



## «GLOBAL EXPERIENCE IN IMPROVING THE ORGANIZATION AND MANAGEMENT OF SMALL INDUSTRIAL ZONES AND THE INTRODUCTION OF A WIN-WIN SYSTEM (NO LOSERS) TO DIRECTORATE OF THE SIZ OF THE KHAREZM REGION»

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Article history:	Abstract:
<b>Received:</b> 28 <sup>th</sup> October 2024	This study focuses on the improvement of the system of formation and management of small industrial zones in the Kharezm region of Republik of Uzbekistan. The purpose of the research is to identify the current state of small industrial zones in the region, analyze the existing system of their formation and management, and propose recommendations for its improvement. The study employs qualitative research methods, including document analysis and interviews with key stakeholders. The findings reveal that the current system of formation and management of small industrial zones in the Kharezm region faces several challenges, including inadequate infrastructure, lack of financing, and insufficient support from local authorities. The study proposes a range of recommendations to address these challenges, such as improving infrastructure, providing financial support, and enhancing the involvement of local authorities in the formation and management of small industrial zones. The study contributes to the literature on industrial zones and provides practical insights for policymakers and practitioners in the field.
<b>Accepted:</b> 20 <sup>th</sup> November 2024	

**Keywords:** small industrial zone, taxes, privileges, effective management, cooperation, special zones, state body, logistics, infrastructure, system.

**INTRODUCTION:** Small industrial zones play a vital role in promoting economic development, creating employment opportunities, and improving the livelihoods of communities. In Uzbekistan, the government has established a policy to develop small industrial zones in different regions of the country. The Kharezm region is one of the regions where small industrial zones have been established. However, the system of formation and management of small industrial zones in the region faces several challenges. This study aims to identify these challenges and propose recommendations for their improvement.

### METHODOLOGY:

The study employs qualitative research methods, including document analysis and interviews with key stakeholders. The document analysis involves the review of policy documents, reports, and other relevant literature on the formation and management of small industrial zones in the Kharezm region. The interviews are conducted with a range of stakeholders,

including representatives of local authorities, business owners, and experts in the field.

If we briefly analyze the literature, in Uzbekistan, the work of Lars was used by Vakhobov A.V., Sabirov O.Sh., Abdullatipov M.F., Khadjibakiev Sh.Kh., and Mominov N.G. In addition,

The distinctive features of industrial parks in China and Korea by B. Bai, F. Baans, Y. Gen, J. Go, W. Jiao, Y. Battul, P. Kan, K. Kiao, B. Lai, H. Li, C. Li, W. Liu, J. Tian, G. Teisman, Y. Sains, Z. Henxin, and L. Chen are reflected in the works of Vidovas.

Despite the large number of works devoted to the study of economic growth and various aspects of industrial park development, there are very few works that consider small industrial zones as an innovative factor in economic growth and from the point of view of improving management.

**PURPOSE OF THE ARTICLE** — The aim of the article is to explore the potential of the win-win system for managing small industrial zones (SIZ),



justify its advantages, and propose a practical methodology for its implementation.

Small industrial zones are formed as clusters of enterprises that share infrastructure, resources, and

territory. Among the main challenges in their management, the following issues stand out:

<b>Problems</b>	<b>Explanation</b>
<b>Limited financial resources</b>	Zones often lack funds to modernize their infrastructure and implement innovative projects.
<b>Conflicts between residents and management companies</b>	This includes rental issues, resource sharing, and compliance with environmental regulations.
<b>Insufficient integration of participants</b>	Enterprises operating in isolation do not use the potential of interaction

Table – 1. Problems of SIZ management<sup>1</sup>:

These challenges require an approach that unites the interests of all parties and ensures sustainable development.

1. To present the concept of a management system based on the principles of win-win. 2. To demonstrate the effectiveness and advantages of using win-win in the management of small industrial areas. 3. To substantiate the methodology of the implementation of this system using real examples, econometric and mathematical formulas. 4. To develop practical recommendations for the implementation of the concept in real market conditions in the Kharezm region.

