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The current economic situation and development trends of single-industry towns in the Republic of Kazakhstan

Abstract

The main Problem: The Republic of Kazakhstan has a significant number of single-industry towns (monotowns) that were created based on backbone enterprises during the intensive industrialization period when the country joined the Soviet Union. These towns have faced diverse economic conditions, with some thriving and others struggling due to their reliance on a single industry. The development and economic sustainability of these towns are central issues for the country's regional development.

Purpose: This article examines the economic situation of single-industry towns in Kazakhstan, focusing on their development trends, the status of key industries, and the challenges they face. It aims to assess the potential for improving the socio-economic conditions of these towns and identify key policies for their future growth.

Methods: The article employs analytical methods, using both qualitative and quantitative data. The research is based on statistical analysis, including demographic trends, industrial outputs, and the structure of key enterprises. Additionally, the article reviews various government programs and strategies aimed at supporting the development of monotowns.

Results, their Significance: The study finds that 70 % of the monotowns in Kazakhstan are economically stable, with industries such as mining, metallurgy, and energy generation playing a major role. However, 30 % of the towns face significant challenges, including economic stagnation and dependence on outdated infrastructure. The research suggests that revitalizing these towns requires a multifaceted approach, including investments in modernizing infrastructure, diversifying industries, and creating favorable conditions for entrepreneurship.

Key words: monotowns, economic development, industrialization, urban sustainability, economic challenges, infrastructure modernization, regional policy.

Introductions

The single-industry towns of Kazakhstan play a crucial role in the country's industrial potential, as they are home to major production facilities in metallurgy, energy, coal mining, and the oil and gas sector. Historically, these towns emerged during the Soviet era when industrialization required the creation of specialized industrial centers. However, in today's market economy, such towns face several challenges, including limited economic diversification, dependence on a single backbone enterprise, and the risk of declining employment if the enterprise reduces its operations.

Currently, Kazakhstan has 27 single-industry towns, accounting for 31.4 % of all cities in the country. Among them, major industrial centers such as Temirtau, Rudny, Ekibastuz, and Zhanaozen stand out, with their economies primarily based on metallurgical and energy enterprises. At the same time, some towns have less stable economies and struggle due to the instability of their core industries or partial shutdowns of key enterprises [1].

The development of single-industry towns remains a pressing issue, as their economic condition directly affects the socio-economic situation in various regions. Ensuring their sustainability requires a comprehensive approach that includes government support, the introduction of new technologies, and investment in alternative industries. This study examines the key economic indicators of single-industry towns, their classification based on stability levels, and possible measures to reduce their dependence on a single enterprise.

Materials and Methods

The study of the economic condition of Kazakhstan's single-industry towns was based on statistical data published by official government bodies, including the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan, the Ministry of National Economy, and the Committee on Statistics. Additionally, the analysis incorporated reports on the socio-economic development of regions, scientific research materials, and data from enterprises that serve as the backbone of these towns [2].

The methodological framework of the study included the following approaches:

- Statistical analysis Used to assess population size, employment levels, industrial output, and other key indicators of the economic development of single-industry towns.
- Comparative analysis Allowed for the identification of differences in the economic stability of single-industry towns based on their classification according to the level of activity of core enterprises.
- Economic and mathematical modeling Applied to forecast the development prospects of single-industry towns, evaluate the impact of backbone enterprises on the local economy, and calculate economic efficiency coefficients.
- Content analysis of strategic programs and government initiatives Used to identify state support measures aimed at stimulating economic growth and diversifying production in single-industry towns.

Thus, the comprehensive approach employed in this study provided an objective assessment of the current state of Kazakhstan's single-industry towns, highlighting key challenges and development prospects in the context of a market economy.

Results

Kazakhstan is home to a considerable number of single-industry towns, often referred to as monotowns, which were established during the Soviet period as part of large-scale industrialization efforts. As of 2019-2020, 27 of the country's 86 cities fall into this category, making up roughly 31.4 % of all urban settlements. This means nearly one-third of Kazakhstan's cities are categorized as monotowns. These towns share certain characteristics, such as populations ranging from 10,000 to 200,000 people and a heavy reliance on a dominant enterprise that employs at least 20 % of the local workforce [3].

Some of the most notable monotowns include Temirtau, Rudny, Ekibastuz, and Zhanaozen, with populations exceeding or approaching 100,000 residents. In contrast, the remaining 23 monotowns have populations under 50,000. Temirtau, in particular, stands out as a major industrial hub, with an annual industrial output of around 265 billion tenge. A large portion, 86 %, of this output is produced by JSC "ArcelorMittal Temirtau," the city's key industrial employer.

In addition to this metallurgical giant, Temirtau's economy benefits from the presence of various small and medium-sized enterprises engaged in diverse industries such as cement production, construction, refrigeration, food processing, and energy generation.

