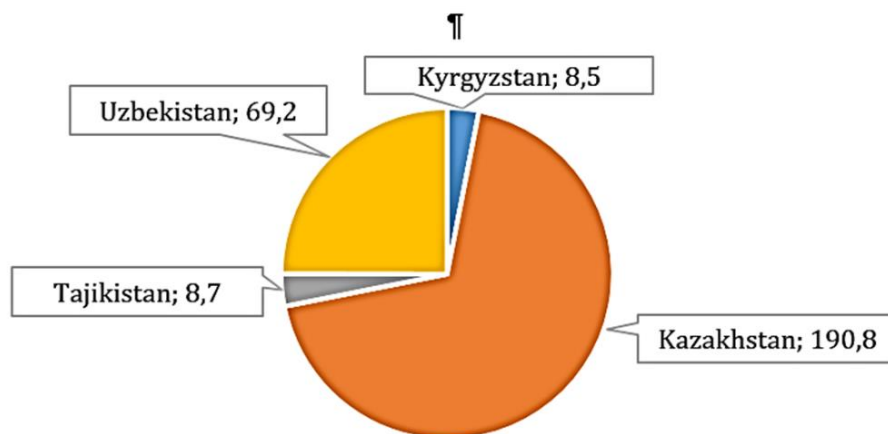


Source: World Bank data [21].

The total GDP of Central Asian countries in 2021 is USD 277.2 billion, the largest economies in the region are Kazakhstan and Uzbekistan (Fig. 2). It should be noted that data on Turkmenistan's GDP for 2021 are not available in public sources.

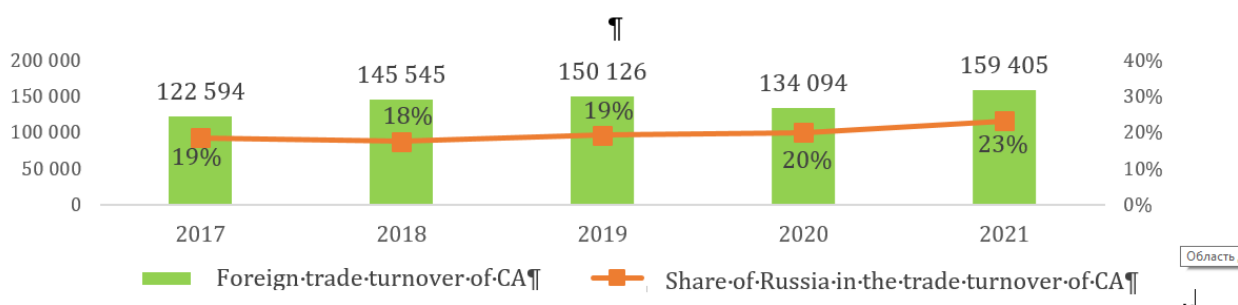
The total foreign trade volume of Central Asian countries was USD 159.4 billion in 2021, an increase of 30% compared to 2017. Trends in the total volume of CA countries' trade are shown in the following chart (Fig. 3).

Figure 2. GDP of 4 CA countries (billion USD)



Source: International monetary fund data [20].

Figure 3. Volume of total foreign trade turnover of CA countries (million USD)



Source: Calculated based on data from the International Trade Center [22].

It should be noted that in most Central Asian countries, the main trading partner is the Russian Federation. As can be seen from the above chart (Fig. 3), the share of the Russian Federation is 23% of the total foreign trade turnover of CA. In some Central Asian countries, the share of the Russian Federation may be more than 23%.

The rather strong trade integration makes the Central Asian economies vulnerable to the sanctions imposed on the Russian Federation. The deteriorating economic situation in the Russian Federation, the disruption of product supply chains, fluctuations in the U.S. dollar exchange rate, and increased inflationary pressure on national currencies have a negative impact on the socio-economic situation in Central Asian countries. International financial institutions predict a slowdown in the growth of Central Asian economies in 2022.

Further deterioration of the economic situation in the Russian Federation could lead to higher unemployment (due to the return of migrants), higher prices, and worsening food security in Central Asian countries.

At the same time, it should be noted that the decline in purchasing power in the Russian Federation may lead to a decrease in exports of CA countries and a decrease in imports to EAEU member countries, as well as difficulties in importing goods that are in transit through the territory of the Russian Federation. The reduction

of imports of goods can lead to a proportional decrease in customs revenues, including within the EAEU for Kyrgyzstan and Kazakhstan.

Given the above, there is a need to diversify trade flows and reorient trade relations in order to increase the volumes of mutual trade between Central Asian countries.

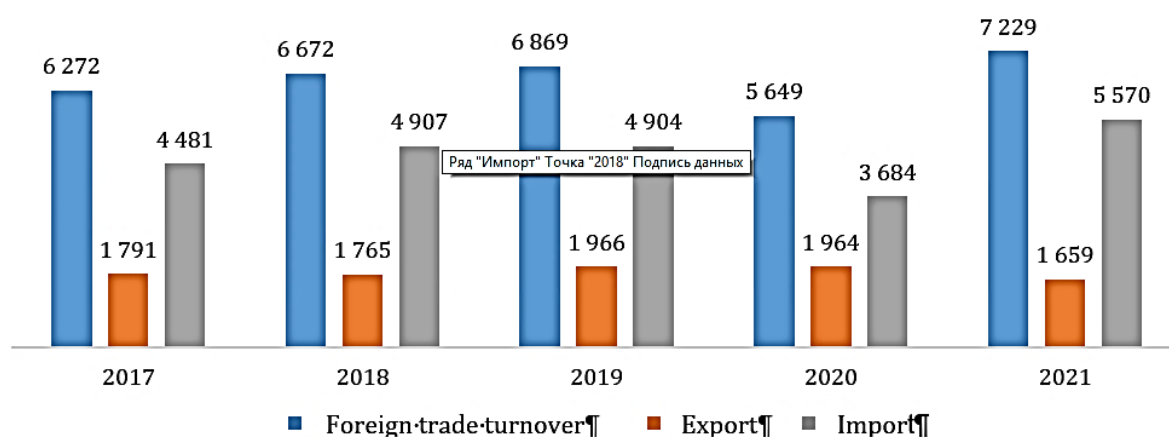
Below is a brief overview of the Central Asian countries.

Kyrgyz Republic.

The area of the country is 199.9 thousand square kilometers with a population of 6.7 million people, some of whom go to work in the Russian Federation. Gross domestic product of the Kyrgyz Republic for 2021 amounted to USD 8.5 billion (World Bank, 2022) [21]. The real sector of the economy is represented mainly by small and medium-sized businesses, whose contribution is 42.8% (National Statistical Committee of the Kyrgyz Republic, 2022) [17] of the GDP of the Republic. The economy of the republic is quite dependent on the main trading partners and remittances of migrants, which provide consumer demand within the country. The main trading partners are the Russian Federation, China, the Republic of Kazakhstan, the Republic of Uzbekistan and Turkey.

It should be noted that the Kyrgyz Republic is a member of the Eurasian Economic Union (hereinafter referred to as the EAEU), along with the Russian Federation, the Republic of Kazakhstan, Belarus and Armenia.

Figure 4. Trade volumes of the Kyrgyz Republic (million US dollars)

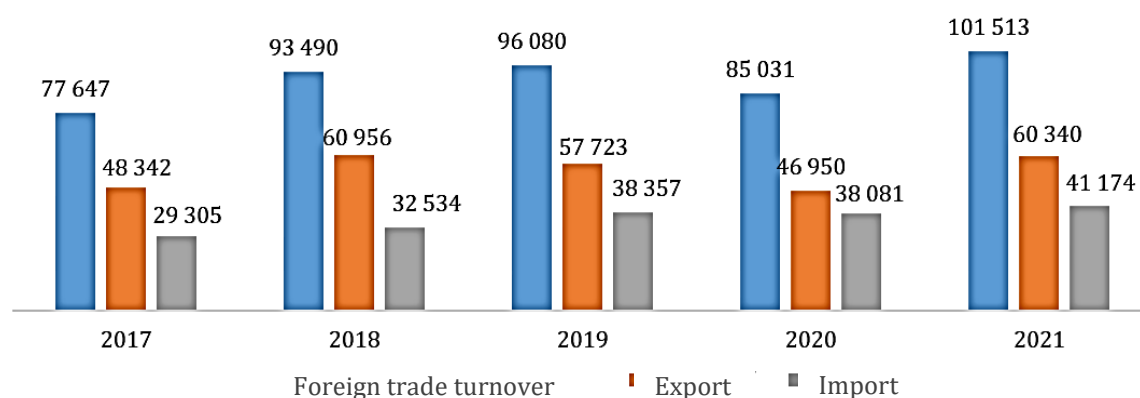


Source: Calculated based on data from the International Trade Center [22].