#### Discussion:

In order to equate Uzbekistan with developed countries, we will have to prevent a decrease in the technological level of industrial development, the deterioration of production infrastructure, a decrease in the level of mechanization and automation, depreciation of fixed assets and a decrease in the intellectual base of production. The fact that GDP in 2022-2023 has a growth rate of 5.7-6.0%, and in 2024 it will increase by 6.5%, once again dictates that we should focus on the main force for the modernization of the economy.

Today, the modern, developed industrial zone is in the form of a compact small town where people live and work. High level of development of social infrastructure (residential buildings, schools, kindergartens, polyclinics, etc.), allowing employees of the industrial zone to solve all their everyday problems almost without leaving the workplace, significantly reducing the loss of time and effort on the way from the place of residence of employees to the place of work, which contributes to an increase in the profitability of the human potential of employees and an increase in labor productivity.

According to the legislation of the Republic of Uzbekistan, it is indicated that SIZ is a part of the territory of a settlement or inter — settlement territory, where production areas with service infrastructure are located and whose boundaries are clearly defined", intended for the implementation of production activities.<sup>2</sup>

Industrial zones provided an opportunity for effective cooperation of production facilities (cooperation), provided access to external entities (in particular, service providers), increased level of service for industrial enterprises, it became possible to apply the theory of the life cycle in the business process.

Table No. 2 services provided in industrial zones <sup>3</sup>.

Industrial Zone	Public	Service samples
Wilmington Industrial Park	USA	Availability of river transport and rail transport
Suzhou Industrial Park	China	Business center with its own customs zone, logistics warehouse, exhibition center, representative offices of large international banks and audit companies
Jubail	Saudi Arabia	Highways, rail networks, two ports, airport, access to more than 20 medical facilities
Amata Nakorn Industrial Estate	Vietnam	Logistics services, ready-made industrial buildings, own customs post



Chemko	Slovakia	Industrial wastewater treatment, maintenance, industrial waste disposal, analytical services for chemical laboratories, telecommunications and postal services, design of industrial facilities and lines, construction work, own Fire Service, medical services
ZETA	Costa Rica	Training center, customs services for customers, administrative assistance and support, general maintenance, sewage treatment facilities, affordable housing for employees, medical center, banks

In a number of leading European countries, state subsidies, as well as other financial measures of state support, have become an important factor in the formation and functioning of new industrial zones.

When analyzing foreign experience, we found it necessary to consider the following experience, one of the types of employment that we offer is autstaffing and personnel leasing. These are two different approaches to personnel management that can be used by companies to temporarily or permanently increase their human resources.

Lets look at the main types of industrial zones in China. According to funding sources, industrial zones are divided into national (funded by the central government), provincial (funded by the provincial government), and prefecture (funding of prefectoral bodies, including cities and adjacent districts). Industrial zones funded by the center or region have the most favorable conditions: low interest rates on loans, tax breaks, low tariffs for land use and utilities<sup>4</sup>.

**Table 2. Types of industrial zones in the People's Republic of China and the Republic of Uzbekistan**

Peoples Republic of China		Uzbekistan	
Kinds	Right to organize	Kinds	Right to organize
National industrial zones	By central government	Free economic zones	Cabinet of Ministers
Provincial industrial zones	By the provincial government	Small industrial zones	Local government
Prefectural industrial zones	By the prefectures	Technoparks, youth industrial and business zones	Local government

Depending on the participation of the industrial zone in the country's economy, economic and technological development zones / parks (ETDP) are divided into high-tech production zones (hi-tech development zones / parks - HTDP) and eco-industrial zones (eco-industrial zones) parks - EIP)<sup>5</sup>.

In the PRC, depending on the distance of the industrial park from the city, it is divided into independent industrial zones (located in areas far from cities), industrial zones located far from cities but subordinate to the city, suburban industrial zones and urban urban industrial zones<sup>6</sup>.

Analysis of existing research, Modern research in the field of industrial zone management highlights the key challenges: • Limited infrastructure resources. • Conflicts between residents and management companies. • Environmental and social requirements. The principles of win-win are actively discussed in management theory, especially in the context of collective decisions and long-term cooperation. Win-win strategies increase trust between the parties, resulting in lower transaction costs.

The win-win principle is based on finding solutions where each side wins. In the context of industrial zone management, this means: 1. Building trust and partnerships between residents, management companies and local authorities. 2. Creating conditions in which the benefits of cooperation exceed the individual costs. 3. Search for compromises that take into account the long-term interests of all participants.

