

REGULATION OF INTERNAL MIGRATION AND URBAN DEVELOPMENT IN KAZAKHSTAN

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ABSTRACT

This article examines how state regulation of internal migration affects urban development in Kazakhstan. Using a mixed-methods design that combines demographic analysis with the Institutional Gap Framework, the research evaluates current migration management mechanisms. The study's main scientific contribution lies in conceptualizing the "institutional vacuum" in migration policy and demonstrating that interventions fail when they overlook the actual absorptive capacity of receiving cities. Results indicate that existing state support measures, such as mobility certificates, prioritize short-term financial incentives over systemic solutions for housing and infrastructure. Consequently, in northern regions, direct subsidies act merely as temporary buffers against demographic decline. Conversely, spontaneous migration to major metropolitan areas increases the risk of infrastructure overload and unregulated suburbanization. Ultimately, improving internal migration policy requires a comprehensive approach that takes into account the practical socioeconomic capacities of receiving urban systems.

Keywords: Internal migration, Migration policy, Urban development, State regulation, Absorption capacity.

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INTRODUCTION

Urbanization, defined as the growing concentration of the population in urban areas, has become a fundamental driver of socio-economic development worldwide and has accelerated rapidly over the past century (Annez et al., 2008). At the beginning of the twentieth century, fewer than 200 million people, representing approximately 15% of the global population, lived in cities; however, this proportion increased dramatically as urbanization accelerated across regions (United Nations, Department of Economic and Social Affairs, Population Division, 2018). By 2010, around 3.6 billion people, accounting for 51% of the world's population, resided in urban areas, and this trend is expected to continue in the coming decades. According to United Nations projections, the share of the global population living in cities will rise steadily to 70% by 2050, representing approximately 6.3 billion people (United Nations, 2018, 2025). In Kazakhstan, as in many developing and transition economies, the ongoing process of urbanization has become increasingly intertwined with patterns of internal migration, making the interaction between these processes a critical factor shaping the country's spatial and socio-economic development.

Following Kazakhstan's independence in 1991, the dynamics of internal migration changed significantly, with rural-to-urban migration intensifying considerably. On the one hand, this phenomenon fosters economic growth and concentrates human capital in major hubs; on the other hand, it deepens regional developmental disparities. Because of this, effectively managing internal migration flows and improving the quality of the urban environment are priorities in state policy. Nevertheless, evidence from recent years highlights a clear mismatch between the state's current administrative mechanisms for managing migration and the actual capacity of urban infrastructure.

LITERATURE REVIEW

In international research, various models and theoretical approaches have been developed to guide the regulation of internal migration and urban expansion. Notably, the theory of urban carrying capacity provides a fundamental framework for evaluating a receiving city's ability to accommodate population inflows without compromising the quality of its socio-ecological environment, emphasizing the physical and institutional limits of urban systems (Wei et al., 2015). Complementing this spatial perspective, the core tenets of Growth Pole Theory now widely examined through the lens of modern agglomeration economics help explain why economic activities and labor migrants tend to concentrate disproportionately in a few major metropolitan centers. As recent spatial development literature demonstrates, if such polarization is not addressed through state intervention, it can widen regional disparities through the continuous "backwash" or drain of human capital from peripheral areas to urban cores (Martin et al., 2021). Alongside these concepts, contemporary interpretations of Lee's classic "push-pull" theory (De Haas, 2021), suggest that migrants' relocation decisions are directly influenced by economic incentives and the attractiveness of the receiving environment. Furthermore, from the perspective of contemporary neo-institutional theory (Hodgson, 2025), a misalignment between formal rules governing migration processes – such as laws and state programs – and actual socio-economic conditions can give rise to a range of risks. For instance, empirical evidence demonstrates that rigid administrative restrictions, such as

China's "Hukou" system, or the entirely unregulated migration observed in Latin American and Southeast Asian countries, often result in spontaneous urbanization, the emergence of poverty enclaves on the urban periphery, and a excessive pressure on infrastructure (World Bank, 2023; Chan, 2019). Conversely, countries within the Organisation for Economic Co-operation and Development (OECD) prioritize the integration of economic incentives and measures to reduce regional disparities with urban planning, rather than relying on administrative restrictions (OECD, 2021).

Within the academic community in Kazakhstan, issues related to internal migration, the regional distribution of labor resources, and urbanization are widely discussed. Notably, studies by researchers such as Mukhametzhanova et al. (2025), Khishauyeva (2025), and Alzhanova et al. (2022) provide comprehensive analyses of the macroeconomic efficiency of urbanization and the mechanisms required to address labor market imbalances. While these studies make a significant contribution to understanding demographic trends, a clear research gap remains in the existing academic literature. Specifically, the impact of state migration programs – including quotas and relocation certificates – on the quality of the urban environment requires further investigation, particularly in relation to the "absorptive capacity" of receiving cities. Although existing programs frequently focus on quantitative targets and short-term financial incentives, the institutional capacity of cities to provide migrants with employment, housing, and adequate physical and social infrastructure remains insufficiently explored.

To address this theoretical and empirical gap, the study seeks to answer the following research questions:

1. How do current state mechanisms for regulating internal migration, such as relocation quotas and financial subsidies, influence the socio-economic conditions and infrastructure of major cities in Kazakhstan?
2. To what extent do existing migration policies and state programs align with the actual absorptive capacity of receiving urban areas?
3. What institutional approaches can be proposed to align migration management with sustainable spatial development, thereby mitigating the negative effects of the "urban penalty"?

