

Modern methods for efficiency assessment of special economic and small industrial zones' ecosystems

Asiiat Kipkeeva^{1,2,3*}, *Ikbol Ermetova*¹, *Umidjon Matyakubov*¹, and *Umidbek Palvanbayev*¹

¹ Urgench State University, Khorezm region, Urgench, 220100 Uzbekistan

²Urganch innovatsion universiteti, Khorezm region, Urgench, 220100 Uzbekistan

³North Caucasus State Academy, Cherkessk, 369000 Russia

Abstract. In the Republic of Uzbekistan, the establishment and assessment of Special Economic Zones (SEZs) and Small Industrial Zones (SIZs) present an urgent challenge that intertwines economic growth with ecological sustainability. Amidst these developmental initiatives, it is imperative to consider the impact of these zones on the region's rich biodiversity and fragile ecosystems. The research systematically evaluates the performance indicators of SEZs and SIZs, drawing upon comparative analyses of legal frameworks across Central Asia and the Russian Federation. This study not only aims to enhance the economic contributions of these zones but also emphasizes the necessity of integrating environmental considerations into their design and operation. By studying successful methodologies from Kazakhstan and lessons from ecological practices in China, South Korea, and Singapore, the potential of SEZs and SIZs can be expanded to foster both economic and ecological resilience. However, the article highlights that significant infrastructural challenges and the absence of regulatory frameworks for measuring ecological impact impede the realization of these dual objectives.

1 Introduction

The strategic goal of Uzbekistan is to be included in the top 50 rankings by 2030. Achieving this goal is not possible without creating favorable conditions for regional development, introducing advanced technologies, and expanding employment. These growth points in the republic are SEZs and SIZs [1-15].

Arslanov U.U. writes «...The largest number of SEZs over the past four years has been observed in Tashkent region (SEZ «Angren», «Bustonlik-farm», «Parkent-farm» and «Bukhoro-agro») and Jizzakh region («Jizzakh» and «Zomin-farm»), Syrdarya (SEZ «Syrdare») regions» In seven regions, one SEZ has been created, but in Kashkadarya region and the city of Tashkent, there are none [1, p. 1676].

Special economic zones (SEZs) – geographically delimited areas where governments promote industrial activity through both fiscal and non - fiscal incentives, infrastructure

* Corresponding author: asya-ki@yandex.ru

provision and improved services – are becoming an increasingly widespread economic development tool [2, p. 456].

In world practice, small industrial zones are considered as a type of special economic zone. In RU, SIZs are an independent structure. The similarities in the organizational and legal conditions for the establishment and functioning of SEZ and SIZ are:

1. Legislative acts have been developed regulating the creation, operation, and regulation of SEZs and SIZs. These laws provide investors with tax breaks and customs incentives.

2. In government support i.e. at the state level, support is provided (financial, infrastructural), as well as regulation of the activities of SIZs and SEZs through specialized agencies and committees.

3. Provision of tax and customs privileges in order to attract foreign and domestic investments into the country.

The law also states that the duration of the benefit is calculated from the date of beginning of production in the SEZ territories. In addition to income tax benefits, full or partial exemption from payment of land tax, property tax, and tax for the use of water resources is provided. Also, SEZ participants are given a deferment on the payment of VAT when importing goods for 120 days.

4. For SEZs and SIZs of Uzbekistan, special management and control are provided by government authorities, which allows for the effective functioning of the zones.

The competent authorities have introduced numerous incentives for SEZ investments, including exemption from customs duties on plant and machinery and overall income tax exemptions for a period of five to ten years [3-5].

Originally, SEZs existed mainly in industrialised countries. However, as early as the 1970s, zones emerged also in East Asia and Latin America, which were supposed to stimulate the influx of foreign capital into highly labour-intensive sectors (Farole & Akinci, 2011). Soon, these preferred areas became the foundation of the trade and investment policy followed by countries shifting from an import-oriented trade policy to an export-oriented one, based on deeper integration with global markets [6, pp. 257].

SEZs are geographic concentrations of firms. They are created to provide better infrastructure and R&D, and they offer various fiscal incentives that are not found outside the zones. They are often established by direct industrial policy interventions to promote regional economic growth, where state policy offers incentives to attract anchor investors and other firms to the same location [7, p. 178].

2 Tools and study methods

In this research we use a systematic approach, including a comparative analysis of the laws of different countries, as well as an analysis of the effectiveness of economic zones.

Modern methods of collecting and processing statistical information related to the activities of the SEZ and SIZ of the republic were also used.

The aim of our investigation is to determine key indicators that allow give economic efficiency assessment of the country's SEZ and SIZ.

3 Results

The Law About Special Economic Zone dated February 17, 2020, No. LRU-604 provides for the possibility of creating scientific and technological, tourist and recreational, free trade, and special industrial zones.