Discussion

The economic landscape of Temirtau is largely shaped by its metallurgical sector, with the Karaganda Metallurgical Plant, operated by ArcelorMittal Temirtau, serving as the primary driver of industrial activity. The city's economy remains highly dependent on this enterprise, though other businesses contribute to its economic structure.

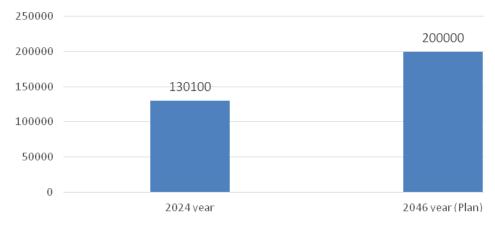
Other notable enterprises in the town include companies like LLP "MIK-T" (construction), JSC "Central Asia Cement" (cement), and LLP "ZPH Techol" (industrial refrigeration). These industries, alongside smaller businesses like JSC "TEMK" and LLP "RenMilk," form the backbone of the town's economy.

Rudny, another significant monotown, is located in the Kostanay region and owes its establishment to the development of iron ore deposits and the launch of the Sokolovsko-Sarbaisky Mining and Beneficiation Complex. This complex is responsible for the extraction and processing of iron ore, supplying major metallurgical plants in Kazakhstan, Russia, and China. The population of Rudny was around 130,100 in 2024, and plans are in place to increase the population to 200,000 by 2046, driven by demographic growth [4].

The town of Ekibastuz, situated 134 kilometers from the city of Pavlodar in the Pavlodar region, is another example of a monotown, primarily known for its role in energy production. Although its specific industries were not detailed in this section, like Temirtau and Rudny, Ekibastuz's

economy revolves around its primary industries, which provide employment to a significant portion of its population.

These towns represent Kazakhstan's historical reliance on large-scale industrial enterprises, which have shaped their economic and social landscapes. As these monotowns continue to evolve, their ability to diversify beyond single industries will be crucial for sustainable development in the future.



Note – Compiled by the author based on source [3].

Figure 1 – Actual and projected population dynamics of the monotown Rudny

As of 2024, Ekibastuz, a single-industry city in Kazakhstan's Pavlodar region, has a population of 133,889. The city's economy is largely dependent on several major industrial enterprises that serve as its economic backbone.

The Bogatyr open-pit mine is a major coal mining operation with a designed annual capacity of 50 million tons. The coal produced at this site is supplied to key power plants and industrial facilities throughout Kazakhstan, as well as to power stations in Russia under RAO "UES of Russia."

The Vostochny open-pit mine is known for its implementation of continuous mining technology, setting a global standard for efficiency in mining practices [5].

The Ekibastuz GRES-1 and GRES-2 thermal power plants are among the largest in Kazakhstan, playing a vital role in meeting the country's energy requirements.

Table 1 outlines the primary and supporting enterprises of Ekibastuz and their associated activities. These industries are crucial not only to the local economy but also to Kazakhstan's industrial infrastructure, ensuring a consistent supply of energy and coal to various sectors.

Table 1 – Main list and activities of primary and additional city-forming enterprises of the monotown Ekibastuz.

Ekioustuz.	
List of enterprises	Sectoral areas of activity
LLP "Bogatyr Komir," Vostochny Open-Pit Mine, LLP	Coal industry
"Maikuben-West," Gamma Coal Mining Complex, Karasor	
Mining and Processing Plant, LLP "Emirat," LLP "Promservice-	
Otan"	
GRES-1, GRES-2, LLP "Ekibastuzenergo," LLP	Electric power industry
"EnergoUpravlenie," LLP "Angrensor Energy," JSC "KEGOC"	
LLP "Taman," Wagon Depot at Ekibastuz-1 Station, LLP	Machine engineering and
"Prommashkomplekt," LLP "Kazakhstan Wagon Building	metalworking
Company," LLP "R.W.S. Concrete," LLP "R.W.S. Wheelset"	
LLP "Montazhno-Naladochnoe Upravlenie," RGTO Plant LLP	Installation and repair of mining
"Bogatyr Komir"	equipment
Building Materials Plant, Shidertin Non-Metallic Materials Plant	Manufacturing of construction
"SMS Engineering," Ekibastuz Gravel Plant, MVI Plant,	materials
Bozshakol Mining and Processing Plant	
LLP "KazExportSkin"	Light industry

Note – Compiled based on source [6]

Zhanaozen, a monotown situated in the Mangystau region of Kazakhstan, functions as an administrative hub. By 2019, the population of the town had reached 81,581 residents. The economy of Zhanaozen is mainly driven by the operations of the Kazakh Gas Processing Plant (TOO), a major enterprise involved in oil and gas extraction activities.

In Kazakhstan, monotowns are classified based on two main factors that characterize their economic conditions:

- The level of economic activity of the main enterprise;
- The type of production associated with the city-forming enterprise.