Currently, internal migration policy in Kazakhstan is primarily aimed at redistributing the labor force from the densely populated southern regions to the northern and eastern regions, which are currently experiencing demographic decline. To achieve this objective, direct financial incentives, such as economic mobility certificates, are actively used. However, the "institutional vacuum" that emerges during the implementation of these migration programs is adversely affecting territorial development. In cities characterized by deteriorating infrastructure or a shortage of stable industrial jobs, direct financial subsidies to migrants fail to promote systemic development; rather, they function merely as a temporary social buffer (Akhmetova & Nakipova, 2023). Meanwhile, in major metropolitan areas (Almaty, Astana, and Shymkent), the continuation of spontaneous migration – which remains outside state regulation – places an overwhelming burden on local budgets. This phenomenon elevates the risk of infrastructural collapse and drives the proliferation of spontaneous suburbanization, characterized by peripheral development lacking essential utility networks.

The contradictions outlined above necessitate a comprehensive reassessment of the state's policy for regulating internal migration. In this regard, the present article tests the scientific hypothesis that internal migration policy in Kazakhstan, if implemented without full consideration of the socio-economic and spatial capacities of receiving cities, it may lead to the degradation of the urban environment rather than serve as a catalyst for territorial development. The primary objective of this study is to examine the impact of state mechanisms for regulating internal migration on the urban environment of Kazakhstani cities and to substantiate novel, comprehensive approaches that account for the absorption capacity of these cities. To this end, the study analyzes migration policy documents to elucidate the cause-and-effect relationships between migration flows and the burden they place on urban infrastructure. The findings of this research aim to provide government bodies with scientifically grounded recommendations for aligning migration policy with urban master plans and for eliminating existing institutional deficiencies.

METHODOLOGY

To achieve the primary objectives of this research, an integrative methodological approach was employed, enabling a comprehensive assessment of the multifaceted nature of migration processes and their subsequent impact on urban development. The methodological foundation of the study is anchored in the theories of spatial economics, urbanism, and demographic analysis, which were examined in close conjunction with the institutional aspects of internal migration management.

The empirical base for this research was derived from official statistical data covering the period from 2020 to 2025, provided by the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. During data processing, methods such as time-series analysis, the calculation of structural proportions, and interregional comparisons were extensively utilized. Within this framework, a comparative analytical method was applied to determine the intensity and spatial differentiation of migratory movements between labor-surplus and labor-deficit regions. Furthermore, this method facilitated a comprehensive evaluation of the urban population share, population density, net migration rates, and overall demographic growth indicators.

The primary analytical tool was a qualitative content analysis of the legal and regulatory framework and strategic documents governing state migration policy. Specifically, key legislative acts of the Republic of Kazakhstan, government resolutions, and foundational documents such as the national project "Strong Regions – the Driver of the Country's Development" were examined in depth. The content analysis method was used to identify institutional bottlenecks – the discrepancies between the target indicators of state programs, their implementation mechanisms, and the actual outcomes. This approach provided the necessary foundation for an objective assessment of how state programs impact urban infrastructure and spatial development.

Additionally, institutional analysis based specifically on the Institutional Gap Framework (policy-implementation gap analysis) was utilized to evaluate the effectiveness of migration management programs and their role in the territorial redistribution of the labor force. This framework was chosen because it allows

for the systematic identification of discrepancies between the formally declared objectives of state migration policies (*de jure*) and their practical implementation outcomes within urban ecosystems (*de facto*). The analysis was used to assess the influence of these programs on labor supply in labor-deficit regions, as well as their broader impact on general urban development. Large and medium-sized cities in Kazakhstan were selected as the primary focus of this study. This selection was based on the premise that these particular territories serve as the principal centers of gravity for internal migration flows. Such a focus ensured the representativeness of the research findings while providing a comprehensive opportunity to systematically analyze the impact of migration on the urban environment.

FINDINGS AND DISCUSSION

The findings section begins with an examination of statistical indicators concerning internal migration dynamics and urbanization processes in the Republic of Kazakhstan. Recent demographic transformations have fundamentally reshaped the country's economic geography, thereby accelerating the interregional redistribution of labor force. As international experience shows, urbanization in developing countries is predominantly characterized by spontaneous population movements and subsequent population concentration in major metropolitan areas (World Bank, 2023). Within the context of Kazakhstan, this phenomenon is driven not only by natural demographic growth but primarily by the influence of state policies and shifting centers of economic attraction. To accurately evaluate the efficacy of state migration programs, it is essential to correlate their tangible outcomes with the macroeconomic indicators of spatial development.

In this regard, statistical data covering the period from 2020 to 2025 demonstrate that the urbanization process in the country has transitioned into a new, accelerated phase. This period coincides with the post-pandemic resurgence of economic activity and the implementation of national initiatives, such as the "Strong Regions – the Driver of the Country's Development" project. According to Nurlanova et al. (2022), the contemporary urbanization model in Kazakhstan is fundamentally driven by agglomeration pull factors, occurring largely at the expense of rural areas suffering from human capital depletion (depopulation). Therefore, when analyzing statistical data, it is imperative to examine not only the quantitative growth but also the direction and qualitative structure of these migration flows. Such an approach enables the accurate determination of the actual demographic burden placed on urban infrastructure, while also enabling the effectiveness of state regulatory mechanisms to be evaluated. Table 1 presents a time series of urbanization indicators for 2020-2025.