SEZs are geographic concentrations of firms. They are created to provide better infrastructure and R&D, and they offer various fiscal incentives that are not found outside

the zones. They are often established by direct industrial policy interventions to promote regional economic growth, where state policy offers incentives to attract anchor investors and other firms to the same location [8-10].

SEZs and SIZs take a special place in the economic growth of Uzbekistan. These zones are aimed at attracting foreign investment, increasing product exports, and creating a favorable business environment. In 1996, the first Law of the Republic of Uzbekistan dated April 25, 1996 No. 220-I «On Free Economic Zones» was made. But it was cancelled in 2020. Intensive work has been underway for 4 years to create a SEZ. So, the first SEZ «Navoi» was established at the end of 2008 on based on the Decree of the President of the Republic of Uzbekistan dated December 2, 2008, No. PD-4059 «On the creation of a free economic zone in Navoi area». The main aim of organization of zones is to receive foreign investment to the republic.

SEZs play a significant role in driving industrial growth and development by attracting foreign direct investment (FDI). China’s experience with SEZs demonstrates their effectiveness in fostering industrialization, expanding export capabilities, and achieving substantial economic growth. SEZs have been instrumental in transforming China into a major global manufacturing and exporting powerhouse [11-12].

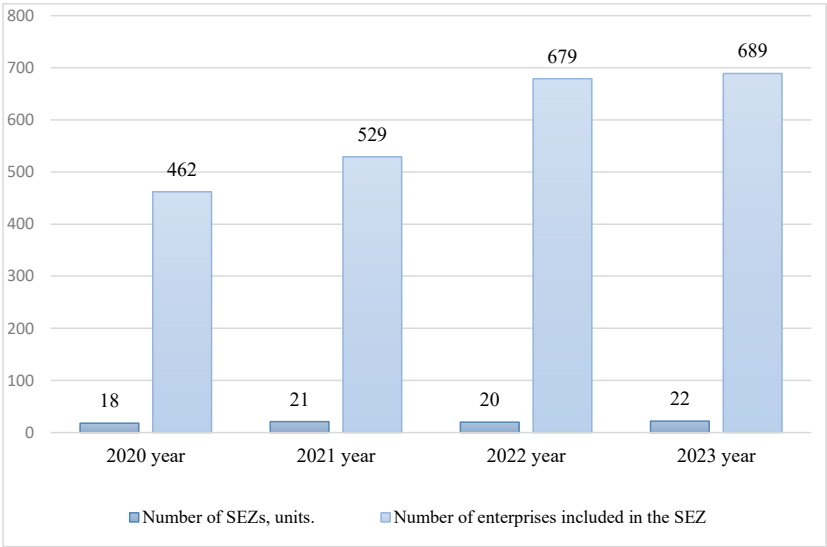


Fig. 1 - Dynamics of SEZ in Uzbekistan for 2020 – 2023 units

In addition to attracting foreign and domestic investment, it helps reduce unemployment. Thus, as of January 1, 2024, 766 industrial zones were created in the republic, of which 24 are special economic zones, 532 are small industrial zones and 210 are youth industrial-entrepreneurial zones. The dynamics of the SEZ of Uzbekistan for 2019-2024 are presented in Figure 1.

SEZs constitute geographically delineated areas where fiscal incentives and regulatory frameworks are provided with the main goal to attract investments and generate additional economic activity in the region. A World Bank report states that within the zones, governments aim to create new firms and jobs and facilitate skills and technology transfers. This can generate synergies, networks and knowledge spillovers to stimulate the economic growth of the region [13].

In Uzbekistan in 2020, 18 SEZs operated as of 01.01.2023, their number has increased to 22 units. According to the Statistics Agency of Uzbekistan, 25 SEZs are currently operating. These include «Nukus-technopark» with a total land area of 30.0 ha, «Nukus» - 152.5 ha, «Navoi» - 711.5 ha, «Jizzak» - 322.2 ha, «Zamin-farm» - 177.5 ha, «Gallyaaral», «Namangan» - 373.0 ha, «Kosonsoy-form» - 81 ha, «Kokand» - 358.7 ha, «Special industrial hub of mechanical engineering and electrical engineering» - 74.8 ha, «Andijan Farm» - 44.5 ha, «Ipak Yuli» - 218.2 ha, «Angren» - 791.9 ha, «Parkent Farm» - 17.3 ha, «Bustanlyk Farm» - 37 ha, «Syrdarya» - 375.5 ha, «Syrdarya-farm» - 54 ha, «Urgut» - 1091.0 ha, «Termez» - 65.5 ha, «Chirakchi» - 72 ha, «Gijduvan» - 664.4 ha, «Bukhara-agro» - 2362.7 ha, «Korakul» - 499.1 ha, «Khozarasp» - 242.4 ha, «Korauzak» - 242.4 ha. Thus, currently, 25 SEZs are functioning, of which 18 are industrial zones, 6 are pharmaceutical-oriented, and 1 is agricultural.