The Republic of Kazakhstan.

Kazakhstan is the largest country in Central Asia (area – 2.7 million sq. km) with a population of 19 million people. In addition to its geographical size, the country is the largest economy in the region, with a nominal GDP of USD 9202.9 billion in 2021 (World Bank, 2022) [21]. The sector of small and medium-sized businesses occupies 33.3% of GDP (Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, 2022) [18].

Figure 5. Trade volumes of the Republic of Kazakhstan (million US dollars)



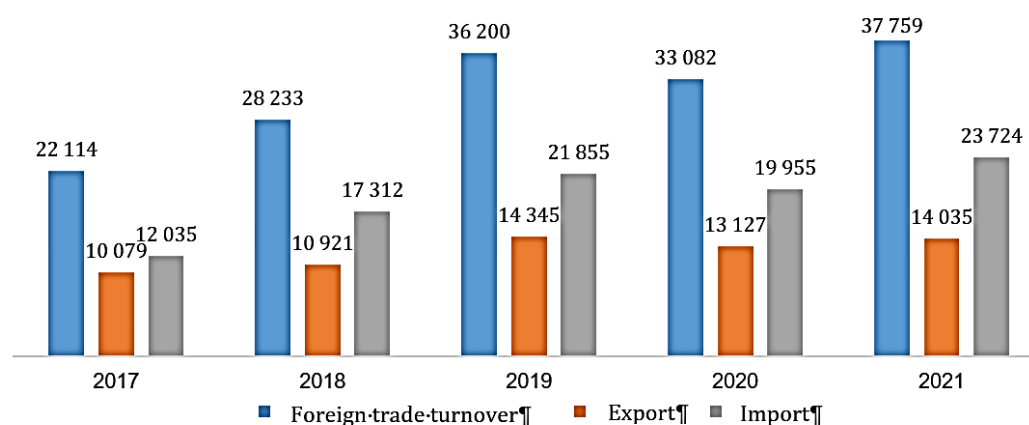
Source: Calculated based on data from the International Trade Center [22].

The main role in the formation of GDP is played by the oil and gas industry. Exports of products of this industry can reach 50% or more of the total exports. The main trading partners are China, the Russian Federation, the Republic of Kazakhstan, the countries of Europe and Asia, the USA and the Republic of Uzbekistan. Kazakhstan trades with other countries of the CA region to a lesser extent than with those listed earlier. It should be noted that Kazakhstan is a member of the EAEU.

The Republic of Uzbekistan.

The area of Uzbekistan is 447.4 thousand square kilometers with a population of 34.9 million people. In recent years, the Government of Uzbekistan has carried out a number of reforms, including the reform of the exchange rate and regulation of foreign trade, as well as the liberalization of prices for goods and services.

Figure 6. Trade volumes of the Republic of Uzbekistan (million US dollars)

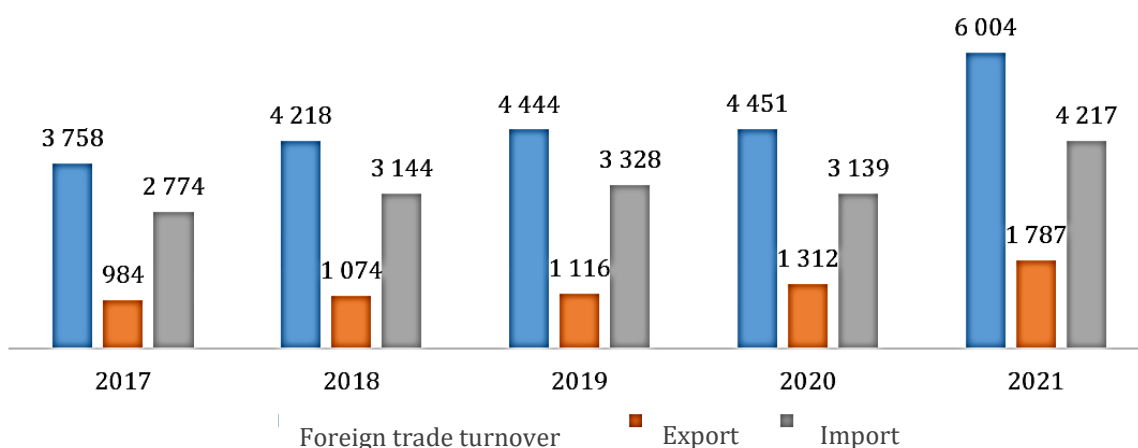


Source: Calculated based on data from the International Trade Center [22].

The reforms carried out made it possible to increase the rate of economic growth, the volume of which in 2021 amounted to 69.2 billion US dollars. The reforms contributed to the fascination of foreign trade volumes. The main trading partners are the Russian Federation, China, Central Asian countries, Afghanistan, Turkey.

The Republic of Tajikistan.

Figure 7. Trade volumes of the Republic of Tajikistan (million US dollars)



Source: Calculated based on data from the International Trade Center [22].

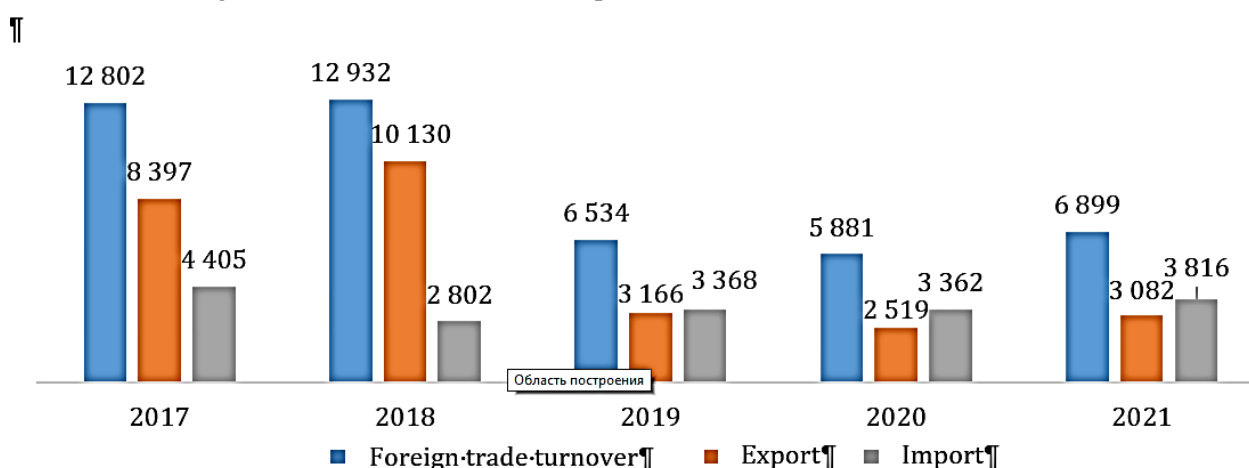
Tajikistan is the smallest country in Central Asia in terms of area, its size is 141.4 thousand square kilometers, and the population is 9.8 million people. Tajikistan's GDP in 2021 was USD 8.7 million and real GDP growth increased to 9.7%. Growth in the economy was supported by rising exports of precious metals and increased remittance inflows, as well as rising private investment and consumption.

The main trade partners of the republic are China, the Russian Federation, Kazakhstan, Uzbekistan, Turkey, Iran, Afghanistan.

Turkmenistan.

The population of Turkmenistan is 6.1 million people, while the area of the country is 488 thousand square kilometers. In recent years, the economy of Turkmenistan has been in crisis, despite the presence of rich natural resources. In general, the economic growth of Turkmenistan is highly dependent on the export of mineral resources. According to the IMF (World Economic Outlook, 2022) [25] in 2020, the real GDP growth rate was negative and amounted to – 2.95%, and the nominal volume of GDP was USD 53.2 billion.

Figure 8. Trade volumes of the Republic of Turkmenistan (million US dollars)



Source: Calculated based on data from the International Trade Center [22].

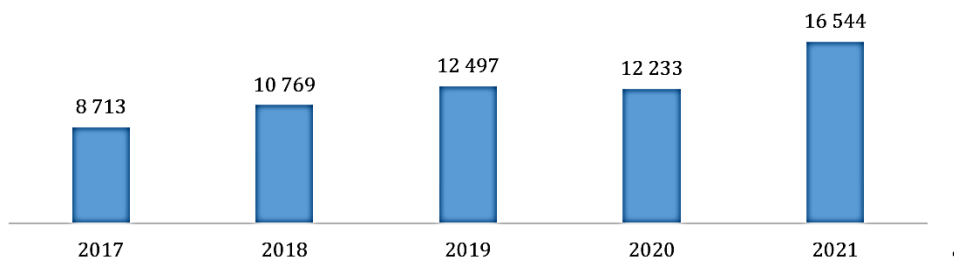
The foreign trade of Turkmenistan is characterized by a significant volume of gas and cotton exports, i.e. raw materials. China is the largest natural gas export market, and natural gas exports to the Russian Federation have been halted due to disputes over transit pricing. Below is the total trade volume of Turkmenistan.