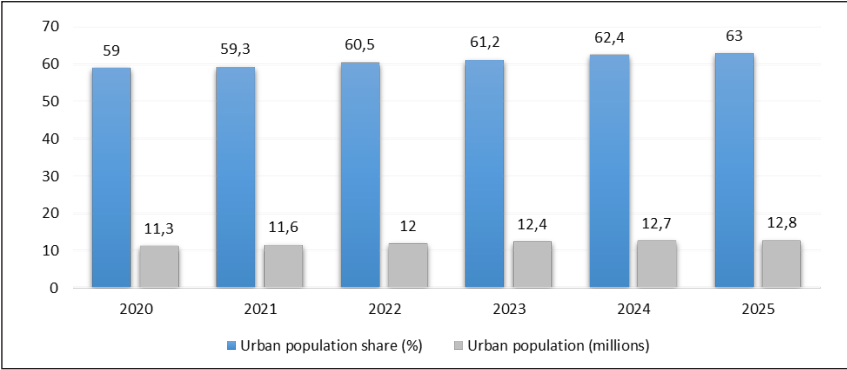
Table 1
Urbanization indicators in Kazakhstan (2020–2025)

Year	Urban population share (%)	Urban population (million, approx.)	Primary migration trend	Net migration in major cities
2020	59.0	11.3	Baseline year (post-pandemic recovery)	Growth in metropolitan areas (Astana, Almaty, and Shymkent)
2021	59.3	11.6	Internal migration directed toward cities	Steady growth
2022	60.5	12.0	Acceleration of urbanization	Concentration in metropolitan areas
2023	61.2	12.4	Intensification of migration to cities	Astana as the leading destination
2024	62.4	12.7	Internal migration growth of +47.6%	+73.2 thousand annual net migration (Astana)
2025	63	12.8	Peak phase of urbanization	Record net influx (+87.4 thousand in Astana)

Source: Compiled by the author based on data from the Bureau of National Statistics (2020-2025)

A visual evaluation of the magnitude and growth trajectories of the quantitative data provided in the table clearly illustrates of the demographic pressure currently affecting the urban environment. To further elucidate this trend, a graphical representation depicting the growth dynamics of the urban population for the period spanning 2020 to 2025 is provided in Figure 1.

Figure 1
Urban population growth dynamics in Kazakhstan (2020–2025)



Source: Compiled by the author based on data from the Bureau of National Statistics (2020-2025)

The statistical indicators presented above provide empirical evidence of the scale of the spatial and demographic transformation occurring within the Republic of Kazakhstan. An analysis of the time series reveals that between 2020 and

2025, the share of the urban population surged from 59.0% to 63% (Bureau of National Statistics 2020-2025). In absolute terms, this represents an increase of over 1.5 million people in urban areas. This increase indicates that demographic growth in cities is primarily driven by migration flows originating from rural areas and socio-economically depressed regions rather than by natural population increase. Consequently, these data show that urbanization within the country is occurring through rapid population concentration rather than gradual demographic change.

To gain a more profound understanding of this trend and to more accurately identify the main labor-donor and labor-recipient regions, an analysis of net migration across Kazakhstan’s regions is essential. The following table, compiled based on data from the Bureau of National Statistics, presents a concrete quantitative overview of interregional net migration for 2020-2025.

Table 2
Interregional net migration in the Kazakhstan (2020–2025)

Administrative unit	2020	2021	2022	2023	2024	2025
Cities of republican significance						
Astana city	25.607	31.906	33.798	50.078	73.238	87.459
Almaty city	40.310	29.253	35.302	38.113	36.061	33.126
Shymkent city	11.042	9.774	2.756	3.416	9.361	15.130
Regions of Kazakhstan						
Abai region	(part of EKR)	(part of EKR)	-2.150	-5.200	-8.352	-9.856
Akmola region	-3.417	-3.281	-3.500	-3.900	-4.150	292
Aktobe region	-311	-1.107	-1.800	-2.200	-2.593	-4.216
Almaty region	-15.830	-6.372	898	-202	2.639	12.110
Atyrau region	-1.442	-2.548	-3.100	-4.500	-5.365	-5.424
West Kazakhstan region	-1.546	-1.311	-2.200	-2.800	-3.152	-4.989
Zhambyl region	-10.101	-8.218	-10.320	-13.681	-16.675	-21.179
Zhetysu region	(part of Almaty reg.)	(part of Almaty reg.)	-8.872	-9.181	-10.914	-13.018
Karaganda region	-5.118	-6.028	-3.075	-4.446	-5.696	-5.387
Kostanay region	-2.532	-3.073	-3.800	-4.500	-5.677	-4.499
Kyzylorda region	-4.727	-4.574	-6.300	-8.100	-9.898	-11.913
Mangystau region	796	239	-500	-800	-1.130	-2.672

Pavlodar region	-1.436	-2.445	-2.900	-3.400	-4.850	-6.100
North Kazakhstan region	-2.628	-2.892	-3.500	-4.100	-5.210	-6.300
Turkestan region	-20.173	-21.297	-18.066	-23.111	-31.966	-42.649
Ulytau region	(part of Karaganda)	(part of Karaganda)	-1.200	-1.400	-2.150	-2.450
East Kazakhstan region (EKR)	-8.494	-8.026	-6.500	-7.200	-9.300	-11.200

Note: Abai, Zhetysu, and Ulytau regions were established in 2022. Prior to this, their data were included within the East Kazakhstan, Almaty, and Karaganda regions, respectively.

Source: Compiled by the author based on data from the Bureau of National Statistics (2020-2025)

As evidenced by the data in the table, the primary destinations of internal migration are the three cities of republican significance. The indicators for Astana are particularly noteworthy: while positive net migration amounted to 25.607 people in 2020 (Bureau of National Statistics, 2020), this figure experienced a sharp surge to 87.459 by 2025 (Bureau of National Statistics, 2025). Although the migration influx in Almaty has remained consistently high (averaging 35 thousand people annually), the figures have begun to partially stabilize. Shymkent also continues to record positive net migration flow. Furthermore, a novel demographic trend has recently emerged in the regions adjacent to major metropolitan areas: migration indicators in the Almaty and Akmola regions have transitioned from prolonged negative net migration to positive dynamics. For instance, in 2025, the number of arrivals in the Almaty region surged, resulting in a positive balance of 12.110 individuals, while the Akmola region also recorded a positive net migration balance (+292 individuals). This tendency directly demonstrates the formation of dense agglomeration belts around Astana and Almaty: as the infrastructural and absorption capacities of the major cities reach their limits, internal migration flows begin to concentrate in their adjacent territories (Bureau of National Statistics, 2025).