Also, according to official data from the Statistics Agency, during the study period, we see increasing of number of enterprises included in the SEZ from 462 enterprises in 2020 to 689 in 2023.

During the period under study, there was also a rapid growth of enterprises entering the SEZ by 49% or 227 enterprises. As of August 1, 2023, the number of operating enterprises with foreign investment was 12,771 units. Their number by region is recorded as follows: in Tashkent - 8169 units; in Tashkent region - 1438 units; in Samarkand region - 536 units; in Fergana region - 447 units; in Surkhandarya region - 340 units; in Andijan region - 312 units; in Bukhara region - 295 units; in Namangan region - 213 units; in Navoi region - 205 units; in Syrdarya region - 190 units; in Jizzakh region - 173 units; in Kashkadarya region - 166 units; in the Republic Karakalpakstan - 158 units; in Khorezm region - 129 units.

In the RU, the number of SEZs from 2020 to 2021 increased from 18 to 21 units. Then in 2022, the number of zones decreased to 20 SEZs. This is because, at the end of 2021, the Boysun Farm SEZ ceased to operate and was annexed to the Termez special zone. For example, in 2020, 1 SEZ operated in the Surkhandarya region, then in 2021 they increased to 3 units, and in 2022 they decreased to two zones.

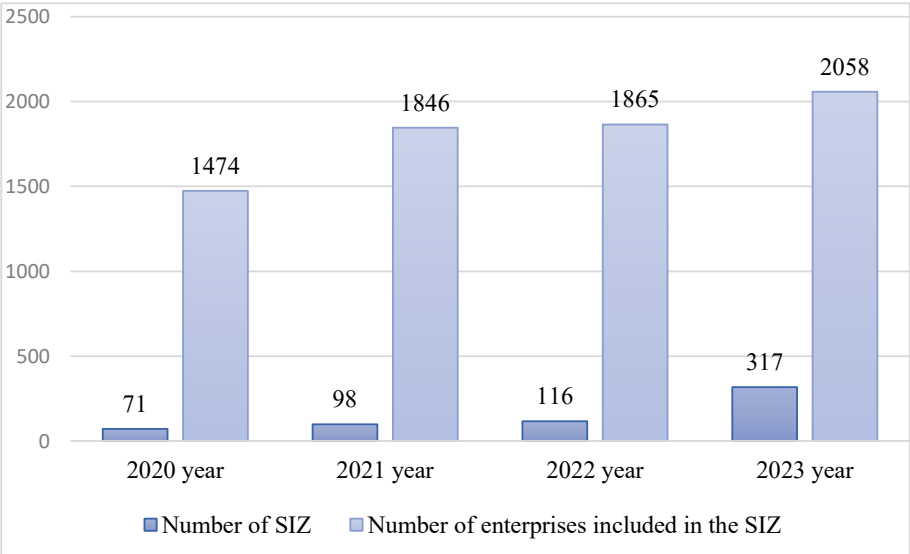


Fig. 2 - Dynamic of SIZ in the Republic of Uzbekistan (2020 - 2023), units

During the analyzed period, the number of SIZs in Uzbekistan tended to increase 4.5 times. We see increasing of enterprises included in the SIZ by 39%. According to official data from the Statistics Agency, in 2020, 18 small industrial zones were concentrated in Tashkent region (out of 71). In April 2021, a meeting was held on investment projects carried out in SEZs and SIZs under the chairmanship of the President Shavkat Mirziyoyev. During the meeting, it was noted that 453 projects worth 2.6 billion US dollars and 1,497 SIZ projects worth 5 trillion soums were implemented in special zones, and 36 thousand new jobs were also created.

There are 17 small industrial zones in Tashkent region. These include Bekabad city SIZ with a total area of 36.8 hectares, Bekabad district SIZ - 3.0 hectares, Akhangarsk district SIZ - 2.2 hectares, Almalykskaya city SIZ - 7.2 hectares, Yukori Chirchik district SIZ - 2.5 ha, Yangiyul district SIZ - 5.6 ha, Angen city SIZ - 1.5 ha, Akurgan district SIZ - 2.4 ha, Urta-Chirchik district SIZ - 10.0 ha, Kuyi-Chirchik district SIZ - 3.7 ha, Chirchik city SIZ - 20.8 hectares, Bukinsky district SIZ - 2.3 ha, Piskent district SIZ - 4.7 ha, Bustonlik district SIZ - 23.95 ha, Kibray district SIZ - 3.4 ha, Parkent district SIZ - 4 ha, Chinaz district SIZ - 6.15 ha.

The Chirchik city SIZ is located in two places in the State Unitary Enterprise «Suvokava», construction is underway in this area, and the total area is 3.4 hectares. The second territory, where the small industrial zone is located, is part of the production territory of the Cherkhikselmash plant - 17.4 hectares. Bustonlik district SIZ is also located in two different territories. The first is the building of JSC «Gazalkent Oyna» - 14.4 hectares and the second is the building of the State Institution «Uzenergoindustry» - 9.55 hectares.