The next section presents an analysis of the level of intraregional trade among Central Asian countries.

2.1. Trade between Central Asian countries

Favorable conditions have been created between Central Asian countries for mutual trade within the framework of trade agreements. Despite the fact that the Central Asian countries are to varying degrees open to international and regional trade, the movement of labor and capital, they have great potential for establishing closer cooperative ties and integration among themselves.

Figure 9. The volume of mutual trade between the CA countries (million US dollars)



Source: Calculated based on data from the International Trade Center [22].

Over the past 5 years, the countries of Central Asia have almost doubled the trade turnover between the countries from USD 8.7 billion to USD 16.5 billion.

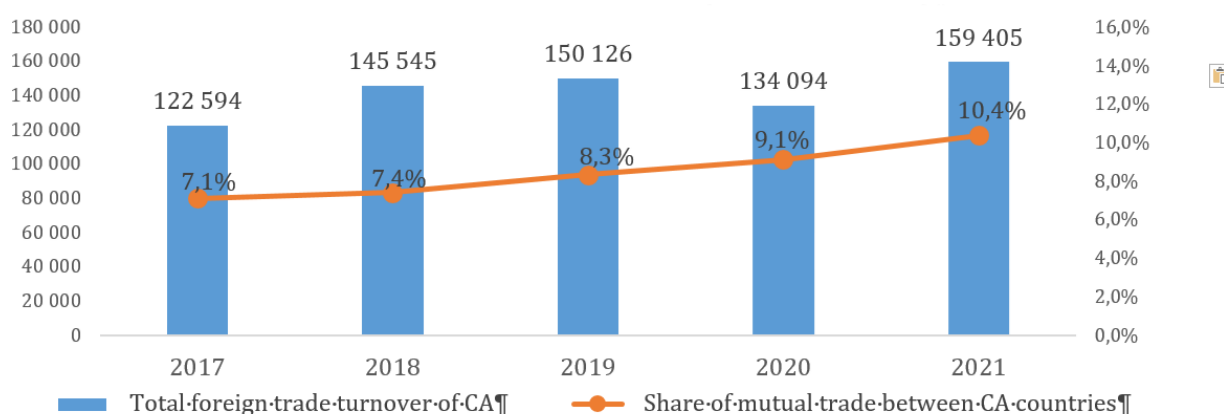
The total foreign trade turnover of the CA countries increased from USD 122.6 billion in 2017 to USD 159.4 billion in 2021, the share of intra-regional trade in the total foreign trade turnover increased from 7.1% in 2017 up to 10.4% in 2021.

In the total foreign trade turnover of Kazakhstan, Uzbekistan and Turkmenistan, the Central Asian countries occupy a smaller share, and the participation of the Kyrgyz Republic and the Republic of Tajikistan in intra-regional trade is the highest and accounts for 22.4% and 28.0%, respectively.

The Republic of Kazakhstan and Turkmenistan are raw material exporters (gas and oil) and are less focused on the closest trading partners due to the insignificant size of the economy of their neighbors and the high demand for minerals in foreign countries.

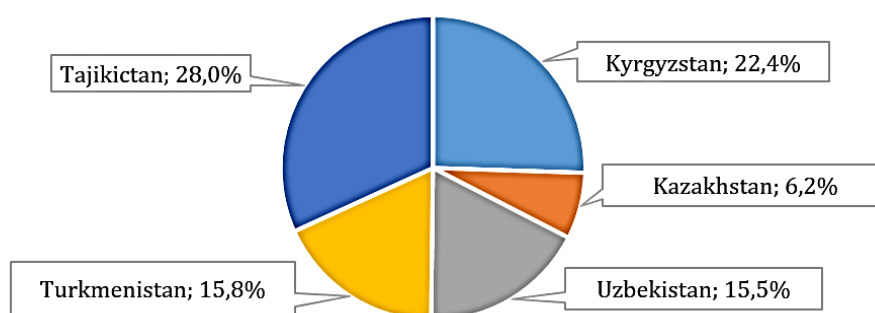
The Republic of Uzbekistan until 2017 had a number of restrictions that did not allow to significantly increase the volume of trade cooperation with the nearest Central Asian countries. The reforms carried out by the Government of the Republic of Uzbekistan since 2017 have contributed to an increase in the volume of trade operations with the Central Asian countries.

Figure 10. The volume of the region's foreign trade with the world and the share of mutual trade between the Central Asian countries (million US dollars)



Source: Calculated based on data from the International Trade Center [22].

Figure 11. Share of Central Asia in the country's foreign trade turnover (%)



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Source: Calculated based on data from the International Trade Center [22].

Table 1 shows the details of mutual trade in 2021 by country. The main share in the trade turnover between the Central Asian countries is occupied by the two largest economies of the region - Kazakhstan and Uzbekistan.

Table 1. Mutual trade between the countries of Central Asia in 2021 (million USD)

	Kyrgyzstan	Kazakhstan	Uzbekistan	Turkmenistan	Tajikistan	Total	Share in TT of CA countries
Kyrgyzstan	0	1 060	497	38	28	1 622	9.8%
Kazakhstan	987	0	3 901	254	1 146	6 288	38.0%
Uzbekistan	928	3 725	0	783	427	5 862	35.4%
Turkmenistan	33	254	783	0	22	1 092	6.6%
Tajikistan	26	1 179	453	22	0	1 680	10.2%
Total	1 974	6 217	5 633	1 097	1 623	16 544	100%

Note: TT - Trade turnover (the volume of mutual trade between the countries of Central Asia).

Source: Calculated based on data from the International Trade Center [22].

The dynamics of exports and imports by CA countries is presented in Table 2.

The main exporters to the CA countries are the Republic of Kazakhstan and the Republic of Uzbekistan, which have almost doubled their export volumes since 2017. At the same time, the volume of imports to these countries from the Central Asian countries increased by 33% for the Republic of Kazakhstan and almost three times for the Republic of Uzbekistan. Despite the increase in export and import indicators, the Republic of Kazakhstan and the Republic of Uzbekistan are oriented towards countries from other regions (Russia, China, European and Asian countries).

Table 2. Trade operations between CA countries (million USD)

		2017	2018	2019	2020	2021
Kyrgyzstan	Export	473	456	537	479	584

	Import	765	694	826	705	1038
Kazakhstan	Export	2267	2887	3354	3466	4481
	Import	1352	1412	1151	1163	1807
Uzbekistan	Export	1274	1643	2114	1803	2218
	Import	1202	2018	2536	2717	3644
Turkmenistan	Export	198	299	435	461	743
	Import	115	126	171	155	100
Tajikistan	Export	394	471	403	245	493
	Import	674	764	970	1038	1202
Total	Export	4606	5 755	6 843	6 454	8 519
	Import	4 108	5014	5 653	5 779	7 791

Source: Calculated based on data from the International Trade Center [22].

Trade operations of the Kyrgyz Republic and the Republic of Tajikistan with the CA countries are characterized by moderate growth, except for Tajikistan's imports from the CA countries, which doubled. Turkmenistan has increased its exports to the Central Asian countries by more than 3.5 times.

Military actions in Ukraine and the imposed sanctions against the Russian Federation have a negative impact on most of the Central Asian countries. In order to minimize the negative consequences associated with the economic situation in the Russian Federation, diversification of trade flows and closer trade cooperation between the CA countries are required.

The first step towards deepening cooperation, including within the framework of trade cooperation and integration of the Central Asian countries, is the signing by the Kyrgyz Republic, the Republic of Kazakhstan and the Republic of Uzbekistan of an agreement on friendship, good neighborliness and cooperation for the development of Central Asia in the 21st century at the IV Consultative Meeting of the Heads of State of Central Asia on July 21, 2022 in Cholpon-Ata (Kyrgyz Republic). In turn, Turkmenistan and Tajikistan expressed their readiness to sign the agreement after the completion of internal procedures in these countries. This agreement determines the further vector of development and cooperation in Central Asia. In the long term, it is possible to sign a trade agreement between the Central Asian countries aimed at reducing trade barriers.

It should be noted that an important factor contributing to the increase in trade is the private sector and its access to financial resources. The next section provides information on the availability of financial resources and the role of local credit guarantee institutions in increasing the private sector's access to finance.