Contemporary migration processes in Kazakhstan are characterized by abrupt, exponential growth rather than gradual, evolutionary change. The sharp increase in internal migration in recent years signifies that the large-scale population influx into metropolitan areas has significantly outpaced both the adaptation speed of urban ecosystems and the institutional preparedness of the state (Acemoglu & Robinson, 2022). Within international scientific discourse, this phenomenon is conceptualized as the “urban penalty.” It has been substantiated that excessively rapid and uncontrolled urban population growth reduces the economic benefits of agglomeration and, conversely, causes infrastructural crises and ecological degradation (Cai et al., 2021; Glaeser, 2020). The major cities of Kazakhstan have entered this critical phase: migration-driven population growth has precipitated unsustainable “overheating” in the housing market, severe strain on urban transport systems, shortages in the provision of basic social services, and the emergence of “false urbanization” (marginalization) in peripheral areas lacking adequate infrastructure.

The demographic surge subjecting metropolitan areas to this “urban penalty” did not materialize spontaneously. This process occurs at the expense of other regions (donor regions), resulting from the unidirectional, spontaneous movement of the population. As shown in Table 2, the vast majority of regions consistently exhibit negative net migration. While the mass outmigration from southern regions – most notably the Turkestan region, where the negative balance nearly doubled to reach an outflow of over 42.000 individuals by 2025 – and the Zhambyl region can be partly attributed to a surplus of labor force, the simultaneous population outflow from the North Kazakhstan, East Kazakhstan, and Abai regions poses a tangible threat to regional economies. This trend is accompanied by the depletion of human capital (depopulation) in rural areas and small monotowns, assuming the characteristics of a “zero-sum game” for the national economy: the concentration of resources in one region inevitably leads to socio-economic stagnation in another (Kireyeva et al., 2022). Furthermore, the necessity for the majority of rural migrants to seek employment in the informal sector deepens skills mismatch in the labor market and exacerbates intra-urban social stratification (Ismailova & Bokaev, 2020).

Although state programs endeavor to regulate this spatial disproportion by directing the population toward the northern and eastern macro-regions, statistical indicators prove that these measures are unable to alter the population’s economically motivated migration choices (Aldabergenov et al., 2024). This situation reveals that administrative restrictions and traditional methods in internal migration management have reached the limits of their effectiveness. Consequently, the analytical focus must shift toward evaluating the state’s institutional capacity: whether the existing regulatory mechanisms are robust enough to transform spontaneous demographic flows into a catalyst for economic growth, or if they inadvertently exacerbate infrastructural crises. To systematically assess the state’s institutional capacity and operationalize the concept of the “implementation gap” between the stated objectives of state planning and empirical realities, an institutional content analysis of key legislative and strategic migration documents was conducted.

During the study, the content and priorities of key documents – such as the Law “On Migration of the Population” (Government of the Republic of Kazakhstan, 2011), the Concept of Migration Policy for 2023–2027 (Government of the Republic of Kazakhstan, 2022), and the National Project “Strong Regions – the Driver of the Country’s Development” (Government of the Republic of Kazakhstan, 2021) – were examined. Many state programs approach migration management solely as an economic instrument for the redistribution of labor force. However, contemporary urban studies confirm that the success of migration policy is determined not only by economic incentives but also by the quality of institutions at the local level (Rodríguez-Pose, 2020). To determine the extent to which the content of policy documents in the context of Kazakhstan considers the integration capacity of the urban environment, the results of the conducted content analysis are summarized in the table below.

Table 3
Institutional content analysis of documents regulating migration in the Kazakhstan

Regulatory legal document (Program)	Strategic focus and key indicators	Applied institutional and economic mechanisms	Implementation contradictions and institutional bottlenecks	Impact on urbanization and the spatial development of cities
Law of the Republic of Kazakhstan “On Migration of the Population”	Establishing the foundation for legal regulation of migration processes; defining the legal status of internal migrants and qandas (ethnic Kazakh returnees), as well as regional quotas.	Quota system (regional quotas for receiving qandas and resettlers); administrative registration procedures; regulation through employment agencies.	Excessive bureaucratization of the legislative framework. Control and registration functions predominate over economic incentives.	Administrative restrictions have proved unable to halt excessive population concentration in metropolitan areas. Exacerbated the concentration of internal migrants in informal suburban settlements (suburbanization).
Concept of Migration Policy of the Republic of Kazakhstan for 2023–2027	Eliminating demographic imbalances; attracting human capital; rational redistribution of labor resources.	“Economic mobility certificates” (assistance for purchasing/building housing); subsidizing relocation expenses; grant support for entrepreneurial initiatives.	Program indicators are predominantly quantitative in nature (e.g., number of relocated individuals). A mismatch between local labor market migrants’ qualifications (skills mismatch).	Due to the low “natural attractiveness” (pull factors) of target cities, the program inadvertently contributes to higher levels of “return migration” after migrants receive financial support.

National Project “Strong Regions – the Driver of the Country’s Development”	Reducing interregional disparities; ensuring managed urbanization; developing large agglomerations and monotowns.	Transfers allocated to modernize basic infrastructure; funding for monotowns through the “Auyl – El Besigi” project.	Inefficiency of investment projects in creating long-term employment. The inability of infrastructural projects to serve as a core economic anchor capable of halting population outflow.	Persistence of the gap between large agglomerations and smaller cities. Because the majority of investments are concentrated around metropolitan areas, indicators for retaining populations in alternative centers remain unfulfilled.
	Stimulating migration flows through the development of productive employment and mass entrepreneurship.	State financing of voluntary relocation from the south to the north; mechanisms for short-term vocational training.	Lack readiness in social infrastructure, poor quality of the housing provided, and a failure to account for adaptation to the climate.	The emergence of rural marginalization elements in receiving cities. The program’s effectiveness declined sharply because migrants were unable to integrate fully into the urban environment (maladaptation).