In 2023, more than 27 thousand new jobs were created through the launch of 963 investment projects worth 9.6 trillion soums in 766 industrial zones. Within the framework of 4,745 commissioned facilities, products worth 53.3 trillion soums were produced, and exported in the amount of \$972 million.

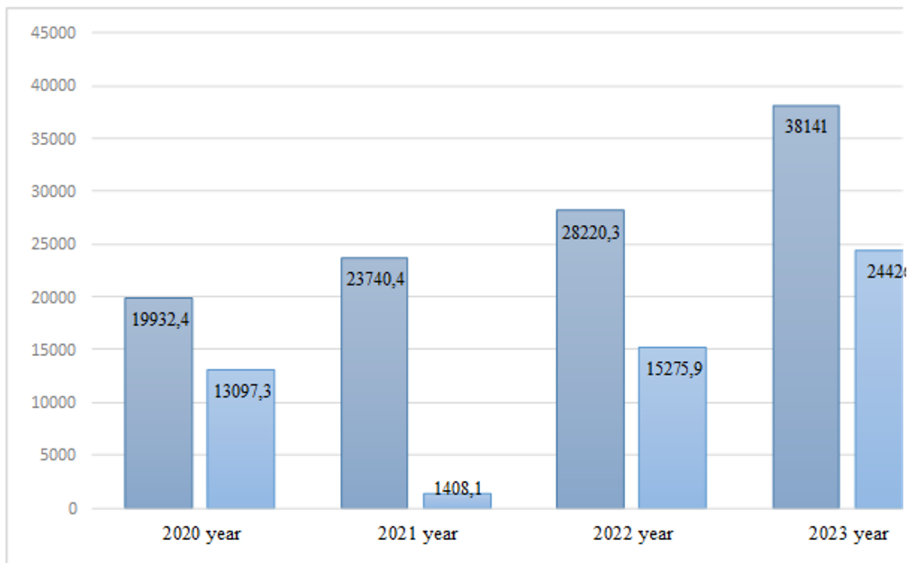


Fig. 3 - Dynamics of imports and exports in the RU for 2020-2023, million US dollars

An analysis of the dynamics of imports showed that during the period under study, there was an increase in imports of products by 91.3%, and during the period under review there

was a tendency to increase exports of products by 86.5%. According to the statistics office of Uzbekistan, a third of exports in 2023 will consist of the sale of gold. However, supplies of textile and industrial products tended to decline. The opposite situation is observed with the import of food products, oil, and gas. Sales of fruits and vegetables for 2023 were on an upward trend of \$1.18 billion. Export of fruits and vegetables from Uzbekistan to Russia amounted to 37%, to Pakistan 16.7%, to Kazakhstan 10.3%, and to the People's Republic of China 12.3%.

Imports of food products, grain, and products amounted to \$1.12 billion, sugar, sugar products, and honey - \$558 million, and cocoa, coffee, and tea - \$385.3 million. In 2023, imports of cars increased and amounted to \$4.34 billion, and imports of spare parts – \$148.3 million. During the period under review, imports of fertilizers almost doubled. This phenomenon can be explained by a decrease in production at Uzkimyo sanoat enterprises, which received less gas.

To produce ammonium nitrate products and cover all losses, 55.3 thousand tons of ammonia were imported from the Russian company Togliattiazot. During the period under study, there was an increase in aircraft deliveries by up to 2.6 times.

The dynamics of the GDP in current prices are presented in Fig. 4. Level of GDP characterizes the economic efficiency of the SEZ and SIZ. During the analyzed period, the level of GDP increased by 76.1%. Maximum GDP growth is observed in 2022, which amounted to 738,425.2 billion soums, and from 2022 to 2023. there is a decline in GDP.

Starting in 2022, the GDP level began to decline. This phenomenon can be explained by a decrease in prices for exported goods such as gold, cotton, etc. There are also internal difficulties in the country, such as the degree of inflation and banking problems. All this can lead to a decrease in economic indicators, in GDP.

Another important indicator characterizing the efficiency of the SEZ and SIZ is investment in fixed capital, which from 2020 to 2022 tended to grow by 26.7%. For January-June 2023, investments in fixed capital amounted to 139,104.6 billion soums, the largest volume of investments falls in Tashkent city - 28,454 billion soums.

High rates of investment at the expense of organizations and enterprises are observed in the capital of Uzbekistan, Tashkent, which amounted to 47.1% of the total. In the Jizzakh region, it was 34.7%, in the Navoi region - 32.9%. A key role is given to foreign investments and loans. High rates of foreign investment are observed in the Syrdarya and Andijan regions, where the values of these indicators reached 82.1% and 55.2%, respectively.