2.2. The Private Sector and Access to Finance in Central Asia

The private sector (especially small and medium-sized enterprises) is an important factor in economic growth and socio-economic situation in the CA countries. Private enterprises create jobs, provide employment for the population, contribute to raising the standard of living and social stability of society. The private sector can contribute to the growth of production and increase in the volume of foreign trade of the Central Asian countries with significant state support and the creation of a favorable business climate.

Understanding the importance of the private sector, especially SMEs, the Central Asian countries are consistently taking special measures aimed at creating favorable conditions for the formation and functioning of small and medium-sized enterprises. Measures are being taken to simplify licensing procedures, the list of activities subject to licensing is being reduced, and state support measures are being expanded.

To this end, a number of comprehensive measures aimed at the development of SMEs have been recently implemented, and the following important results have been achieved.

In the Kyrgyz Republic a number of reforms were carried out to liberalize legislation and business regulation. Laws have been adopted regulating licensing and permitting activities, the competitive environment, public-private partnerships and the sphere of natural monopolies. Amendments were made to the laws of the Kyrgyz Republic on state support for small businesses, the procedure for conducting inspections of SMEs, on simplifying the procedures for their registration and liquidation, protecting the rights of entrepreneurs, optimizing the regulatory framework for regulating business activities, on competition and natural monopolies.

In the Republic of Kazakhstan within the framework of the State program of business support and development "Business Roadmap-2020" financial and other support is provided to SMEs. An important direction of the program is the strengthening of entrepreneurial potential. This direction includes a set of projects on teaching the principles of doing business and consulting support for potential and start-up entrepreneurs.

In the Republic of Tajikistan in order to support industrial entrepreneurship, a moratorium on inspections for 2018-2019 has been announced and a number of tax incentives have been provided. The number of desk audits of small and medium-sized enterprises has been reduced by 2 times, the number of permits has been significantly reduced, and a unified state electronic register for permits has been created. Presidential grants are provided for the State Entrepreneurship Support Fund, for starting and developing a business, and developing women's entrepreneurship.

Significant progress has been made in the growth of entrepreneurial activity in the Republic of Uzbekistan, so by the Decree of the President dated October 5, 2017 "On additional measures to ensure the accelerated development of entrepreneurial activity, the comprehensive protection of private property and the qualitative improvement of the business climate", the Program of Comprehensive Measures was approved, according to which the implementation of measures was launched in 5 priority areas, including: legal regulation of entrepreneurial activity, reduction inspections and prevention of unreasonable interference in business activities, further liberalization of the responsibility of business entities, improvement of the financial system, taxation and customs, as well as improvement of conditions for doing business, increasing the investment attractiveness and international rating of the republic.

The existing development institutions of the Central Asian countries provide state support to the SME sector by providing services, financial services, and assistance in the field of innovation. A special role is given to the interaction of business and government.

Financial instruments such as national guarantee funds, microfinance programs for small businesses and individual entrepreneurs, etc., have been developed. Guarantee funds have proven to be effective tools for expanding the access of SMEs to financial services.

In the Republic of Kazakhstan back in 1997, the "Damu" Entrepreneurship Development Fund JSC was established with an authorized capital of USD 197 million. The functions of "Damu IDF" JSC have been expanded and the organization is engaged in portfolio and direct lending, subsidizing, and providing loan guarantees. The maximum guarantee amount is USD 481,000; the maximum share of the loan guarantee is 85%. Below are the main characteristics of the Kazakhstan lending market and guarantees of "Damu IDF" JSC.

In February 2017, the State Fund for Supporting the Development of Entrepreneurial Activities under the Cabinet of Ministers of the Republic of Uzbekistan was established in Uzbekistan with an authorized capital of USD 50 million, the form of ownership is state. The maximum guarantee amount is USD 240, 000, the maximum share of the loan guarantee is 50%. The activities of the Guarantee Fund of Uzbekistan are at an early stage and there is no information on issued loan guarantees in open sources.

Table 3. Main characteristics SME lending market of the Republic of Kazakhstan

	2018	2019	2020	2021
Loan portfolio, \$ mln	35 822	38 677	37 126	50 465
business loans, mln \$	22 825	22 072	20 556	28 871
Guarantees, mln \$	74	104	255	418
Loans with guarantees, mln \$	170	267	655	857
Guaranteed loans/CP BS	0.5%	0.7%	1.8%	1.7%

Source: FRP "Damu" [26]; National Bank of Kazakhstan [27].

In the Kyrgyz Republic, the Government, with the support of the Asian Development Bank, established the "Guarantee Fund" OJSC ("GF" OJSC) in 2016 to support small and medium-sized businesses throughout the country. To date, the authorized capital of OJSC "GF" is USD 80 million, the form of ownership is private (the shareholder is the state represented by the National Bank of the Kyrgyz Republic and the State Property Management Fund under the Government of the Kyrgyz Republic). Direction – provision of guarantees for loans, the maximum amount of the guarantee is USD 8 million, the maximum share of the guarantee from the loan is 50%.

Table 4. Main characteristics SME lending market of the Republic of Uzbekistan

	2018	2019	2020	2021
Loan portfolio, \$ mln	20 080	22 254	26 437	29 959
business loans, mln \$	17 150	18 734	22 020	23 546
Guarantees, mln \$	72	91	398	323
Loans with guarantees, mln \$	224	260	978	829
Guaranteed loans/CP BS	1,1%	1,2%	3,7%	2,7%

Source: Bulletin of the Central Bank of Uzbekistan [28].

Since 2014, the Credit Guarantee Fund of Tajikistan has been operating in Tajikistan with an authorized capital of USD 14.2 million, the form of ownership is international (DEG, OeEB, FMO). Providing a guarantee, the maximum amount of the guarantee is USD 500.000, the maximum share of the guarantee from the loan is 60%.

A feature of this guarantee fund in Tajikistan is that it was created with the assistance of the German side and decisions to provide loan guarantees are made in Germany, which slows down the process of making a decision on issuing a guarantee.

Table 5. Main characteristics of the market lending to SMEs of the Kyrgyz Republic

	2018	2019	2020	2021
Loan portfolio, \$ mln	1 831	2 107	1947	2138
business loans, mln \$	1458	1639	1 532	1642
Guarantees, mln \$	7	11	10	14
Loans with guarantees, mln \$	23	36	35	46
Guaranteed loans/CP BS	1.2%	1.7%	1.8%	2.1%

Source: OJSC Guarantee Fund [29]; Bulletin of the National Bank of the Kyrgyz Republic [30].

It should be noted that in 2019, with the support of OJSC "Guarantee Fund" (Kyrgyz Republic), the NGO "Zamonat" was created according to the Kyrgyz model of the guarantee fund with a capital of USD 250.000, which does not allow to significantly influence the expansion of access to financing. This guarantee fund is currently in its infancy and provides individual guarantees with a maximum guarantee coverage of 50% of the loan amount.

Table 6. Key characteristics of the SME lending market in the Republic of Tajikistan

	2018	2019	2020	2021
Loan portfolio, \$ mln	920	1001	963	1059
business loans, mln \$	873	917	943	894
Guarantees, mln \$	-	-	-	-
Loans with guarantees, mln \$	-	-	-	-

Source: Bulletin of the National Bank of Tajikistan [31].

The above Guarantee Funds (Institutions) have been established to expand the availability of financial resources, but the Guarantee Funds in Uzbekistan and Tajikistan are at an early stage and have not yet realized their potential. At the same time, in most Central Asian countries, guarantee funds mainly provide guarantees for loans and trade finance instruments are not widely used.

At the same time, there is no mechanism in the CA countries to reduce the risks of guaranteeing large projects aimed at expanding trade cooperation. In this case, a larger international guarantee fund is needed, which will guarantee part of the portfolio of national guarantee funds and minimize risks.

Nevertheless, despite the existence of national guarantee funds, the availability of financial resources remains one of the main factors in the development and growth of SMEs. An equally serious problem is the high interest rate on loans provided by commercial banks.

In the CA countries, the private sector claims that difficulties in accessing finance constitute one of the main barriers to starting, running and developing their businesses. SMEs face significant barriers to obtaining finance.