Source: Results of the content analysis conducted by the author, based on state programs and legislative documents from the Adilet.kz database (Government of the Republic of Kazakhstan, 2011, 2018, 2021, 2022)

The content analysis results presented in the table highlight a profound implementation gap between internal migration policy and urban reality in Kazakhstan. Primarily, the majority of strategic documents are predicated on quantitative indicators (e.g., quotas and the number of relocated families) rather than qualitative integration. Such “target-driven management” in public administration prioritizes the fulfillment of official metrics over the actual social efficacy of the programs (Advisory Council on Migration, 2023). Consequently, while direct financial mechanisms like “Economic Mobility Certificates” enhance the spatial mobility of the population, these flows remain misaligned with the actual capacities of the receiving cities.

Measures designed to stimulate migration are not coordinated with the degree of infrastructural deterioration, the shortage of spaces in schools and hospitals, or the carrying capacity of utility networks. This lack of systemic coherence in state policy generates an “institutional vacuum,” wherein regulatory measures, instead of providing impetus for urban development, become a factor that exacerbates socio-infrastructural crises (Akhmetova & Nakipova, 2023). These

risks supported by international experience: migration policies implemented without adequate infrastructure frequently fail (Poku-Boansi et al., 2024).

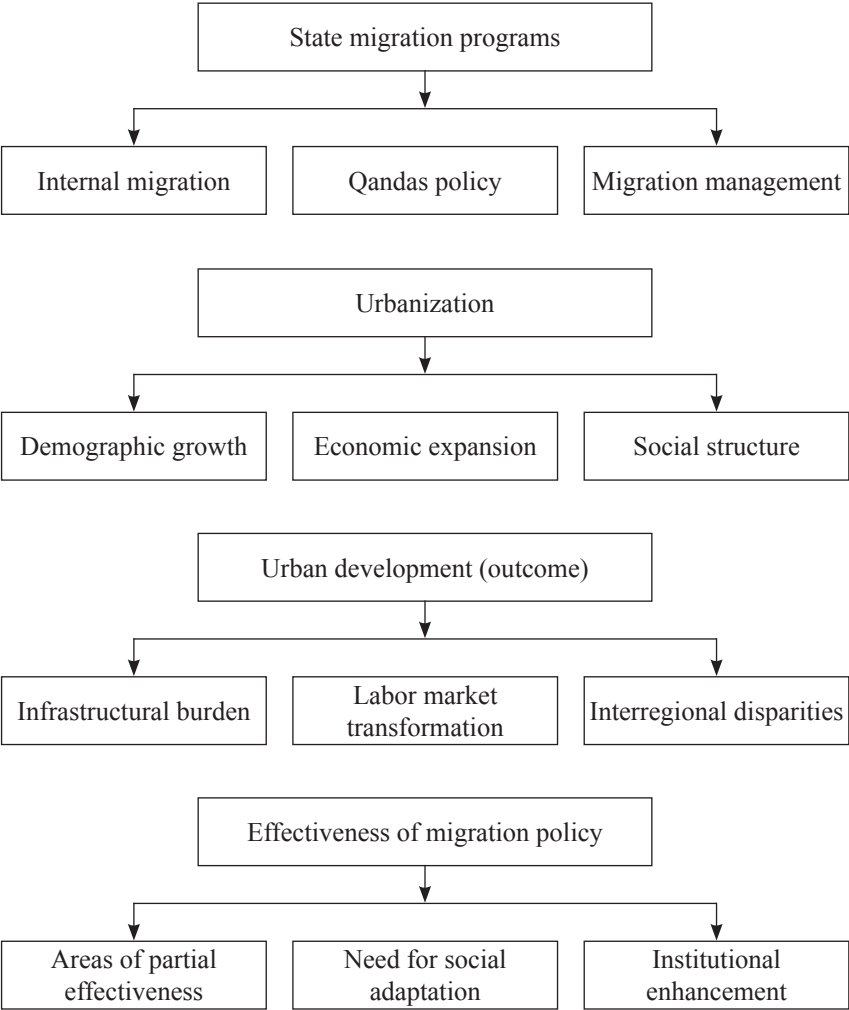
Furthermore, although existing documents exhibit an intent to divert migration flows from metropolitan areas toward smaller cities, they do not provide effective mechanisms for achieving this goal. State regulation is based predominantly on administratively “steering” people toward specific regions rather than on addressing the “push factors” that prompt them to leave. However, evidence from international experience shows that such restrictions, which contradict with individuals’ economic interest, are highly ineffective (Portes, 2020). This argument is supported by the phenomenon of “return migration” in Kazakhstan: a significant proportion of migrants who relocate to the north under state quotas nevertheless subsequently resettle in large urban agglomerations. This leads not only to the inefficient expenditure of state funds but also to the further exacerbation of interregional social inequality.

Thus, the content analysis shows that the state currently lacks effective mechanisms to transform internal migration into an economic driver. This situation necessitates a transition to a new, comprehensive approach to migration policy management.

The institutional analysis of state strategic documents has elucidated profound disparities between migration policy and the genuine processes of urbanization. Nevertheless, to comprehend how these contradictions affect the components of the urban ecosystem, it is necessary to model functional relationships among these components. Migration flows represent more than a mere demographic indicator; they constitute a complex factor that directly impacts a city’s social structure, economic stability, and urban infrastructure. In light of this, an integrated structural model of the influence of state migration policy on urbanization and urban development has been developed.