Single-industry towns are categorized into three groups depending on the operational state of these enterprises.

- 1. Cities with fully operational core enterprises, which are considered relatively stable and economically viable;
 - 2. Cities where core enterprises are only partially functional, leading to economic instability;
 - 3. Cities where the main enterprise has shut down, leading to economic deterioration.

Based on these criteria, several monotowns in Kazakhstan are classified as economically stable due to the ongoing operations of their city-forming enterprises. Among these are Temirtau, Rudny, Ekibastuz, Zhanaozen, Abai, Aksai, Aksu, Balkhash, Zhezkazgan, Zhitikara, Zyryanovsk, Karazhal, Kulsary, Kurchatov, Lisakovsk, Ridder, Satpayev, Khametau, and Shakhtinsk.

This classification is useful for evaluating the economic health and future potential of these towns. Cities with active and functional enterprises are more likely to experience economic stability and long-term sustainable development [7].

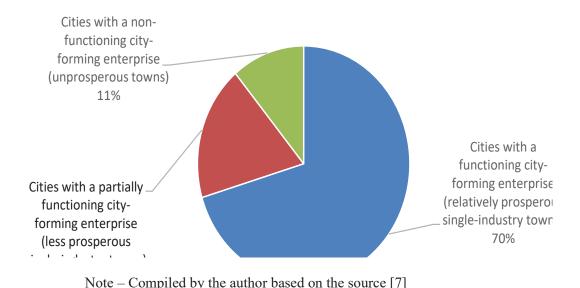


Figure 2 – Structure of Single-Industry Towns in the Republic of Kazakhstan by the Level of Economic Activity of the City-Forming Enterprise.

In Kazakhstan, there are towns whose economies are largely dependent on a single industry, making them less economically prosperous. Some of these towns include:

- Arkalyk
- Zhanatas
- Karatau
- Saran
- Stepnogorsk

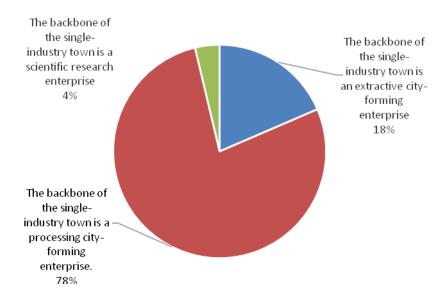
Additionally, there are towns facing economic challenges, such as:

- Kentau
- Serebryansk
- Tekeli

Single-industry towns in Kazakhstan can be categorized based on the type of economic activity that defines their main source of income. These categories include:

- Towns focused on extractive industries
- Towns centered around processing industries
- Towns involved in scientific research and development

The distribution of these towns by industry type is shown in Figure 3.



Note – Compiled by the author based on source [1]

Figure 3 – Structure of single-industry towns in Kazakhstan by type of activity (production)

In Kazakhstan, five single-industry towns host extractive city-forming enterprises:

- Serebryansk
- Stepnogorsk
- Zhezkazgan
- Satpayev
- Khromtau

Kurchatov is notable for its scientific research enterprise, which plays a crucial role in the town's economic structure.

Single-industry towns in Kazakhstan have historically provided several key economic advantages, including:

- High employment levels, often approaching full employment;
- Significant contributions to national economic growth during periods of industrial expansion.

However, under free-market conditions, maintaining these advantages has become increasingly challenging.

The economic landscape of Kazakhstan's monotowns shows that approximately 70 % remain stable and economically viable, while 30% face considerable challenges that impede their development. Additionally, around 11 % of these towns are experiencing economic decline, leading to a downturn in industrial activity.

Given these circumstances, a comprehensive analysis of the economic and social conditions of Kazakhstan's single-industry towns is essential. This includes evaluating their long-term growth potential and assessing government policies aimed at ensuring their sustainable development at the national level [8].

Conclusion

It can be argued that single-industry towns in the Republic of Kazakhstan, despite their vulnerability to external economic fluctuations, possess significant potential for transformation and sustainable development. Traditional reliance on a single industry often leads to economic instability, lower living standards, and depopulation, especially in the event of a drop in commodity prices or technological shifts within the industry. However, in recent years, there has been an increase in both governmental and private efforts aimed at diversifying the economy of single-industry towns. State support programs, such as the "Single-Industry Town Development Program," are focused on creating

new jobs, stimulating small and medium-sized businesses, developing infrastructure, and attracting investments in new sectors like agriculture, tourism, and innovative technologies [9].

The diversification process forms the basis for improving the economic stability and quality of life in single-industry towns. Stimulating the development of new industries such as renewable energy, economic digitalization, and creating infrastructure for small and medium-sized businesses can reduce dependency on the key industry and open new opportunities for employment. It is essential to emphasize that for the successful implementation of these initiatives, certain challenges must be overcome, such as a lack of skilled workers, outdated infrastructure, and a lack of funding for long-term projects.