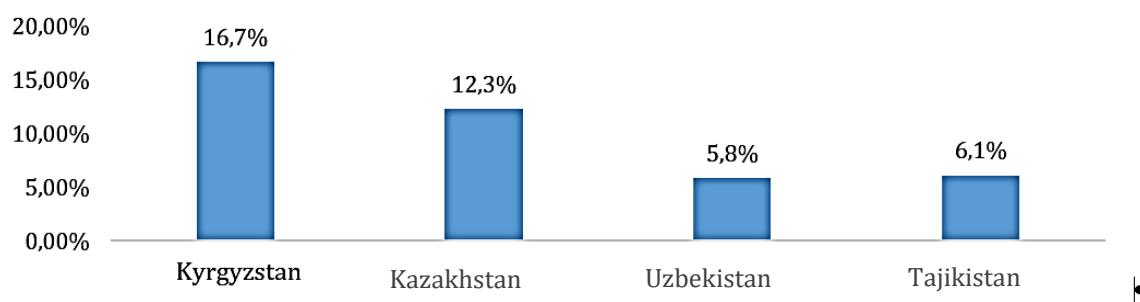
World Bank data from enterprise surveys show that access to finance remains one of the main constraints to the development of the SME sector (Fig. 12).

As can be seen from the chart (Fig. 12), specific numbers vary by country, as in Kyrgyzstan 16.7% of SMEs find access to finance a significant challenge, while in Uzbekistan only 5.8% of SMEs report that access to finance is a major constraint.

In particular, SMEs tend to face higher interest rates and tighter credit conditions, face more credit rationing than large companies, and have less access to official sources of finance.

Financial and credit institutions consider lending to SMEs to be associated with higher risks. The reason for this is often the lack of transparency of SMEs and high transaction costs, insufficient collateral, poor credit history and, in many cases, a lack of knowledge about financial products, as well as the professional skills needed to prepare complex financial statements.

Figure 12. Percentage of SMEs in Central Asia for which access to finance is a major constraint



Note: no data available for Turkmenistan

Source: World Bank (2019) [32].

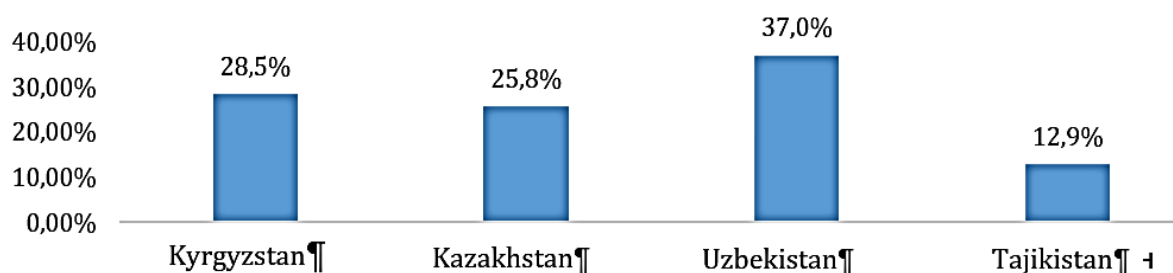
SMEs are more affected by the fact that administration and lending processes are often complex and burdensome. Agricultural SMEs, which make up the bulk of such businesses in the region, often face the risks of high collateral requirements that are almost unsustainable for farmers whose main assets are land and buildings, typically located in remote rural areas and therefore do not have a significant market value. The need for collateral for loans also hinders the emergence and development of new innovative enterprises and SMEs whose business models are based on intangible goods.

About 30-40% of potential borrowers from Central Asian countries who applied to banks cannot receive the requested loan amount to develop their business due to insufficient collateral. Insufficient supply of credit resources of the banking system with a high demand for them does not allow reducing interest rates on loans.

SMEs often use personal finance in their activities, however, bank financing is the most widely used external financing tool in the countries of Central Asia.

Only a small number of SMEs in the region actively use banks to finance their investments and working capital. Less than 25% of companies turn to banks to finance their working capital; by comparison, in middle-income countries this figure is about 31.6%.

Figure 13. Private sector lending as % of GDP in 2020



Source: World Bank [21].

For the region as a whole, private sector lending was 26% of gross domestic product (GDP) in 2020, compared to 147% of GDP in OECD countries and 95% of GDP in middle-income countries. Other funding options, such as early stage funding through business angels, venture capitalists and credit unions, are very limited.

It should be noted that according to the survey of enterprises "Pulse of Business" since February 2022, 65% of businesses in Kyrgyzstan, Uzbekistan, Tajikistan are facing production costs. Moreover, enterprises exporting products or companies from the Russian Federation and Ukraine reported an average 5% decrease in sales, while sales of enterprises not selling to the Russian Federation or Ukraine increased by an average of 5%.

Figure 14. Share of enterprises in need of short-term credit adjustment (in %)

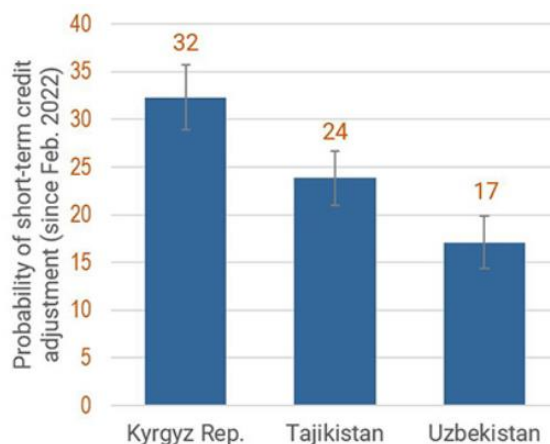
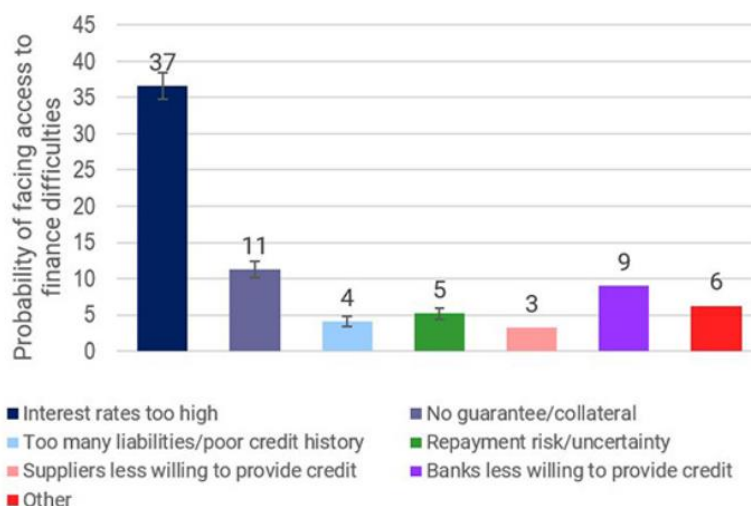


Figure 15. Main difficulties of firms in accessing credit (in %)



At the same time, since February 2022, businesses from the three CA countries have been facing financial difficulties, which may be related to declining profitability and difficult access to new credit financing. Such difficulties are experienced by about 25% of the surveyed enterprises, in connection with which they need to adjust loans and reduce the debt burden. This problem is most acutely felt in the Kyrgyz Republic, which is the most integrated with the Russian Federation in terms of trade relations out of the three above-mentioned countries.

The above data are presented in the World Bank's "Business Pulse" survey conducted after the events of February 2022 (World Bank, 2022) [24].

Limited access to financing does not allow the private sector to fully realize its production potential and increase exports to the Central Asian countries. At the same time, it is necessary to support infrastructure projects aimed at developing trade relations in the medium term.

Increasing the export capacity of the private sector through access to finance can help create regional value chains in Central Asia, including industrial and agricultural clusters. At the same time, it is necessary to pay attention to the digital economy and the creation of digital trading platforms for the private sector of the Central Asian countries.

Thus, in recent years, certain successes have been achieved in the countries of Central Asia to expand the availability of financing (national guarantee funds have been created). At the same time, the analysis of trade between the countries of Central Asia shows a moderate increase in the volume of mutual trade; and the

geopolitical situation and turmoil for the world economy affect Central Asian countries to a greater extent, since the main trading partner is the Russian Federation. It is necessary to help the countries of the region to redirect and diversify trade flows to increase the volume of mutual trade between Central Asian countries.

Considering the foregoing, it is necessary to assess the potential growth in the volume of mutual trade between the Central Asian countries based on the gravity model of foreign trade, as well as to propose a tool that helps expand the availability of financial resources to realize the potential in trade.

3. Assessment of trade potential between Central Asian countries based on a gravity model

3.1. Gravity Model Methodology

The gravity model of trade is an economic model that describes trade flows between two countries based on the Newton’s law of gravity in physics. The gravity model was first applied in 1962 by Jan Tinbergen in economics [16].

The theoretical basis of the gravity model, by analogy with the gravitational equation, comes from the assumption that the interaction between countries (foreign trade) is directly proportional to their economic weight, and inversely to the barriers that stand in their way. The distance between trading partners is used as trading costs in the academic literature [10; 8].