This model delineates how migration management decisions translate into spatial transformations in cities. In international scientific discourse, “systems thinking in urban planning” is prominent because a change in one sector invariably generates cumulative effects in others (Kandt & Batty, 2021). In the context of Kazakhstan, the incongruity between state quotas or subsidies and the “absorption capacity” of the urban environment leads to systemic imbalance. These structural interrelationships and the mechanisms of policy impact are illustrated in Figure 2.

Figure 2
Structural model of the impact of state migration policy on urbanization and urban development



Source: Developed by the author based on the Concept of Migration Policy of the Republic of Kazakhstan, 2022)

The proposed structural model elucidates the complex causal relationships between state migration policy and the development of the urban environment. As depicted in the diagram, state regulatory mechanisms operate as the central nexus for internal migration and urbanization processes. However, the efficacy of these mechanisms is directly manifested across four principal domains: social structure, economic expansion, interregional disparities, and infrastructural burden. The interdependence of these elements within the model underscores the spatial-institutional – rather than strictly demographic – nature of migration policy.

As illustrated in the Figure 2 social structure block, unregulated migration flows can precipitate the stratification of the urban population and the spatial

concentration of marginalized groups. As researchers emphasize, inadequate social integration of urban migrants exacerbates intra-urban inequality and escalates social tension (Ahlfeldt & Pietrostefani, 2019). Furthermore, while the economic expansion factor highlights the catalytic role of migration, in the context of Kazakhstan, this growth is predominantly driven by the low-productivity service sector and the informal labor market. This phenomenon engenders the risk of “poor urbanization,” wherein population growth occurs simultaneously with a decline in the city’s overall economic efficiency and innovative potential (Florida et al., 2023).

The infrastructural burden block constitutes one of the most critical elements of the model. The effectiveness of migration policy is directly contingent upon the capacity of the city’s utility networks and social infrastructure. Research has shown that resettlement policies executed without adequate infrastructural preparedness precipitate the degradation of urban services and the deterioration of environmental conditions (UN-Habitat, 2024). The interregional disparities factor within the model illustrates the macro-level repercussions of migration policy: the concentration of the population in large agglomerations accelerates the economic decline of peripheral regions (periphery decline).

In conclusion, the proposed structural model supports the need for institutional transformation in current approaches to migration management. State policy must ensure not merely the physical relocation of people but also their effective integration into the urban ecosystem (integration efficiency). This model can provide a sound analytical basis for integrating the social, economic, and infrastructural dimensions of migration policy. To further delineate these structural contradictions, it is subsequently necessary to conduct an empirical assessment of the positive and negative consequences of migration programs.

Although the structural model systematizes the mechanisms through which migration policy influences urban development, an empirical evaluation is required to assess its actual outcomes from both qualitative and quantitative perspectives. Internal migration processes present a duality for any state: they create new opportunities while simultaneously generating profound socio-economic risks. While the positive attributes of urbanization are predominantly associated with the concentration of human capital and enhanced labor productivity, its negative repercussions stem from the inability of urban systems to withstand demographic pressure.

In this regard, a comprehensive assessment of the effectiveness of migration programs in Kazakhstan and their consequential impact on the urban environment constitutes one of the primary outcomes of this study. During the research, an analytical evaluation was conducted across three fundamental vectors of state regulation: internal migration, the pace of urbanization, and labor resource allocation policy. This evaluation was anchored in international principles of “sustainable urban development,” which require economic growth to be balanced with social and infrastructural stability (Elmqvist et al., 2021). The cumulative results regarding the positive and negative impacts of state regulatory measures on the urban environment are delineated in the table below.

Table 4
Comprehensive assessment of the effectiveness of migration programs

Regulatory area	Positive balance	Negative impacts	Overall assessment
Internal migration	Accelerates urbanization and stimulates economic activity	Excessive concentration of the population in major metropolitan areas	High
Urbanization	Bolsters the economic development of urban centers	Pressure on infrastructure and the risk of environmental degradation	Moderate
Labor resources	Enhances interregional socio-economic balance	Complete equilibrium remains unachieved	Moderate
Qandas policy	Fosters demographic growth and consolidates the national composition	Challenges associated with social adaptation and integration	Moderate
Migration management	Serves as an instrument for strategic spatial regulation	Effectiveness remains uneven and highly differentiated across regions	Moderate

Source: Compiled by the author based on the content analysis in Table 3 and the statistical data in Tables 1–2

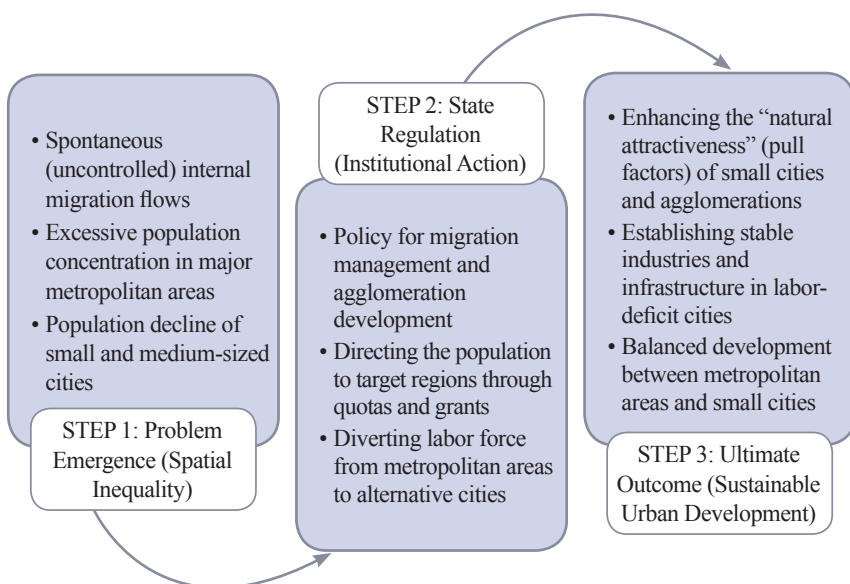
The evaluation results presented above clearly demonstrate the contradictory nature of migration policy in Kazakhstan. Although the acceleration of the urbanization process driven by internal migration is regarded as a positive factor, its qualitative characteristics raise considerable concern. Specifically, the excessive concentration of the population in major metropolitan areas and the consequent escalation of environmental pressure serve as direct manifestations of imbalances in migration management. According to international experts, if migration flows surpass a city’s capacity for job creation, this imbalance can lead to “agglomeration degradation” (Akhmetova & Nakipova, 2023). In the context of Kazakhstan, exponential population growth in metropolitan areas has degraded the quality of basic services and diminished the overall livability of the urban environment.