At the same time, the government of Kazakhstan is making every effort to support this process by creating conditions for private investments and the development of infrastructure projects. The use of public-private partnerships, along with the attraction of modern technologies and experienced professionals from various fields, can accelerate the processes of modernization and economic diversification in single-industry towns [10].

In the future, single-industry towns in Kazakhstan have the potential to become more dynamic and competitive centers of economic activity if they continue to follow the chosen path. Expected diversification and the successful implementation of innovative and sustainable solutions will contribute to the creation of a balanced economy and the improvement of the local population's quality of life.

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Текущая экономическая ситуация и тенденции развития моногородов в Республике Казахстан

В Республике Казахстан существует значительное количество моногородов, которые были созданы на базе градообразующих предприятий в период интенсивной индустриализации, когда страна присоединилась к Советскому Союзу. Эти города сталкиваются с различными экономическими условиями, некоторые процветают, а другие испытывают трудности из-за зависимости от одной отрасли. Развитие и экономическая устойчивость этих городов являются центральными вопросами для регионального развития страны.

В статье рассматривается экономическая ситуация моногородов Казахстана, акцентируя внимание на тенденциях их развития, состоянии ключевых отраслей и проблемах, с которыми они сталкиваются. Цель состоит в оценке потенциала улучшения социально-экономических условий этих городов и выработке ключевых политик для их будущего роста.

В статье используются аналитические методы, как качественные, так и количественные данные. Исследование основано на статистическом анализе, включая демографические тенденции, производственные показатели и структуру ключевых предприятий. Также рассматриваются различные государственные программы и стратегии, направленные на поддержку развития моногородов.

Исследование показало, что 70 % моногородов Казахстана экономически стабильны, при этом важную роль играют отрасли, такие как горнодобывающая промышленность, металлургия и энергетика. Однако 30 % городов сталкиваются с серьезными проблемами, включая экономическую стагнацию и зависимость от устаревшей инфраструктуры. Исследование предполагает, что возрождение этих городов требует комплексного подхода, включая инвестиции в модернизацию инфраструктуры, диверсификацию отраслей и создание благоприятных условий для предпринимательства.

Ключевые слова: моногорода, экономическое развитие, индустриализация, городская устойчивость, экономические проблемы, модернизация инфраструктуры, региональная политика.

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Қазақстан Республикасындағы моноқалалардың қазіргі экономикалық жағдайы және даму тенденциялары

Қазақстан Республикасында бірқатар моноқалалар (моногородтар) бар, олар индустриализация кезеңінде, ел Кеңес Одағына қосылған кезде, негізінен ірі кәсіпорындар негізінде құрылған. Бұл қалалар әртүрлі экономикалық жағдайларға тап болды, кейбіреулері гүлденсе, басқалары бір салаға тәуелділіктен қиындықтармен бетпе-бет келді. Осы қалалардың дамуы мен экономикалық тұрақтылығы елдің өңірлік дамуы үшін маңызды мәселелер болып табылады.

Бұл мақалада Қазақстанның моноқалаларының экономикалық жағдайы қарастырылған, олардың даму тенденциялары, негізгі салалардың жағдайы және олар тап болған қиындықтар анықталған. Мақсат — осы қалалардың әлеуметтік-экономикалық жағдайларын жақсарту мүмкіндіктерін бағалау және олардың болашақтағы өсуі үшін негізгі саясаттарды анықтау.

Мақалада аналитикалық әдістер, сапалы және сандық деректер пайдаланылады. Зерттеу статистикалық талдауға негізделген, соның ішінде демографиялық трендтер, өндірістік көрсеткіштер және негізгі кәсіпорындардың құрылымы қарастырылады. Сонымен қатар, моноқалалардың дамуын қолдауға бағытталған түрлі мемлекеттік бағдарламалар мен стратегиялар қарастырылған.

Зерттеу нәтижелері бойынша Қазақстанның 70 % моноқалалары экономикалық тұрғыдан тұрақты, ал бұл қалаларда тау-кен өндірісі, металлургия және энергетика сияқты салалар маңызды рөл атқарады. Алайда, 30 % қалалар экономикалық тоқырау және ескі инфрақұрылымға тәуелділік сияқты күрделі мәселелермен кездесуде. Зерттеу моноқалаларды жандандыру үшін инфрақұрылымды жаңарту, салаларды әртараптандыру және кәсіпкерлікке қолайлы жағдайлар жасау сияқты көп қырлы тәсілдерді қажет ететінін көрсетеді.

Түйінді сөздер: моногородтар, экономикалық даму, индустриализация, қалалық тұрақтылық, экономикалық қиындықтар, инфрақұрылымды жаңғырту, өңірлік саясат.

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