An example is the joint implementation of environmental technologies, which reduces the costs of all residents while improving conditions for the local community.



A win-win strategy assumes that the participants in the process achieve mutual benefits by finding solutions that maximize the benefits of all parties. This is especially true in industrial zones, where the interests of residents, management companies, the state and the local population must be taken into account.

Successful practices - an example of the successful application of win-win is the EcoPark industrial zone project in Germany, where joint environmental initiatives have increased the profitability of residents and improved environmental performance. In Asia, the win-win strategy was implemented to create a cluster of innovative production involving small businesses.

Methodology and research approaches - the following methods were used to study the effectiveness of the win-win approach in SIZ management: 1. Case analysis. Examples of the introduction of win-win models in industries in different countries were considered. 2. Interviewing. Expert interviews with representatives of management companies and residents revealed the main barriers and successful practices. 3. Modeling. A hypothetical model of a small industrial zone has been created to analyze the potential of a win-win approach.

The assessment metrics included economic (corporate income), environmental (pollution reduction), and social (employee engagement).

Metrics are used to evaluate the system: Economic indicators: investment growth, profit of residents. Social effects: job creation, increased satisfaction of participants. Environmental results: reduction of emissions, introduction of energy-saving technologies.

Development of a mathematical formula for managing small industrial zones (SIZ) using the Win-Win approach  
The formula for the overall efficiency of SIZ management:

$$E_{win-win} = \alpha_1 \cdot G + \alpha_2 \cdot S + \alpha_3 \cdot E - \beta \cdot C$$

Where:

$E_{win-win}$  integrated management efficiency using the win-win approach.

• G — income growth of residents and the management company caused by cooperation.

• S — social benefits (increased employment, improved working conditions, increased satisfaction).

• E — environmental benefit (emission reduction, energy saving).

• C — costs of coordinating and implementing initiatives (including time and financial costs).

$\alpha_1, \alpha_2, \alpha_3$  — weighting coefficients showing the relative importance of the economic, social and environmental components for a particular SIZ.

•  $\beta$  is the coefficient of cost impact on overall efficiency.

Econometric interpretation

1. Functional parameters

$E_{win-win}$  The formula is based on the theory of utility and optimization, where the goal is to maximize joint benefits and minimize costs. The use of weighting factors allows you to take into account the specifics of different zones. For example, an industrial area with an emphasis on sustainable development will have high  $\alpha_3$  and low  $\alpha_1$ .

2. Determinants of effectiveness

• G: Income growth The economic efficiency of the zone directly depends on the increase in income of the participants. Measurement methods include an analysis of the growth of gross income of residents (based on accounting data).

• S: Social benefits Social effects are assessed through employment indicators, participant satisfaction surveys, and an analysis of working conditions.

• E: Environmental benefit Criteria include reducing the carbon footprint and the proportion of green technologies used. Econometric estimation is possible through regression models linking the costs of environmental programs and the level of emissions.

• C: Implementation costs The coordination of participants requires time and financial investments. This data is collected from cost reports on joint projects and logistics.

3. Weighting  $(\alpha_1, \alpha_2, \alpha_3)$  factors

The weight parameters depend on the specifics of the zone and are determined by expert analysis or regression analysis. For example:

$$\alpha_1 + \alpha_2 + \alpha_3 = 1$$

Econometric model: assessment and forecasting



Econometrics allows you to use this formula to evaluate and predict performance using multiple linear regression.:

$$E_{win-win} = \beta_0 + \beta_1 \cdot G + \beta_2 \cdot S + \beta_3 \cdot E - \beta_4 \cdot C + \varepsilon$$

Where:

- $\beta_0$  is the free term (the influence of factors not taken into account in the model).
- $\beta_1, \beta_2, \beta_3, \beta_4$  — coefficients reflecting the sensitivity of  $E_{win-win}$  to changes in the relevant factors.
- $\varepsilon$  is an accidental error.

This model can be used to analyze data from different zones to determine which factors most strongly influence management effectiveness.