In the area of labor force allocation, the effectiveness of state programs was assessed as “moderate.” This assessment indicates that the mechanisms designed to integrate relocated individuals into their new environments remain underdeveloped. State endeavors to supply the northern and eastern regions with a requisite workforce frequently encounter difficulties stemming from the discrepancy between migrants’ qualification levels and the actual demands of the local labor market (skills mismatch). This problem is common in the regulation of labor migration in developing countries, often neutralizing the intended effectiveness of state subsidies (Aldabergenov et al., 2024). Consequently, the mere provision of financial assistance cannot serve as a guarantee of successful integration.

The predominance of environmental and infrastructure-related challenges in the negative-impact category indicates insufficient attention to the “absorption capacity” principle in state policy. The excessive rise in housing prices and the phenomenon of spontaneous suburbanization (urban sprawl) are direct consequences of conducting urban planning in isolation from migration policy. Research indicates that, when spatial development strategies are not synchronized with migration flows, significant urban instability can result (Scott & Storper, 2015). Thus, the analytical assessment presented in Table 4 substantiates the imperative to transition from fragmented institutional and administrative actions to comprehensive strategic management in regulating internal migration. The specific trajectories of this transformation will be fully articulated in the novel management process model proposed in the concluding phase of this study. As shown in Figure 3, the model transitions from institutional-administrative action toward strategic-integrational regulation.

The institutional contradictions identified during the research, coupled with the comprehensive assessment of migration policy’s impact on the urban environment, dictate the necessity for a fundamental transformation of management processes. As demonstrated by the statistical data and content analysis results, the current model, which is predicated exclusively on administrative and financial measures, cannot effectively manage spontaneous internal migration. To convert the urbanization process into a genuine driver of the country’s economic development, state policy must pivot from the mere relocation of people to the strategic management of urban ecosystems.

The internationally recognized concept of “smart urbanization” entails the synchronization of migration flow management with the infrastructural capacities of cities and the actual demands of the labor market (Akande et al., 2019). In this context, the migration management process must not be limited to recording departures and arrivals; rather, it must establish a continuous management cycle focused on migrants’ adaptation to the urban environment and the effective use of their human capital. Toward this objective, a novel logical model for managing migration flows and ensuring balanced territorial development was developed within the framework of this research. This model is based on the “expected regulation” paradigm, illustrating the transition from an institutional and administrative level of management to a strategic-integrational one.

Figure 3*The process of managing migration flows and balanced territorial development*

Source: Developed by the author based on the research findings

The proposed management model establishes a conceptual framework for the modernization of migration policy in Kazakhstan. As illustrated in the diagram, the process originates from traditional institutional and administrative measures and progressively advances toward “anticipatory regulation”. The essence of this transformation lies in redefining the state’s role from a mere “supervisor” to a “strategic coordinator.” In this new model, the advancement of urban pull factors and the proactive forecasting of their absorption capacity occupy a central position.

This management process model resonates with the international concept of the “resilient city,” wherein migration flows are viewed not as a “shock” to urban infrastructure but as a factor that replenishes its resource base (Almulhim, 2025). The “expected regulation” block in the diagram entails a three-level integration of migration regulation: synchronizing spatial planning, strengthening social integration mechanisms, and enhancing labor market flexibility. Such a comprehensive approach is widely regarded as one of the most effective methods for reducing urbanization-related disparities in developing countries (UN DESA, 2023).

A critical stage in implementing this model is enabling migration flows to become more self-regulating by enhancing the “natural attractiveness” of cities. This implies that the state should prioritize improving the quality of life in regional urban centers rather than attempting to direct migrants toward specific regions solely through subsidies. As researchers have demonstrated, cities with a high quality of life attract human capital more effectively and can transform it into long-term economic growth (Florida et al., 2023). Thus, the process presented in Figure 3 serves as a practical algorithm for transforming migration policy from a demographic tool into a strategic driver of urban development.

Overall, the research findings and the proposed models support the need to establish a new institutional architecture for regulating internal migration in Kazakhstan. The statistical trends analyzed in the results section, the findings of the content analysis, and the identified structural relationships have provided a new perspective on the interdependence between migration and urbanization. The final section of the article synthesizes these conclusions and presents specific practical recommendations for state policy.

The results of this comprehensive study attest that the institutional gap between Kazakhstan's current internal migration policy framework and the actual dynamics of urban development has reached a critical threshold. A correlated examination of statistical trends and content analysis data indicates that the current model of state programs – predicated on quantitative indicators such as quotas and financial transfers – is proving ineffective in regulating the spatial mobility of the population. At the same time, the failure to account for “absorption capacity” of receiving cities is accelerating infrastructure deterioration and social stratification in major agglomerations. This situation necessitates a reassessment of migration management as a strategic mechanism for ensuring the sustainability of urban systems, rather than merely a demographic tool.

The structural interrelationships formulated during the discussion and the proposed management model offer a sound analytical framework for moving state policy beyond the “institutional vacuum.” The identified risks of the “urban penalty” and the consequences of spontaneous suburbanization support the need to closely align migration policy with urban master plans. The new paradigm of migration flow management must be based on comprehensive integration measures that regard migrants not only as members of the local labor force but also as an integral members of the urban ecosystem. Consequently, the results and their theoretical interpretation provide a robust foundation for the practical recommendations offered to public administration bodies and the general conclusion of this study.

Operationalization of the “Anticipatory Regulation” Model: A Conceptual Framework for Digital Monitoring

The proposed “anticipatory regulation” model provides a strategic foundation for modernizing migration policy; however, its practical application requires data-driven precision. To transition this model from a descriptive framework into a proactive policy instrument, it is imperative to operationalize it through an integrated digital monitoring system.

Conceptually, this operationalization relies on the continuous aggregation of regional-level statistics and Big Data analytics across several key domains: migration inflows, labor market dynamics, housing availability, social infrastructure load (schools and hospitals), and environmental pressure. By synthesizing these metrics, state authorities can formulate an “Urban Absorption Capacity Index” for each receiving city. This index would classify urban ecosystems based on their real-time capacity (high, medium, or low) to accommodate additional populations without triggering an “urban penalty.”

Consequently, administrative tools such as migration quotas, relocation subsidies, and urban development plans would no longer be guided by reactive demographic targets, but rather by evidence-based socio-spatial coordination. If

a city exhibits a low absorption capacity, state interventions should prioritize infrastructure expansion rather than stimulating further migration influxes.

At the current stage, this study is grounded in institutional policy evaluation and does not aim to construct a fully functioning algorithmic forecasting platform. Rather, it establishes the theoretical and methodological prerequisites for such a system by identifying the critical institutional variables that must be included in future predictive models. Further empirical research, utilizing micro-level municipal datasets, will be essential to test and refine the proposed Urban Absorption Capacity Index.

CONCLUSION

This comprehensive study has revealed profound institutional contradictions between the state policy of regulating internal migration processes and the sustainable urban development in the Republic of Kazakhstan. Through the synthesis of demographic statistics and institutional policy evaluation, the findings provide direct empirical and theoretical responses to the core research questions established at the outset of this inquiry.

Addressing the first research question – how current state regulatory mechanisms influence the urban environment – the empirical evidence demonstrates that administrative quotas and direct financial subsidies inadvertently exacerbate demographic pressure rather than resolve spatial disparities. Because these tools prioritize short-term labor redistribution over long-term spatial planning, they have accelerated spontaneous urbanization. Consequently, major metropolitan areas have been subjected to an “urban penalty,” characterized by acute infrastructural strain, unregulated suburbanization, and a rapid population concentration driven by agglomeration pull factors.

In response to the second research question, which evaluates the alignment between existing state programs and actual urban absorption capacity, the institutional gap analysis reveals a profound structural misalignment. The scientific novelty of this finding lies in conceptualizing the “institutional vacuum”: state policies systematically overlook receiving cities’ socio-economic conditions, housing capacity, and infrastructure readiness. By failing to account for local labor market dynamics, current interventions transform migration-driven population growth from a potential demographic dividend into a catalyst for urban degradation and intra-urban social stratification.

Finally, regarding the third research question concerning the comprehensive institutional approaches necessary to synchronize migration management with sustainable spatial development, this study supports the need for a conceptual and strategic shift. Overcoming current structural disparities dictates transitioning from fragmented administrative actions toward a comprehensive “expected regulation” paradigm.

Based on these findings and the structural models developed within this study, the following specific recommendations are formulated to operationalize this shift and enhance policy effectiveness:

- Transition to an “Integrational Model” of Migration Regulation: It is imperative to shift the performance indicators of state programs from the “number of relocated individuals” to a “migrant urban integration

index.” Mechanisms must be strengthened to provide settlers not only with housing but also with stable employment aligned with their professional qualifications and access to social adaptation centers.

- **Synchronization with urban master plans:** Migration policy must be strictly aligned with urban master plans and spatial development strategies. Migration quotas should be established only after an evidence-based assessment of the “absorption capacity” of each receiving city, including its infrastructure capacity, environmental carrying capacity, and economic capacity.
- **Development of Pull Factors in Small and Medium-Sized Cities:** To alleviate pressure on major metropolitan areas and mitigate interregional disparities, priority should be given to developing natural “pull factors” in medium and small cities. This should be achieved not merely through administrative regulation, but by fostering a high quality of life capable of attracting and retaining high-quality human capital, thereby establishing alternative growth poles.
- **Implementation of Digital Monitoring and Big Data:** The migration management system should be enhanced through digital monitoring tools and big data analytics to forecast population movement and infrastructural load in real time.

In conclusion, the proposed “expected regulation” paradigm offers an opportunity to transform internal migration from a spontaneous challenge into a managed strategic resource. The modernized framework provides a scientific foundation for state bodies to enhance the global competitiveness of Kazakhstani cities while mitigating the risks of rapid urbanization. One limitation of this study is the limited availability of regional-level micro data. Therefore, future research should focus on applying the proposed Urban Absorption Capacity Index to specific monotowns and peripheral agglomeration belts, thereby empirically testing the localized socio-economic impacts of migration.

Ethical Commission Approval

This study did not require approval from an ethics committee as it did not involve human participants, animals, or sensitive personal data. All data used in this research were obtained from publicly available sources.

Conflict of Interest Statement

There is no conflict of interest with any institution or person within the scope of this study.

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