The basic formula of the gravity model is as follows:

$$Ex_{ij} = A \frac{GDP_i^\alpha * GDP_j^\beta}{D_{ij}^\gamma} \tag{3.1}$$

Exij – trade flows between two countries as the sum of goods and services exported from country i to country j;

GDPi and **GDPj** – the gross domestic product of country i and country j;

Dij – geographical distance between two countries;

A – constant.

The parameters α , β and γ are constants that are subject to empirical evaluations. They weight variables according to their influence. The larger the parameters, the greater the influence of the variables.

Logarithm allows us to convert the multiplicative form into an additive one, which is more convenient for econometric estimation methods:

$$\ln EX_{ij} = \beta_0 + \beta_1 \ln Y_i + \beta_2 \ln Y_j + \beta_3 \ln D_{ij} \tag{3.2}$$

In order to increase its effectiveness and relevance, the model has supplemented with various relevant variables that have an impact on mutual trade. Such variables are the presence of a common border between countries, a common official language and the similarity of languages or the presence in the country of a population that speaks the language of the trading partner country, as well as whether the countries are members of the same integration (EAEU) [1; 2; 4; 5; 6; 12]. Such variables are introduced into the model as dummy variables.

The source of information for the calculations of the gravity model is the database of the World Bank and the International Monetary Fund (IMF), data from the trade statistics website trademap.org, and also official data from the statistical authorities of the Central Asian countries were used [21; 20; 22].

Taking into account additional variables (parameters), the gravity model takes the following form:

$$\ln(EX_{ij}) = \beta_0 + \beta_1 \ln(GDP_i) + \beta_2 \ln(GDP_j) + \beta_3 \ln(D_{ij}) + \beta_4 combor_{ij} + \beta_5 lang_off_{ij} + \beta_6 lang_eth_{ij} + \beta_7 integr_{ij} + U_{ij} \tag{3.3}$$

Description of the parameters (variables) of the gravity model of trade is given in Table 7.

Table 7. The value of the parameters of the gravity model of trade

Variable name	Variable Description
ln(expij)	exports from the i country to the j country, in USD million (in logarithmic form);

$\ln(\text{GDP}_i)$	GDP of the I country, in USD millions at PPP (in logarithmic form);
$\ln(\text{GDP}_j)$	GDP of the partner country, in thousands USD at PPP (in logarithmic form);
$\ln(\text{D}_{ij})$	distance between the capitals (economic centers) of trade partners;
combor _{ij}	a dummy variable reflecting the presence of a common border (1 - there is a common border, 0 - there is no common border);
lang_off _{ij}	the presence of a common official language (Russian), Dummy variable
lang_eth _{ij}	the presence of a common ethnic language; Dummy variable
Integr _{ij}	whether the countries are members of the same integration (EAEU); Dummy variable
U _{ij}	Error

This gravity model uses purchasing power parity (PPP) GDP as a parameter (variable) of a country's economic size to minimize the impact of fluctuations in the exchange rate of the national currency against the US dollar.

It should be noted that a separate gravity model with the above parameters was applied for each CA country (the Integr_{ij} variable is used only for Kyrgyzstan and Kazakhstan).

All continuous variables were converted to logarithmic form to estimate the elasticity of exports for all factors included in the gravity model. Export elasticity was assessed on the basis of indicators for the last 2-3 years. The elasticity calculation covers 30 major trading partners, whose share is more than 90% of the total exports of each CA country.

Table 8 presents statistical information about the parameters (variables) of the gravity model for each CA country.

Table 8. Descriptive statistics of variables of the gravity model of the CA countries

Variable	Number of observations	Averages	Standard deviation	Minimum	Maximum
Kyrgyz Republic					
LNexp	60	2.00	2.10	-1.84	6.90
LN _{gdp_kg}	60	3.53	0.04	3.49	3.57
LN _{gdp_partner}	60	6.52	1.80	3.60	10.22
LN_Dist	60	7.95	0.85	5.24	9.26
Combor	60	0.13	0.34	0	1
lang_off	60	0.37	0.49	0	1
lang_eth	60	0.10	0.30	0	1
Integr	60	0.10	0.30	0	1
The Republic of Kazakhstan					
LNexp	60	6.77	1.12	4.34	9.20
LN _{gdp_KAZ}	60	6.26	0.04	6.22	6.30
LN _{gdp_partner}	60	6.85	1.75	3.49	10.22
LN_Dist	60	8.05	0.83	5.24	9.54
Combor	60	0.17	0.38	0	1
lang_off	60	0.23	0.43	0	1
lang_eth	60	0.07	0.25	0	1
Integr	60	0.07	0.25	0	1
The Republic of Uzbekistan					
LNexp	60	4.70	1.44	2.39	7.84
LN _{gdp_UZ}	60	5.64	0.06	5.58	5.69
LN _{gdp_partner}	60	6.73	1.77	3.49	10.22
LN_Dist	60	7.86	0.86	5.73	9.26
Combor	60	0.15	0.36	0	1

lang_off	60	0.33	0.48	0	1
lang_eth	60	0.23	0.43	0	1
The Republic of Tajikistan					
LNexp	60	1.44	2.82	-6.91	6.39
LNgdp_RT	60	3.67	0.06	3.60	3.73
LNgdp_partner	60	6.62	1.64	5.73	9.28
LN_Dist	60	7.87	0.84	5.73	9.28
Combor	60	0.13	0.34	0	1
lang_off	60	0.27	0.45	0	1
lang_eth	60	0.10	0.30	0	1
Turkmenistan					
LNexp	88	3.13	2.03	-2.17	6.77
LNgdp_TK	88	6.25	0.04	6.22	6.30
LNgdp_partner	88	6.55	1.87	3.49	10.22
LN_Dist	88	7.81	0.73	6.50	9.43
Combor	88	0.17	0.38	0	1
lang_off	88	0.32	0.47	0	1
lang_eth	88	0.18	0.39	0	1

Source: Calculated based on data from the International Trade Center, World bank, IMF [20; 21; 22].

According to the theory, the coefficient of the exporter's and importer's GDP should have a positive sign, since GDP is an indicator of the exporter's production capacity and an indicator of the importer's market size, which are factors influencing the trade (export) of countries. In turn, the distance between countries should have the opposite effect, since greater distance between countries increases transport and customs costs. The presence of a common border, a common official and ethnic language should theoretically have a positive effect on trade between countries [7; 9; 11; 13; 14].

3.2. Results for the gravity model of trade.

The results of the regression analysis for calculating the elasticity coefficients of the gravity model variables are presented in Table 9.

Table 9. Coefficients for the gravity model of exports of Central Asian countries

Variable	Kyrgyzstan	Kazakhstan	Uzbekistan	Tajikistan	Turkmenistan
const	-12.94	-11.17	-7.69	-2.24	-28.37
LNgdp	4.80	2.57	2.05	1.45	4.94
LNgdp_partner	0.43	0.33	0.51	0.13	0.15
LN_Dist	-0.68	-0.07	-0.42	-0.35	-0.11
combor	1.18	0.52	0.28	1.85	1.27
lang_off	0.89	-0.04	0.81	-0.33	0.51
lang_eth	0.03	0.37	1.81	1.29	0.91
integral	1.44	0.46	-	-	-

The results of the regression analysis confirm the theoretical conclusions, for example, the GDP of the exporting and importing country has a positive effect on exports, while the distance between countries has a negative effect.

It should be noted that Kazakhstan and Tajikistan received a negative coefficient for the lang_off variable (-0.04 and -0.33, respectively).

A detailed study of Kazakhstan's exports highlights the raw material (oil) orientation and the main importers are European and Asian countries, i.e. Kazakhstan does not export oil and oil products to CIS

countries, which affects the negative coefficient result on the "lang_off" variable (-0.04), but this coefficient is close to zero and is statistically insignificant.

In turn, Tajikistan received a negative coefficient for the lang_off variable (-0.33) due to a greater focus on countries with a similar language, for example, Afghanistan and Iran, which is confirmed by the positive coefficients "lang_eth" (1.29).

The coefficient for the "Integration" variable (applied for Kyrgyzstan and Kazakhstan, which are members of the EAEU) is positive (1.44 and 0.46 respectively), which demonstrates a positive effect on trade.

The obtained coefficients in Table 9 were applied in the formula of the gravity model of exports of CA countries to assess the export potential of 5 CA countries based on actual data for 2021. The calculation results are presented in table 10.

