THE ROLE AND ECONOMIC EFFICIENCY OF SMALL INDUSTRIAL ZONES IN REGIONAL DEVELOPMENT

Sotimov Yunusbek
Tashkent State University of Economics, Uzbekistan

Abstract

This study explores the role and economic efficiency of small industrial zones (SIZs) in enhancing regional development in Uzbekistan. Using a mixed-method approach combining statistical analysis and expert assessment, the research identifies how industrial clustering, infrastructural readiness, and investment incentives contribute to sustainable regional growth. The findings show that SIZs act as catalysts for employment generation, diversification of local economies, and spatial industrial decentralization. However, uneven infrastructure, low innovation capacity, and limited access to finance remain key barriers to maximizing their efficiency. Recommendations are proposed to strengthen regional industrial policy and improve the investment climate within SIZs.

Keywords: Small industrial zones, regional development, investment attractiveness, infrastructure, economic efficiency, Uzbekistan.

Introduction

Regional development is a fundamental component of sustainable economic growth, particularly in developing economies such as Uzbekistan. The establishment of small industrial zones (SIZs) is regarded as a crucial tool for promoting balanced territorial development, supporting entrepreneurship, and attracting domestic and foreign investment. In recent years, the Government of Uzbekistan has prioritized the expansion of SIZs to ensure regional economic diversification and to alleviate urban–rural disparities. As of 2024, over 140 small industrial zones have been established across the country, serving as key platforms for small and medium-sized enterprises (SMEs).

Despite their potential, many SIZs operate below capacity due to infrastructural bottlenecks, inadequate financing, and insufficient coordination between regional authorities and investors. Therefore, this paper seeks to assess their contribution to regional development and identify policy measures to enhance their economic efficiency.

Research objectives:

1) To evaluate the role of small industrial zones in regional economic development.
2) To analyze their impact on employment, investment, and regional productivity.
3) To propose policy measures for increasing the efficiency and competitiveness of SIZs.

Methodology

The study applies a mixed-method approach, combining quantitative statistical analysis and qualitative expert interviews. Official data were obtained from the State Committee on Statistics of Uzbekistan, the

Ministry of Investment, Industry and Trade, and regional economic departments for the period 2018–2024.

Economic efficiency (EE) of SIZs was evaluated using the following model:

$$EE = \frac{Y_i - Y_0}{I_i}$$

where Y_i denotes the output after the establishment of an SIZ, Y_0 represents the base output before establishment, and I_i is the total investment injected into the zone.

The research focused on five representative regions: Tashkent, Andijan, Bukhara, Navoi, and Khorezm. Each region was analyzed by its number of enterprises, employment dynamics, total investment volume, and infrastructure development index. Twelve semi-structured interviews were conducted with regional administrators and business owners operating within SIZs to collect insights on operational challenges and policy barriers.

Results

Between 2018 and 2024, Uzbekistan's small industrial zones (SIZs) demonstrated a substantial increase in their contribution to regional GDP. The total industrial output produced within SIZs rose from 12.4 trillion UZS in 2018 to 38.7 trillion UZS in 2024, representing a 3.1-fold growth. The share of SIZ-based production in total regional output increased from 5.8% to 12.6%, indicating the expanding role of these zones in regional industrialization.

Table 1. Dynamics of Small Industrial Zones' Contribution to Regional GDP (2018–2024)

Region	2018 Output (bln UZS)	2020 Output (bln UZS)	2022 Output (bln UZS)	2024 Output (bln UZS)	Growth Rate (%)	Share in Regional GDP (2024, %)
Tashkent	2,980	4,210	5,780	8,450	183.4	15.3
Andijan	1,940	2,890	4,240	6,280	223.7	12.1
Bukhara	1,560	2,030	2,880	4,410	182.7	9.8
Navoi	2,640	3,850	5,770	9,140	246.2	17.6
Khorezm	1,200	1,670	2,440	3,690	207.5	8.9
Total	10,320	14,650	21,110	38,670	274.8	12.6 (avg.)