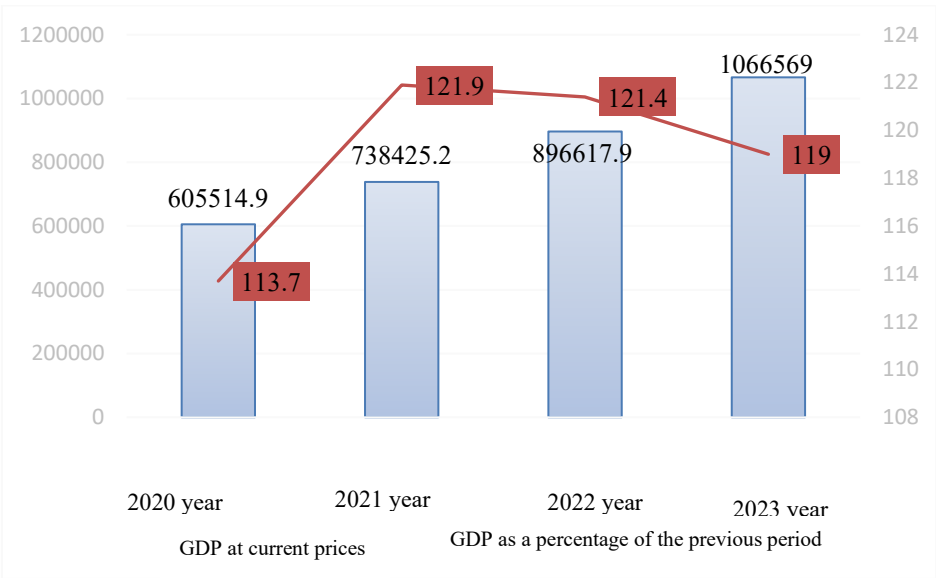


Fig. 4 - Dynamics of GDP of the RU in current prices for 2020-2023, billion soums

To create new jobs in the SEZ and SIZ of Uzbekistan, on June 1, 2024, a meeting was held in the Gijduvan district, where President Shavkat Merziyoyev noted the changes taking place. In his speech, the President of Uzbekistan noted that in previous years the economy of the Bukhara region has grown 1.5 times, and 4.6 thousand enterprises were created, and this allowed to create an additional 90 thousand jobs.

The country is actively developing projects related to industry and energy. In December 2023 alone, 7 large thermal, wind, and solar power plants with a capacity of 2.4 gigawatts were connected to the grid in the country. Thanks to foreign investments worth 14 billion US dollars, 31 power plants with a total capacity of 21 gigawatts are being built.

The ADM Jizzakh automobile plant has been operating on the territory of the Jizzakh SEZ since 2021. Over the past three years, 36 thousand cars have been produced under the Kia, Haval, and Chery brands. The total investment in the project amounted to \$234 million and 1.8 thousand jobs were created.

In the Farish region, in cooperation with the Chinese companies «China Poly Group» and «China Electric», it is planned to build a solar power plant with a capacity of 500 MW, which will also provide the population with additional jobs.

4 Discussion

Currently, there is no document in the country that would regulate the effectiveness of the SEZ and SIZ. In the Republic of Kazakhstan and Russia, legislative acts have been issued and put into effect regulating the issues of the effectiveness of the functioning of SEZ and SIZ (Table 1).

The Resolution provides criteria for evaluating the effectiveness of the SEZ. The efficiency criteria for assessing the value of the SEZ (the number of SEZ residents) are used as follows:

- SEZ is recognized as highly efficient if the calculated indicator exceeds 80%;

- with a value from 40% to 80%, it is considered that the SEZ is quite effective and performs its functions at a satisfactory level, although it may have the potential to improve its performance;
- less than 40% inefficient functioning of the SEZ, i.e. does not achieve its goals.

Table 1. Methods for assessing the effectiveness of SEZs

Countries	Legislative documents	Characteristic
Russian Federation	Decree of the Government of the Russian Federation dated July 7, 2016, No. 643 «On the procedure for assessing the effectiveness of the functioning of special economic zones» with amendments and additions dated February 29, 2024.	The Resolution was amended on July 7, 2018, July 24, 2024, and February 29, 2024. This Resolution establishes a procedure for evaluation of performance of SEZs, aimed at ensuring their transparency and efficiency, and the changes introduced make it possible to strengthen control and expand evaluation indicators, which contributes to a more accurate and comprehensive analysis of the effectiveness of the SEZ.
<i>Central Asian countries</i>		
The Republic of Kazakhstan	Order of the Minister of Industry and Infrastructure Development of the Republic of Kazakhstan dated August 12, 2019 No. 637. Registered with the Ministry of Justice of the Republic of Kazakhstan on August 15, 2019 No. 19248 [14].	According to the legislation of the Republic of Kazakhstan, the effectiveness of the zones implies the calculation of absolute and relative indicators. The annex of the specified document also contains evaluation criteria using a five-point system for evaluating the activities of zones.
The Republics of Turkmenistan, Tajikistan, and Kyrgyzstan do not have a legislative act regulating the evaluation of performance of the SEZ. The Republic of Kyrgyzstan was not considered because of the five free economic zones, only one is operational. Its contribution to the economy of Kyrgyzstan is extremely minimal.		