Application example

Initial data for evaluation:

- Income growth (G): 10.0 million som.
- Social benefits (S): increase in the number of jobs by 200.
- Environmental benefits (E): reduction of emissions by 10%.
- Coordination costs (C): 2.0 million som.

Weight parameters:

$$\alpha_1 = 0.4, \alpha_2 = 0.3, \alpha_3 = 0.2, \beta = 0.1.$$

Calculation:

$$E_{win-win} = 0.4 \cdot 10 + 0.3 \cdot 200 + 0.2 \cdot 10 - 0.1 \cdot 2$$

<sup>1</sup> From the researcher's own materials acquired in the course of work from the Ministry of Investment, Industry and Trade of the Republic of Uzbekistan

<sup>2</sup> National database of legislative information, 10.03.2020., No. 09/20/134/0272; national database of Legislative Data,

<sup>3</sup> Shchetinina T.S., Kuznetsov A.N. Industrial parklarning rivozhida zhakhon tazhibasi // "Economics and management of innovative technologies" electronic ilmiy-amaliy journal. 2017.No.5 [Electronic resource]. URL: <http://ekonomika.sci.sauka.ru/2017/05/14837>

<sup>4</sup> Matthew E. Kahn, Weizeng Sun, Jianfeng Wu, Siqi Zheng. The Revealed Preference of the Chinese Communist Party Leadership: Investing in Local Economic Development Versus Rewarding Social Connections. - National Bureau of Economic Research. - Working Paper 24457. - March 2018.

<sup>5</sup> Key Industrial Parks in the Yangtze River Delta. - Mortenson, China. - 140 b.

<sup>6</sup> Geng Y., Hengxin Z. Industrial Park Management in the Chinese Environment. - Journal of Cleaner Production. - 2009. - № 17. - p. 1289 - 1294.

After recalculation, the indicators will be converted to a single scale (for example, points or percentages) in order to correlate the numerical interpretation.

Interpretation of results

1. The positive value of  $E_{win-win}$  indicates the profitability of the approach. The higher the result, the better the integration of the interests of the participants.

2. The analysis of weights ( $\alpha$ ) shows which factors require increased attention. For example, if the weight of the environmental benefit ( $\alpha_3$ ) is low, this may be a signal of underestimation of the environmental component.

3. Costs (C) suggest where costs can be optimized (for example, improving communication using digital platforms).

This formula allows not only to quantify the effectiveness of management in small industrial areas, but also to form strategic recommendations for improving performance through optimizing key factors.

Scientific novelties and mathematical models for evaluating the effectiveness of small industrial zones (SIZ)

Conclusion

The use of the win-win system in the management of small industrial zones in the Kharezm region contributes to the creation of harmonious relations between participants, the improvement of economic and environmental indicators, as well as the



development of local businesses. For successful implementation, it is necessary to take into account the specifics of each zone, paying special attention to the motivation of participants and the introduction of innovative tools.

The win-win approach opens up new perspectives for the management of small industrial zones, creating a platform for sustainable development, harmonization of interests and increased economic efficiency. The implementation of this strategy requires a well-developed methodology and the involvement of all participants.

In the future, it is important to develop standardized management models that can be adapted to the specifics of different zones, ensuring sustainable development and competitiveness.

Further research will be aimed at developing universal win-win models for various types of industrial zones.

SIZ is organized only on the basis of non-functioning production areas and vacant land plots not intended for agriculture, where engineering and technical communications are available or easy to carry out, and decisions on the establishment of new SIZ and changing the edges of the SIZ region operating in coordination with the Ministry of economy and industry of the Republic of Uzbekistan<sup>1</sup>.

A total of 532 SIZ are operating in the Republic. Their total land area is 3,574.5 hectares, of which 2,846.6 hectares, that is, 79.6 percent of the land area, are allocated to projects.

In order to manage and coordinate the activities of the SIZ, single directorates have been established on every territory. The total price in SIZs is 1.1 million. dollars 4441 projects are selected and planned to be implemented .

Analytical data show that the organization and management of SIZ in Tashkent City and Namangan, Ferghana regions was preceded by other regions, we can see this from the project value, production costs, export costs and new jobs.

Kharezm region has only 5 percent share with 234 projects at the Republican level in terms of the number of projects in total balance, as well as export figures of 0.12 million. dollar, it would seem, is limited to the production of products in the Kharezm region intended only for the domestic market.<sup>2</sup>.