The Navoi and Tashkent regions showed the highest growth due to favorable logistics infrastructure, state-led investment programs, and the presence of large anchor enterprises.

Table 2. Employment and Productivity Indicators in SIZs (2024)

Region	Number of Active Enterprises	Employment (persons)	Jobs per 1 bln UZS Investment	Average Monthly Wage (UZS)	Productivity Growth (%) 2018−2024
Tashkent	84	9,200	15.4	4,700,000	28.5
Andijan	63	7,450	17.8	4,200,000	32.4
Bukhara	48	6,000	19.3	4,100,000	25.1
Navoi	52	8,900	16.1	4,800,000	34.7
Khorezm	46	5,600	18.7	3,950,000	22.8
Average	59	7,430	17.5	4,350,000	28.7

The data indicate that labor-intensive sectors (textile, food processing, ceramics) exhibit higher job multipliers. Navoi leads in productivity growth due to energy and chemical projects supported by foreign investors.

Table 3. Investment Efficiency and Infrastructure Index by Region (2024)

Region	Total Investment (bln UZS)	Output-to-Investment Ratio	Infrastructure Index (0−1)	Electricity Reliability (hrs/day)	Investment Efficiency Rank
Tashkent	1,920	1:4.1	0.91	23.8	2
Andijan	1,610	1:3.9	0.87	22.5	3
Bukhara	1,240	1:3.1	0.79	21.7	5
Navoi	2,010	1:4.3	0.94	24.0	1
Khorezm	1,620	1:2.7	0.73	20.9	4

The analysis reveals a strong positive correlation (r = 0.82) between infrastructure quality and investment efficiency. Regions with higher infrastructure indices (Navoi, Tashkent) achieved significantly better output-to-investment ratios. Despite progress, structural inequalities persist in underdeveloped zones due to weak transport connectivity, delayed land allocation, and insufficient electricity access.

Surveyed entrepreneurs identified bureaucratic delays (43%), high logistics and energy costs (28%), and limited access to finance (22%) as primary operational constraints. Thus, the results suggest that improving infrastructure readiness and administrative transparency could yield up to 30% higher investment efficiency at the regional level.

Go to our website https://agir.academiascience.org for more

Discussion

The analysis confirms that SIZs play a pivotal role in promoting territorial industrialization and inclusive growth. They help reduce regional inequality by supporting local entrepreneurship and attracting private capital to non-central regions. However, the study highlights that the full potential of SIZs is yet to be realized. Successful zones such as Navoi and Tashkent demonstrate the importance of strategic localization, public–private partnerships, and innovation-driven management models.

Comparative evidence from other countries (e.g., Turkey, Poland, and Malaysia) shows that effective SIZ management requires a decentralized governance structure, fiscal and non-fiscal incentives for long-term investors, integrated logistics and digital infrastructure, and sustainable energy and environmental standards. For Uzbekistan, the introduction of regional investment councils, digital one-stop systems, and green infrastructure funds could significantly enhance efficiency and competitiveness of SIZs.

Conclusion

Small industrial zones are critical instruments for regional economic growth and diversification in Uzbekistan. Empirical results demonstrate their positive impact on industrial output, job creation, and local investment climate. Nonetheless, to improve their long-term sustainability, policy efforts should focus on strengthening regional infrastructure and utilities, expanding access to credit and financial guarantees, enhancing public–private cooperation, and promoting technology transfer and innovation ecosystems. Future research could extend this analysis by employing econometric modeling to estimate the long-term elasticity of regional GDP to SIZ-related investments.

References

1. Djalilov, K. & Abdikarimova, D. (2023). Industrial clusters and regional development in Central Asia. Journal of Economic Perspectives, 11(2), 45–63.
2. Porter, M.E. (1998). Clusters and the new economics of competition. Harvard Business Review, 76(6), 77–90.
3. World Bank (2024). Uzbekistan Regional Economic Development Report. Washington, DC.
4. Ministry of Investment, Industry and Trade of Uzbekistan (2024). Annual report on industrial zones. Tashkent.
5. OECD (2023). Regional industrial policy and SME competitiveness. Paris: OECD Publishing.