Evaluation of performance is carried out annually based on the SEZ activities for the calendar year. Considering the experience of the Russian Federation, it is clear that changes have been repeatedly made to the Decree of the Government of the Russian Federation, i.e. the list of indicators has been expanded, such as the digitalization of services in the SEZ, environmental indicators and the level of innovative activity of residents. It became relevant for Russia to introduce changes due to sanctions pressure from the West. These measures necessitated the need to adapt the performance assessment methodology to new economic conditions and challenges. For example, indicators of innovation activity of residents assess the level of introduction of new technologies and implementation of research and development work in the SEZ.

Resolution No. 643 provides methodological recommendations for evaluation of economic performance of investment projects that are being implemented by the Russian SEZ. This regulatory document has been amended several times. These changes make it possible to take into account changes in both the economic, political, and legislative spheres and optimize the process of evaluation of performance of the SEZ.

To develop its methodology for assessing the performance of SEZs, Russia applied the experience of best practices. These countries include China, Singapore, South Korea, and European countries (Poland, Czech Republic, Hungary, etc.).

One of the reasons to China's highly economic growth is to set up special economic zones (SEZs). Since the establishment of first four SEZs (Shenzhen, Zhuhai, Shantou, Xiamen) in 1980s, different types of SEZs have played an important role in China's international trade, industrialization and urbanization.

Recent estimates place the number of Special Economic Zones established in post-reform China between 1984 and 2018 at more than 2200. As discussed in Wang (2013) and Lu et al. (2019), SEZs are more attractive to both foreign and domestic businesses due to special tax incentives, favorable land-use policies, employment subsidies, and advantageous financial assistance—all largely intended to lower the costs of operating a business [15].

The Resolution also strengthens the requirements for transparency of reports of management companies. Measures for additional control and monitoring of the effectiveness of the SEZ have been strengthened, including an independent audit.

The evaluation of performance is carried out by the Ministry of Economic Development of the Russian Federation. Efficiency assessment is carried out about each economic zone, and reports are posted on the official website of the Ministry of Economic Development of the Russian Federation www.economy.gov.ru within three days from the date of sending to the Government of the Russian Federation. Compliance with these measures will ensure accessibility and transparency of information for both stakeholders and the public.

Only the Republic of Kazakhstan (out of the countries of Central Asia) has the Order of the Minister of Industry and Infrastructure Development of the Republic of Kazakhstan dated August 12, 2019, No. 637, registered with the Ministry of Justice of the Republic of Kazakhstan on August 15, 2019, No. 19248, been developed and put into effect. Order No.19248 specifies indicators characterizing the economic efficiency of the SEZ of the Republic of Kazakhstan.

When developing its methodology for evaluation of performance of the SEZ, Kazakhstan applied the experience of several countries.

Firstly, I applied the experience of China, a world leader in the creation and regulation of special economic zones.

Secondly, when developing its own methodology for evaluation of performance of economic zones, Kazakhstan relied on the experience of countries such as Singapore and South Korea. They demonstrated high performance of economic zones, creating a favorable climate.

They emphasized the development of innovation, technological development, and integration into global supply chains.

Indicators are used to analyze the effectiveness of SEZ activities (in accordance with Order No. 637):

- the number of jobs created;
- the number of participants in economic zones, including foreign investors;
- the taxes paid by participants of SEZs and SIZs to the budgets of all levels of the Republic of Kazakhstan;
- the volume of revenue from the sale of goods works, and services minus VAT, excise, and (or) the amount of income received by participants as a result of the implementation of agreements on the implementation of activities as a participant in SEZs and SIZs (prognosis/fact);
- the volume of customs duties paid by participants in SEZs and SIZs;
- the volume of private investments in the authorized capital of the management company of special economic and industrial zones for the purpose of financing and creating objects of engineering, transport, social, innovation, and other infrastructure of SEZs and SIZs;

-the volume of investments, including capital investments, made by participants of SEZs and IZs on the territory of special economic and industrial zones in accordance with agreements on the implementation of activities as a participant in special economic and industrial zones (plan/actual).

The methodology for evaluation of performance of SEZs and IZs of the Republic of Kazakhstan involves calculating the following indicators:

The amount of attracted domestic and foreign investment. A comparative assessment of the planned and final results of the activities of the SEZ and IZ of the country is carried out.

Assessment of social indicators i.e. number of jobs created (permanent/temporary) by participants of the SEZ (plan/actual), etc.

One of the successful projects in the Republic of Kazakhstan is the Astana - New City SEZ, created in 2001, and the Khorgos - Eastern Gate SEZ, which gave Kazakhstan 20,000 jobs.