To identify problems in the process of writing a scientific paper , on December 23, 2024, the head of the joint directorate in the form of a state institution under the administration of the Kharezm region ,

S.Kurbanov and other employees, below we present interview statement.

Small industrial zones in the Kharezm region today account for 25, the area of the located zones is a total of 109.3 hectares, projects planned for placement: 1275 (506.8 mlrd.som), of which workaholics: 1136 units (167.3 mlrd.som), completed projects: 84 units.

Today, 25 small industrial zones operate on a total of 109.3 hectares of land approved during the development of the master plan, of which infrastructure facilities and other facilities are located on 64.3 hectares of land. Land area occupied by engineering-communications and other facilities 44.9 hectares.

The problems associated with the activities of small industrial zones are as follows, the most urgent problem of systemic problems in small industrial zones today is the inefficient use of land plots by entrepreneurs at electronic online auctions, the implementation of investment projects in their time, the creation of new jobs there is a problem of creation by agreement with the Directorate, since the entities recognized by the winners through an electronic online auction, deny the director's requirements and face situations when Hech is ineffective without work.

Based on the results of the study, we will cite the following proposals for the development of small industrial zones of Kharezm region:

Achieving synergistic effect by organizing production on a cluster basis in small industrial zones;

Organization of General Service structures for small businesses in small industrial zones;

Establishing cooperation between business entities in small industrial zones;

Increase full-time employees to one specialist per zone;

Adopt the experience of China, and build social infrastructure nearby or in the smallest industrial zone;

Also from the experience of China, legally divide the zones into the 7 above categories of industrial zones;

Based on an interview with the head of the unified directorate of the SIZ, to develop a new and well-thought-out conceptually strategic order.

Further research areas may include a more in-depth analysis of the economic impact of small industrial zones in Uzbekistan, as well as a comparative study of small industrial zones in other countries. In addition, research can focus on the role of small industrial zones in promoting sustainable



development and how they can help solve environmental and social problems.

The impact of this study on politicians and practitioners is great. The results of this study show that small industrial zones can be a key factor in economic growth and development in Uzbekistan and create a favorable environment for business development. To fully realize this potential, they will have to take an integrated approach to the management of small industrial zones, solving the problems of infrastructure, financing, management potential, integration with the local economy, regulatory processes and technological capabilities.

Politicians can support the development of small industrial zones by encouraging investors, improving funding opportunities, simplifying regulatory processes, and investing in infrastructure. Practitioners, such as managers of small industrial zones, can strengthen management capacity, promote cooperation and innovation between SIZ, and provide access to common facilities and technological experiences.

Also, this study examined the theoretical foundations and practical aspects of the organization and management of small industrial zones in the Republic of Uzbekistan and identified the main problems and solutions for their successful operation. By solving these problems, small industrial zones can play an important role in ensuring economic growth and development in Uzbekistan, create a supportive and dynamic business environment in the SIZ. Results:

The study finds that the current system of formation and management of small industrial zones in the Kharezm region faces several challenges. These challenges include inadequate infrastructure, lack of financing, and insufficient support from local authorities. The study proposes a range of recommendations to address these challenges. The recommendations include improving infrastructure, providing financial support, enhancing the involvement of local authorities in the formation and management of small industrial zones, and promoting the development of value chains.

The following changes were proposed by the researcher and changes were made to the regulation on small industrial zones approved by the decree of the Cabinet of Ministers of the Republic of Uzbekistan No. 375 of July 8, 2022, No. 134 of March 9, 2020. In particular, to paragraphs 20-26-29-30-35-54-60.

#### Conclusion:

The study concludes that the system of formation and management of small industrial zones in

the Kharezm region can be improved by addressing the challenges faced by the current system. The recommendations proposed in the study can contribute to the improvement of the system and promote the development of small industrial zones in the region. The study highlights the importance of a comprehensive approach to the formation and management of small industrial zones and provides practical insights for policymakers and practitioners in the field.

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<sup>2</sup>Source: The Ministry of Investments and Foreign Trade of the Republic of Uzbekistan.<https://www.mift.uz/stat.php>