Table 10. Estimation of export potential in CA countries (million USD)

Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Kyrgyzstan	Kazakhstan	374.7	927.8	553.1	148%
Kyrgyzstan	Tajikistan	23.8	30.8	7.0	thirty%
Kyrgyzstan	Turkmenistan	5.1	8.2	3.2	62%
Kyrgyzstan	Uzbekistan	180.1	90.9	-89.2	-fifty%
Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Uzbekistan	Kazakhstan	1178.4	1551.8	373.4	32%
Uzbekistan	Tajikistan	501.9	578.4	76.5	fifteen%
Uzbekistan	Turkmenistan	191.9	432.7	240.8	125%
Uzbekistan	Kyrgyzstan	792.0	442.0	-350.1	-44%
Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Kazakhstan	Kyrgyzstan	625.2	1063.8	438.6	70%
Kazakhstan	Tajikistan	800.3	319.7	-480.6	-60%
Kazakhstan	Turkmenistan	211.5	589.8	378.3	179%
Kazakhstan	Uzbekistan	2844.1	1646.4	-1197.7	-42%
Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Turkmenistan	Kazakhstan	42.8	252.5	209.6	489%
Turkmenistan	Kyrgyzstan	32.8	48.4	15.7	48%
Turkmenistan	Tajikistan	22.2	21.0	-1.2	-5%
Turkmenistan	Uzbekistan	687.8	245.0	-442.8	-64%
Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Tajikistan	Kazakhstan	360.1	3.5	-356.5	-99.0%
Tajikistan	Kyrgyzstan	5.6	17.3	11.7	210.9%
Tajikistan	Turkmenistan	0.01	3.5	3.4	57458.5%
Tajikistan	Uzbekistan	126.7	108.7	-18.0	-14.2%

Source: Calculated based on data from the International Trade Center, World bank, IMF [22; 21; 20].

The above results are obtained taking into account the given parameters (variables) of the gravity model and the elasticity of exports in relation to the parameters (variables) for the last 2-3 years.

The results of gravity modeling of trade between the CA countries demonstrate the potential for increasing trade volumes.

For example, Kyrgyzstan can increase exports to Kazakhstan, Tajikistan and Turkmenistan and the total potential increase in exports to these countries could amount to USD 563 million.

Uzbekistan has the potential to increase exports by USD 691 million also to Kazakhstan, Tajikistan and Turkmenistan.

Kazakhstan, being a major economy in the region, also has the potential to increase exports to the Central Asian countries in the amount of USD 817 million.

Turkmenistan also has the potential to increase exports to Kazakhstan and Kyrgyzstan, the total increase in exports could reach USD 225 million.

The potential growth of Tajikistan's exports to the Central Asian countries according to the model is USD 15 million.

Thus, the total increase in exports of the Central Asian countries according to the model could amount to USD 2.3 billion, and, accordingly, the potential increase in trade turnover between the countries could amount to USD 4.6 billion.

Given that the Central Asian countries have concluded an agreement on friendship, good neighborliness and cooperation for the development of Central Asia in the 21st century, which contributes to further steps to expand cooperation between the countries and may lead to the conclusion of a regional trade agreement in the future. The conclusion of a regional trade agreement will remove barriers and lead to an increase in trade between the CA countries.

For example, existing gravity model estimates in the literature (Baier and Bergstrand, 2007) document that a free trade agreement roughly doubles the two-way trade of two trading partner members over an average of 10 years [3].

Considering the above, the gravity model was calculated to estimate the effects of reciprocal measures by CA countries to increase trade between countries (conclusion of a regional trade agreement, creation of mechanisms to stimulate trade between countries, etc.). The gravity model introduces an upward coefficient as a dummy variable that, all other things being equal, leads to an increase in trade volumes. The results of the gravity model with an increasing coefficient are given below.

Table 11. Assessment of export potential with a multiplying factor (million US dollars)

Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Kyrgyzstan	Kazakhstan	374.7	2522.1	2147.3	573%
Kyrgyzstan	Tajikistan	23.8	83.8	60.0	252%
Kyrgyzstan	Turkmenistan	5.1	22.4	17.3	342%
Kyrgyzstan	Uzbekistan	180.1	247.2	67.1	37%
Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Uzbekistan	Kazakhstan	1,178.4	4218.1	3,039.7	258%
Uzbekistan	Tajikistan	501.9	1572.3	1,070.4	213%
Uzbekistan	Turkmenistan	191.9	1,176.1	984.2	513%
Uzbekistan	Kyrgyzstan	792.0	1201.4	409.4	52%
Exporter	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Kazakhstan	Kyrgyzstan	625.2	2,891.8	2266.6	363%
Kazakhstan	Tajikistan	800.3	869.2	68.8	9%
Kazakhstan	Turkmenistan	211.5	1603.2	1391.6	658%
Kazakhstan	Uzbekistan	2844.1	4475.4	1631.2	57%
Export	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Turkmenistan	Kazakhstan	42.8	686.3	643.5	1502%
Turkmenistan	Kyrgyzstan	32.8	131.7	98.9	302%
Turkmenistan	Tajikistan	22.2	57.1	34.9	157%
Turkmenistan	Uzbekistan	687.8	665.9	-21.9	-3%

Export	Importer	Fact	Calculation	Growth in abs. terms	Growth in %
Tajikistan	Kazakhstan	360.1	18.1	-341.9	-95.0%
Tajikistan	Kyrgyzstan	5.6	88.5	83.0	1493.5%
Tajikistan	Turkmenistan	0.01	17.7	17.7	294881.7%
Tajikistan	Uzbekistan	126.7	556.9	430.2	339.6%

Source: Calculated based on data from the International Trade Center, World bank, IMF [22; 21; 20].

The results of the gravity model with a multiplying factor demonstrate a significant effect of the mutual measures of the Central Asian countries aimed at deepening cooperation in the field of trade.

The potential increase in exports is \$14.5 billion, and the volume of growth in potential trade turnover could be \$29 billion more than the volume of trade between the CA countries in 2021.

Achieving this increase in trade volumes between the CA countries is possible with the removal of trade barriers within 5-7 years and with significant support to business entities by expanding access to financing.

In order to more accurately determine potential export products, it is necessary to analyze trade by commodity groups and production capabilities of the CA countries.

The next section proposes the creation of an international regional institution to support the private sector and assist the Governments of the Central Asian countries in providing access to finance in order to increase production and export opportunities.

4. The Central Asian Guarantee Fund is a development institution that promotes increasing trade between Central Asian countries

The realization of the trade potential of Central Asia is possible with the implementation of mutual measures by the Central Asian countries themselves in the field of expanding the availability of financing and reducing trade barriers. At the same time, a key factor in the implementation of measures to expand cooperation is the system of credit guarantees that provide access to the necessary financing.

The CA countries have introduced loan guarantee systems, but the level of access to finance is increasing slowly. One of the reasons is the initial stage of formation of guarantee institutions in Tajikistan and Uzbekistan. In Kyrgyzstan and Kazakhstan, guarantee institutions (OJSC “Guarantee Fund” and DAMU Entrepreneurship Development Fund, respectively) are increasing the issuance of guarantees and expanding the availability of financing for SMEs, while facing issues of capitalization and minimization of guarantee risks.

Given the above, it is necessary to create an international Central Asian Guarantee Fund, which will be at the level of a regional institution for the development and support of the private sector.

The Central Asian Guarantee Fund (hereinafter referred to as CAGF) will provide support to national guarantee funds, as well as apply various instruments of financing, insurance of export operations. The activities of the CAGF will be aimed at increasing the volume of mutual trade and trade cooperation between countries, creating regional value chains, including industrial and agricultural clusters.

Given the above, the main tasks of the CAGF are formulated below:

- Ensuring long-term socio-economic development of the Central Asian countries.
- Increasing the volume of mutual trade between the Central Asian countries.
- Formation and implementation of a strategy with the identification of priority sectors of each CA country, including a competitive offer.
 - More effective support of exports and results monitoring (export discipline).
 - Ensuring access to financing through the introduction and application of various financing instruments, including trade finance, counter-guarantees, co-guarantees.
 - Insurance of trade transactions between SMEs of the Central Asian countries.

CAGF can work in four main areas of activity:

- 1) Ensuring SMEs have access to finance by providing guarantees for loans, expanding the use of trade finance instruments in the CA countries, etc.

2) Development of priority sectors and export-oriented industries: to formulate and implement a strategy with the identification of priority sectors of each CA country, including a competitive offer, more effective support for exports and monitoring of results (export discipline).

3) Insurance of export-import transactions between SMEs of the Central Asian countries in order to protect against the risks of export-import operations, which contributes to a more dynamic growth in trade volumes between the CA countries.

4) Support for national guarantee funds in risk sharing: the introduction of various instruments of guarantee support for export-oriented enterprises and a system of counter-guaranteeing the existing guarantee funds of the Central Asian countries.