We do not consider the experience of the Kyrgyz Republic (among the countries of Central Asia) because of the five free economic zones, only one is operational. Its contribution to the economy of Kyrgyzstan is extremely minimal. In order to develop SEZs in the country, the international experience of the Jebel Ali special economic zone, which turned the economy of Dubai, and the SEZ of China were taken. However, this experience did not give positive results. In the republics of Tajikistan and Turkmenistan, there is no official regulatory document that allows us to determine the effectiveness of SEZ zones at the current time.

5 Conclusions

To evaluation of performance of SEZs and SIZs of the RU, the experience of both Russia and the Republic of Kazakhstan can be applied. The experience of Kazakhstan is the most acceptable because of all the countries in Central Asia, only the Republic of Kazakhstan has a regulatory document establishing a methodology for evaluation of performance of SEZ activities. Both states are located in Central Asia and have similar challenges and opportunities, natural and climatic conditions, problems, and cultural characteristics.

Kazakhstan has a similar legal system to the RU, which will simplify the process of adapting regulations and legislative acts. Both states are carrying out legislative reforms to attract foreign investment.

The Republic of Kazakhstan has similar economic conditions to Uzbekistan, including economic structure and level of development. Kazakhstan has successful projects of the Astana-New City SEZ and the Khorgos-Eastern Gate SEZ. As of 06/09/2022, the Astana-New City SEZ has created more than 5,000 jobs. For 20 years, the Astana-New City SEZ has made a huge contribution to the development of the capital. Large projects have been implemented with foreign investment for the production of Talgo passenger cars, the Tau-Ken Altyn LLP refinery, the Astana Yutaria garment factory, the GIB house-building plant, and the Modex Astana block house-building plant.

There are also successful free economic zones in the RU: SEZ «Navoiya», formed in 2008 in the Karmaninsky district of the Naval District, and the SEZ «Angren», formed in Tashkent district, formed in 2012, SEZ «Jizak», founded in 2013 in the Dzhizuk district. These areas demonstrate positive results in different economic spheres of the country, the possibility of implementing foreign investments, the creation of working areas, and the development of infrastructure.

To analyze the performance of the economic zones developed in the Republic of Kazakhstan, it is advisable to introduce them into key indicators in Uzbekistan. For these purposes, it is necessary:

To prepare and standardize the documentation regulating the methodology of the assessment of the SEZ and SIZ in the RU;

Include in the standard document the main economic indicators that characterize the effectiveness of the SEZ and SIZ agreements.

Firstly, there are such showpieces as the number of SEZ and SIZ members including the members of the foreign investors.

$$P \text{ Index } (\%) = \frac{P(\text{fact})\text{mastered}}{P(\text{planned})\text{prognosis, highlighted}} \times 100 \% \quad (1)$$

where:

P (%) - share of indicator performance as a percentage;

Pfact (mastered) - the actual value of indicator performance;

Planned (prognosis, highlighted) - the overall value of the indicator.

The evaluation of performance of the SEZ and SIZ is carried out based on such indicators as the number of jobs created by participants and in the territory of the SEZ and SIZ, the volume of investments, including capital investments made by the participants of the SEZ and SIZ and the amount of taxes paid to the budgets of all levels of the budget system Uzbekistan (prognosis-actual).

In the second place, the final value of each criterion is determined as the weighted average of the indicators (in percentage):

$$S_{\text{weigh.aver}} = \frac{\Sigma P_1 \times B_1}{\Sigma P_1} \quad (2)$$

where:

Sweigh.aver – weighted average of indekators;

P1 – percentage ratio of indicators according to the relevant criteria;

B1– an assessment corresponding to the actual achievement of targets according to a five - point rating system.

In the third place, calculate financial indicators, the taxes paid by participants of the zones to the budgets of all levels of the budget system of the RU (prognosis-actual);

$$K (\%) = \frac{H_1}{H_2} \times 100\% \quad (3)$$

where:

K (%) – comparison of tax receipts to the budget system of Russia and Uzbekistan (prognosis-actual);

H1 - the amount of taxes paid by the participants of the SEZ and SIZ to the budgets of all levels of the budgetary system of the RU (prognosis-actual);

H2- taxes paid by SEZ and SIZ of Uzbekistan.

An important tool for the development of SEZ and SIZ is the calculation of the total area of land plots leased and/or owned by participants, which is carried out according to the following formula:

$$Z = \frac{C_{\text{land}}}{C_{\text{total}}} \times 100\% \quad (4)$$

where:

Z – the share of the total area of land plots leased or owned by participants of the SEZ and SIZ;

Cland – the total area of land that is owned or leased;

Ctotal – the total area of the SEZ and SIZ.

It should also be noted that the formula proposed by us for calculating the percentage of land area is radically different from the methodology for evaluating the effectiveness of SEZ functions.

An analysis of the effectiveness of the functioning of SEZs and SIZs must be carried out for each zone separately. The results of the analysis must be published on the official website

of the Ministry of Investment, Industry, and Trade of the Republic of Uzbekistan. This will ensure transparency and availability of data for stakeholders, investors, business communities, and the public. There is also no operational statistical information on the official website of the Statistics Agency under the President of the Republic of Uzbekistan on special economic and small industrial zones. In this regard, it is necessary to develop and approve rules for publishing the activities of SEZs and SIZs on the official website. The rules must include requirements for the content of information, regularity of data updates, and mechanisms for monitoring and quality of information.

It would be advisable to create a section on the official website of the Ministry of Investment, Industry, and Trade of the RU for further publication of data on the annual change in the number of SEZs and SIZs, as well as overview information about each zone, its characteristics, etc.

On the official website of the Agency of Statistics under the President of the Republic of Uzbekistan, it is necessary to publish quarterly and annual statistical reports on activities in general and separately for each zone. It is advisable to include in these reports data on key indicators such as the volume of investment (domestic and foreign direct), the number of jobs created, etc. It is also recommended to regularly update data and provide access to reports, as well as provide the ability to download statistical information, for example, for research purposes.

In the context of the digitalization of industries and areas of the economy, the presence of a high-quality website is the standard for large projects and zones. The Republic of Uzbekistan competes with other countries, for example with neighboring Kazakhstan, where government support measures are also being taken for the development of special economic zones. In this regard, having an informative and user-friendly website can be a decisive factor in attracting investors. It would also be advisable to create Internet sites to post information about the activities of SEZs and SIZs. This would be most useful for the following reasons:

1. The creation of an Internet site will provide detailed information about the activities of SEZs and SIZs, including quarterly and annual reports, plans, and prognosis;
2. All these measures will increase confidence on the part of domestic and foreign investors;
3. Investors expect quick access to information and interaction online;
4. The creation of a website will help reduce the time for administrative procedures;
5. The Republic of Uzbekistan will look most attractive to the international community.

Of course, creating and maintaining an Internet resource requires additional costs, especially for software, however, you can save money by purchasing ready-made templates and modules that are cheaper than developing an individual Internet site.

References

1. Arslanov U.U. (2024) *Sci Am* **14** (4): 1671-1682. doi: 10.18334/epp.14.4.120652.
2. Andres Rodriguez-Pose, Federico Bartalucci, Sussane A. Frick, Amelia U, Santos-Paulino, Richard Bolwijn (2022). *Regional Science Policy & Practice*. **14**, Issue 2: 457-482.
3. Fahd Amjad, Liaqat Ali Shah (2020) *Renewable Energy* **115**, 761-769
<https://doi.org/10.1016/j.renene.2020.03.083>
4. Beyzanur C. E., Selim Zaim, Omer F. Demirel, Zeynep Aydin, Dursun Delen (2018): *Renewable and Sustainable Energy Reviews* **1**, 1538-1550
<https://doi.org/10.1016/j.rser.2017.06.095>

5. Muhammad Bilal, Muhammad Khurram Ali, Usama Qazi, Salman Hussain, Mirza Jahanzaib, Ahmad Wasim (2022): A multifaceted evaluation of hybrid energy policies: The case of sustainable alternatives in special Economic Zones of the China Pakistan Economic Corridor (CPEC): Sustainable Energy Technologies and Assessments **vol. 52** part A, 10958 <https://doi.org/10.1016/j.seta.2022.101958>
6. Nazarczuk, J. M. (2017). Do operations in SEZs improve a firm's productivity? Evidence from Poland. New Trends and Issues Proceedings on Humanities and Social Sciences. **4(10)**, 256–264.
7. Sergey Sosnovskikh. Russian Journal of Economics **3** (2017) 174-199
8. Aggarwal A. Economic impacts of SEZs: Theoretical approaches and analysis of newly notified SEZs in India: MPRA Paper (2010), p. 20902
9. Gupta E.K.R. Special economic zones: Issues, laws and procedures, 2, Atlantic Publishers & Dist, New Delhi, India (2008)
10. Sergey Sosnovskikh. Russian Journal of Economics **3** (2017) 174-199 <https://doi.org/10.1016/j.ruje.2017.06.004>
11. Y. Tao, Z. Lu, Springerlink (Online Service), Special Economic Zones and China's Development Path, Springer Singapore, Singapore, 2018
12. Isah Ibrahim Danja, Xingping Wang, *Matching comparative advantages to special economic zones for sustainable industrialization*, Heliyon, **10** (2024)
13. Holger Görg, Alina Mulyukova. *Place-based policies and firm performance: Evidence from Special Economic Zones in India*. European Economic Review **165** (2024)
14. Min Wu a, Chong Liu b, Jiuli Huang. China Economic Quarterly International **1** (2021) 319-330
15. Liang Zheng: China Economic Review **69** (2021) 101651 <https://doi.org/10.1016/j.chieco.2021.101651>