The CAGF will be a self-sustaining and financially sustainable organization due to interest income from the placed guarantee capital in deposits of financial and credit institutions, and the commission received from providing a guarantee.

In order to effectively operate the CAGF, it is necessary to determine the model for the functioning of this institution and create it on the basis of an existing guarantee institution for the effective launching and functioning of the CAGF. For example, the guarantee institutions of Uzbekistan and Tajikistan cannot serve as a basis for the creation of the CAGF due to the short period of activity. The "DAMU" Entrepreneurship Development Fund (Kazakhstan), in addition to providing guarantees, performs other functions related to concessional lending through banks and subsidizing interest rates under government programs.

Given the above, the creation of the CAGF is possible on the basis of OJSC "GF" or as a newly created institution.

In the first option, the basis for the creation of the CAGF can serve OJSC "GF", which has achieved sustainable development over the past 5 years and is the only specialized institution that provides guarantee support to business entities. The model of the guarantee fund in the Kyrgyz Republic for the support and development of SMEs has been recognized by international financial institutions as successful, sustainable and effectively helping entrepreneurs. One of the main achievements of OJSC "GF" is the repayment rate of guarantees, which is 99.8% with issued guarantees in the amount of more than USD 55 million.

In the second option, the creation of CAGF as a newly created institution, with the opening of the head office in Bishkek, the Kyrgyz Republic and branches in the Central Asian countries. This option is based on the development model of the guarantee fund in the Kyrgyz Republic, as well as the availability of professional skills of employees in the creation and successful operation of OJSC "GF", which can be used in the work of CAGF and its branches.

The established CAGF will be an international organization - a subject of international law, have international legal capacity and have the right to conclude international agreements within its competence and will not be a supervised institution of the central (national) banks of the Central Asian countries.

CAGF and its branches in the CA countries will interact with financial and credit institutions (hereinafter referred to as FCI) and guarantee funds of these countries on the basis of agreements and provide guarantee support in order to access financial resources and share risks with national FCIs and guarantee funds.

The interaction of CAGF with the national guarantee funds of the CA countries will be aimed at sharing risks through re-guaranteeing, introducing new tools and products, providing advice and methodological assistance in building the business processes of the Guarantee Funds and the legislative framework in the CA countries.

Increasing access to financing for export-oriented enterprises using guarantee support tools, to facilitate FCIs in conducting factoring operations (repurchase of export contracts), documentary operations with guarantee support from the CAGF.

Implementation of the guarantee instrument "Guarantee of a credit transaction between enterprises (contract performance guarantee, guarantee of obligations under the transaction)" in the import-export operations between the CA countries.

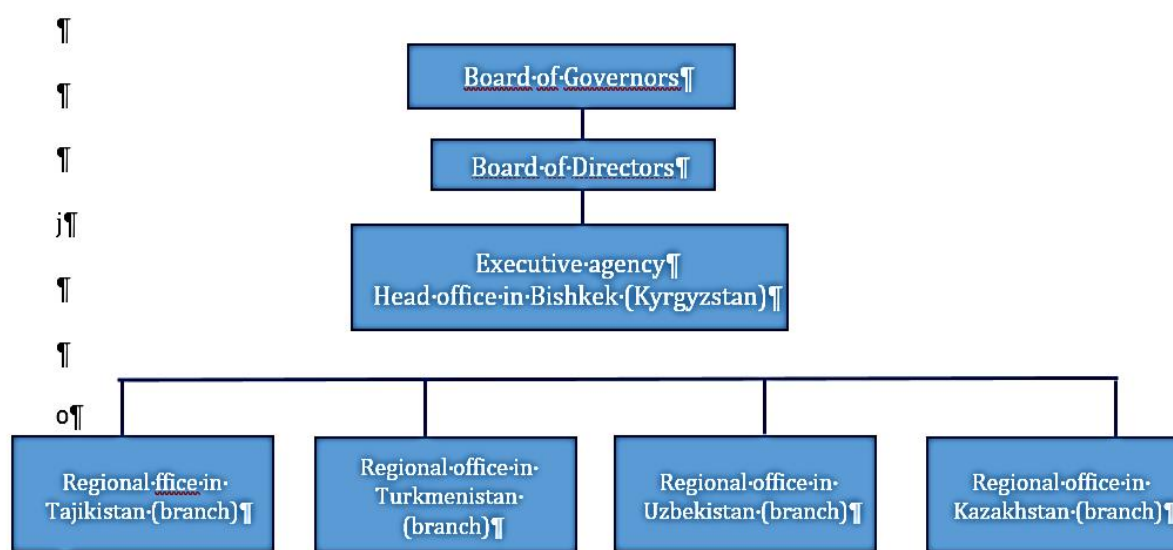
Formation of CAGF capital.

The main issue in the creation of CAGF is the sources of capital formation and its size.

Considering that the need for financing is 25% of the revenue of a business entity, and the actual trade turnover between the CA countries is USD 16.5 billion, the volume of trade financing is USD 4.1 billion.

When applying the multiplier coefficient in CAGF 1 to 10, then the required amount of initial capital of CAGF will be USD 400 million.

Figure 16. Organizational structure of the Central Asian Guarantee Fund



The capital of CAGF in the amount of USD 400 million can be formed based on 2 options:

1) 5 CA countries will contribute USD 80 million each and form capital in the amount of USD 400 million;

This option is possible if the Governments of all Central Asian countries are interested and will allocate appropriate funding from the state budget. In turn, the Kyrgyz Republic, when creating the CAGF on the basis of OJSC "GF", can use the capital of OJSC "GF" (80 million US dollars) as a contribution to the formation of the CAGF.

2) Formation of initial capital in the amount of USD 400 million will be at the expense of international financial institutions (ADB, IFC, WB, EBRD and other international financial institutions). At the same time, financial institutions of the Central Asian countries can also take part in the formation of capital and become one of the shareholders.

The proposed organizational structure is presented above (figure 16) and consists of three governing bodies and regional offices (branch) in the CA countries.

5. Conclusion

The results of the assessment of mutual trade based on the mathematical gravity model show the potential to increase the volume of trade between the CA countries, which can be realized with the creation of CAGF with a capital of USD 400-500 million. CAGF contributes to an increase in trade turnover between CA countries by more than USD 29 billion.

The formation of capital in the amount of USD 400-500 million is preferably to be carried out at the expense of funds of interested international financial institutions.

At the same time, it is necessary to determine the model of CAGF functioning and to establish it on the basis of the existing guarantee institution for its effective launching and functioning. The establishment of CAGF is possible on the basis of OJSC "GF" as the only specialized guarantee institution in Central Asia.

It is also possible to establish the CAGF as a newly created institution with the opening of the head office in Bishkek, due to the presence of a successful model of guarantee fund development in the Kyrgyz Republic, as well as the presence of professional skills of employees in the creation and successful operation of the OJSC "GF", which can be used in the activities of the CAGF.

Globally, there is a regional-level institution similar to the proposed CAGF, the "Country Guarantee and Investment Facility," with ASEAN+3 and the Asian Development Bank as founding members. This institution aims to guarantee corporate bonds of ASEAN+3 companies in order to provide access to the Southeast Asian bond markets.

In turn, the Central Asian Guarantee Fund will make it possible to realize the trade potential through the introduction and wide use of trade finance instruments, support for large infrastructure projects that promote trade and support for national guarantee funds in Central Asian countries.

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Pussian version

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CENTRAL ASIAN GUARANTEE FUND AS AN INSTITUTION TO SUPPORT AND DEVELOP MUTUAL TRADE BETWEEN CENTRAL ASIAN COUNTRIES

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Abstract

This article examines factors affecting trade among Central Asian countries and assesses the trade potential of the region. Using open data, a gravity model is used to estimate Central Asian countries' trade over the past 2-3 years. The results obtained from the mathematical gravity model showed the presence of the trade potential between the Central Asian countries. According to the results, GDP of the exporting and importing country has a positive impact on trade, while distance has a negative impact. The trade potential shows the opportunities for economic growth and the development of entrepreneurship. Lower-middle-income countries, being less developed economies even by Central Asian standards, can only reduce poverty and become more developed by increasing their trade with neighboring Central Asian countries. At the same time, this article proposes a tool for realizing trade potential - the Central Asian Guarantee Fund. This institution will aim to increase the level of trade between countries by providing private sector access to finance, expand trade finance instruments, and support national guarantee funds. Thus, the article can help Central Asian governments formulate policies to expand regional trade in the face of geopolitical tensions. This article is the first experience of applying the gravity model to Central Asian countries in order to estimate trade potential, and to realize it with the help of the Central Asian Guarantee Fund.

Keywords: trade, gravity model, Central Asia, Central Asian Guarantee Fund, Kyrgyzstan, Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan.