

K.B. Makhanov^{1*}, A.A. Khitakhunov²,
Z. Zhanaltay³, M.O. Mussabekov³

¹University of Debrecen, Debrecen, Hungary

²CAPS Unlock, Almaty, Kazakhstan

³Eurasian Research Institute, Almaty, Kazakhstan

*e-mail: kanat.makhanov@science.unideb.hu

SHIFTING RURAL LANDSCAPES: THE HISTORICAL GEOGRAPHY OF POPULATION CHANGE IN POST-SOVIET KAZAKHSTAN

This study analyzes changes in the spatial distribution of the rural population in post-Soviet Kazakhstan using census data from 1989 to 2024. While the total rural population has remained stable, over 27% of rural settlements have been eliminated during the sample period. Applying a proximity-based framework, the research shows that districts near major cities have experienced rural population growth and resilience, while remote areas face sharp decline and village abandonment. The findings reveal a selective spatial reorganization of the rural landscape, with populations concentrating in fewer, larger settlements located within accessible distance of major urban centers. These dynamics reflect not only rural decline, but also broader structural changes aligned with Kazakhstan's ongoing urbanization. The observed patterns are closely tied to Kazakhstan's broader urbanization process in a way that cities have become a key factor shaping rural viability, reinforcing demographic and spatial reorganization across the country. Overall, the findings align with broader research on rural transformation, providing a detailed case of how proximity to urban centers has shaped rural population patterns and settlement structures in post-Soviet Kazakhstan over time, reflecting enduring trends of spatial concentration and selective territorial development.

Keywords: rural population, population geography, urbanization, migration, post-Soviet Kazakhstan.

Қ.Б. Маханов^{1*}, А.А. Хитахунов², Ж. Жаналтай³, М.О. Мусабеков³

¹Дебрецен университеті, Дебрецен, Венгрия

²CAPS Unlock, Алматы, Қазақстан

³Еуразия ғылыми-зерттеу институты, Алматы, Қазақстан

*e-mail: kanat.makhanov@science.unideb.hu

Посткеңестік шығыс даладағы ауылдық аумақтардың динамикасы: Қазақстан ауылдық жерлеріндегі халық саны өзгерістерінің географиясы

Бұл зерттеу 1989–2024 жылдар аралығындағы халық санағы деректеріне сүйене отырып, посткеңестік Қазақстандағы ауыл халқының кеңістіктік таралуындағы өзгерістерді талдайды. Ауыл халқының жалпы саны тұрақты сақталғанымен, зерттелген кезеңде ауылдық елді мекендердің 27%-дан астамы жойылған. Қалаға жақындықты негізге алған тәсіл бойынша жүргізілген зерттеу ірі қалаларға жақын аудандарда ауыл халқының өсуі мен тұрақтылығы байқалатынын, ал шалғай өңірлерде халықтың күрт азаюы мен ауылдардың жойылуы орын алып жатқанын көрсетеді. Нәтижелер ауылдық кеңістіктің таңдаулы қайта ұйымдастырылуын аңғартады: халық ірі қалаларға қолжетімді қашықтықтағы ірі және аз санды ауылдарға шоғырлануда. Бұл үдерістер тек ауылдың құлдырауын ғана емес, сонымен қатар Қазақстанда жүріп жатқан урбанизациямен байланысты ауқымды құрылымдық өзгерістерді де көрсетеді. Байқалған заңдылықтар урбанизация үдерісімен тығыз байланысты: қалалар ауылдардың өміршеңдігін айқындайтын негізгі факторға айналып, ел бойынша демографиялық және кеңістіктік қайта құрылымды күшейтуде. Жалпы, зерттеу нәтижелері ауылдық трансформацияға қатысты кең ауқымды зерттеулермен үндесіп, посткеңестік Қазақстанда қалаларға жақындық факторының ауыл халқының орналасу үлгілері мен елді мекен құрылымдарына уақыт өте келе қалай әсер еткенін нақты мысалмен көрсетеді, бұл кеңістіктік шоғырлану мен іріктемелі аумақтық даму сияқты ұзақмерзімді үрдістерді айқындайды.

Түйін сөздер: ауыл халқы, халық географиясы, урбанизация, миграция, посткеңестік, Қазақстан.

К.Б. Маханов^{1*}, А.А. Хитахунов², Ж. Жанаптай³, М.О. Мусабеков³

¹Университет Дебрецена, Дебрецен, Венгрия

²CAPS Unlock, Алматы, Казахстан

³Евразийский научно-исследовательский институт, Алматы, Казахстан

*e-mail: kanat.makhanov@science.unideb.hu

Постсоветская динамика сельских территорий на восточном степном пространстве: география изменений численности населения сельской местности Казахстана

Настоящее исследование анализирует изменения в пространственном распределении сельского населения в постсоветском Казахстане на основе данных переписей населения за 1989–2024 годы. Несмотря на то, что общая численность сельского населения оставалась стабильной, за исследуемый период было ликвидировано более 27% сельских населённых пунктов. Используя подход, основанный на близости к крупным городам, исследование показывает, что районы, расположенные рядом с ними, характеризуются ростом и устойчивостью сельского населения, в то время как отдалённые территории сталкиваются с резким спадом и исчезновением сельских поселений. Результаты указывают на избирательную пространственную реорганизацию сельского ландшафта, при которой население концентрируется в меньшем числе более крупных посёлков, находящихся в зоне доступности от крупных городов. Эти процессы отражают не только сельское сокращение, но и более масштабные структурные изменения, связанные с продолжающейся урбанизацией в Казахстане. Наблюдаемые тенденции тесно связаны с урбанизацией, при которой города стали ключевым фактором жизнеспособности сёл и усиливают демографическую и пространственную перестройку по всей стране. В целом, полученные результаты соотносятся с более широкими исследованиями сельской трансформации, представляя подробный пример того, как близость к городским центрам со временем формировала модели расселения и структуру сельских населённых пунктов в постсоветском Казахстане, отражая устойчивые тенденции пространственной концентрации и избирательного территориального развития.

Ключевые слова: сельское население, география населения, урбанизация, миграция, постсоветский Казахстан.

Introduction

In the years following Kazakhstan's independence, significant shifts in population distribution laid the foundations for the rural depopulation processes observed today. The post-Soviet transition triggered marked declines in small urban and rural settlements, while larger cities expanded rapidly, reflecting an early acceleration of urbanization and rural–urban migration (Rowland, 1994; 1995). This population redistribution was driven by both economic restructuring and the outmigration of economically active and younger residents seeking better opportunities in urban centers.

Throughout the 1990s, Kazakhstan experienced an increasingly polarized settlement pattern. Mid-sized and large cities became dominant growth poles, while many small towns and rural areas faced ongoing depopulation (Rowland, 1999). Declines in rural areas were fueled not only by migration but also by natural decrease, leading to a gradual aging of the rural population and weakening of local labor potential.

Census data further reveal that rural depopulation has exhibited distinct regional and ethno-demographic patterns. Areas with predominantly Russian populations experienced sharper declines, while

Kazakh-majority rural regions maintained relatively higher natural growth rates, though still subject to net outmigration pressures (Rowland, 2001). These early post-independence trends created long-lasting demographic imbalances that continue to shape rural population dynamics in Kazakhstan today.

More recent analyses confirm that the long-term evolution of Kazakhstan's settlement system has been marked by the strengthening of large urban centers at the expense of small towns and rural settlements, a process that began in the late Soviet period and continued throughout the post-Soviet decades (Makhanov, 2023). The cumulative effect of these transformations provides the broader structural background for understanding contemporary rural depopulation processes in Kazakhstan.

The present study builds on these earlier findings to examine the current phase of rural depopulation in Kazakhstan, with particular attention to regional variations, demographic structures, and the effectiveness of policy responses.

Literature review

The issue of rural depopulation in Kazakhstan has only recently begun to attract academic attention. While the topic has been addressed within

broader thematic contexts, few studies have focused specifically on the spatial demographics of the rural population. Instead, rural demographic data are often employed as background or secondary evidence in analyses centered on other social, economic, or health-related issues. As a result, the spatial patterns and demographic shifts within rural Kazakhstan have rarely been the primary focus of scholarly investigation.

In much of the existing literature, rural demographic trends are used to illustrate broader negative changes in the social fabric of rural areas (Buckley, 1998; Rakhmetova & Abenova, 2013; Amankulova, 2018; Dzhusupov et al., 2019; Belgibayeva et al., 2021; Aidarkhanova et al., 2025). Rural depopulation is frequently cited as a contextual factor contributing to these transformations. A particularly acute case is observed in the North Kazakhstan region, where depopulation is closely linked to rapid population aging, which in turn accelerates the erosion of rural community life (Belgibayeva et al., 2021). Outmigration of the working-age population weakens rural economies, undermines the agricultural sector, reduces demand for local services, and perpetuates a cycle of decline and stagnation (Belgibayeva et al., 2021).

Several studies examine rural depopulation in relation to policy domains such as health promotion and education access (Amankulova, 2018; Dzhusupov et al., 2019; Lee et al., 2025). In these works, demographic decline is often framed as a barrier to effective service delivery and as a challenge that must be addressed to foster sustainable rural development. Although the state has introduced various interventions aimed at reversing rural decline, many are reported to have limited impact, with scholars identifying rural demographic trends as a key structural issue in need of reform (Belgibayeva et al., 2021; Amirova, 2024). Specific recommendations include tailoring interventions to the specialization of local economies, the availability of labor resources, territorial characteristics, and—importantly—the age composition of rural populations (Amirova, 2024).

Demographic processes underlying rural depopulation are closely connected to broader national trends, yet some recent studies have emphasized the importance of non-demographic factors in shaping population dynamics. For instance, Lee et al. (2025) explore the role of corporate social responsibility (CSR) programs in the agricultural sector, finding that CSR initiatives can significantly improve living conditions and help retain rural populations. Tar-

geted investments in infrastructure, education, and healthcare through CSR efforts may complement government policies in mitigating rural outmigration.

Despite these valuable contributions, rural depopulation has rarely been examined through the lens of spatial distribution and urbanization. Much of the available literature focuses on the earlier phases of Kazakhstan's post-Soviet transition rather than on more recent decades (Rowland, 1994, 1995, 1999; Rakhmetova & Abenova, 2013). These studies document the sharp decline of small towns and rural settlements amid expanding large cities, illustrating an early stage of accelerated urbanization and rural-to-urban migration (Rowland, 1994, 1995, 1999). The urbanization process continued into the early 21st century, with population increasingly concentrated in major urban centers. Rakhmetova and Abenova (2013) additionally highlight the convergence of rural and urban fertility patterns as a contributing factor to population aging and declining natural growth in rural areas.

One limitation of the existing literature is its inconsistent or narrow spatial coverage. Some studies adopt a broader Central Asian regional perspective with little or no subnational detail specific to Kazakhstan (Buckley, 1998), while others rely on regional data but limit their scope to specific oblasts (Dzhusupov et al., 2019; Belgibayeva et al., 2021; Amirova, 2024). As a result, a comprehensive nationwide perspective on rural demographic change is largely lacking.

This study aims to address this gap by providing a detailed, district-level analysis of rural population dynamics across Kazakhstan during the last three intercensal periods—1989, 1999, and 2009–2021. By focusing on spatial demographic trends, this research contributes to a more nuanced understanding of rural depopulation processes and their regional differentiation.

Theoretical background

This study adopts a proximity-based framework to examine rural depopulation in Kazakhstan, focusing on the spatial distance between rural settlements and major urban areas. Given Kazakhstan's vast territorial extent, sparse population, and highly uneven rural settlement dynamics, a framework centered on spatial proximity to urban centers offers both a conceptually coherent and empirically robust basis for analyzing patterns of rural population change.

This research framework draws on several complementary theoretical approaches. The first is the *Rural Depopulation and Counterurbanization* perspective, which initially emerged in studies of rural population change in developed countries. This approach highlights the dual process of population decline in remote areas and selective growth in rural areas located near cities. It also incorporates the concept of counterurbanization—the movement of populations from cities to rural areas, typically within commuting distance (Berry, 1976; Champion, 1989). The core assumption is that remote rural areas experience population loss due to outmigration and limited opportunities, while accessible rural areas may attract residents seeking lower costs or improved quality of life.

A second influential perspective is the *Urban Influence and Peri-Urbanization* approach, which has proven useful in analyzing rural-urban interactions across various global contexts (Tacoli, 1998; McGee, 1991; Nelson, 2001, 2004). This framework focuses on the decline of rural areas distant from cities and the simultaneous rise of suburbanized rural zones. It conceptualizes the growth of peri-urban and desakota regions as part of the expanding urban field, where rural and urban activities increasingly overlap. In this context, rural population growth near cities is largely driven by commuting, service availability, and urban spillover.

The third relevant approach is grounded in *Core-Periphery Theory and Central Place Theory*, developed by Friedmann (1966, 1973) and Christaller (1933), respectively, and later complemented by Perroux's (1950) concept of growth poles. This tradition emphasizes the structural concentration of economic and population resources in urban “core” areas, while peripheral rural regions face systematic disadvantages. Increased distance from these cores limits access to services, infrastructure, and employment, resulting in population decline in more remote areas. In this view, rural depopulation is a spatial expression of broader patterns of uneven development.

A fourth and more quantitative line of thought is drawn from *Population Geography and Spatial Demography*, which analyzes the spatial distribution of populations and their interactions with socio-economic structures. This includes studies of commuting zones and rural economic dependency (Rogerson, 1999; Rephann, 1999), as well as more recent frameworks such as New Forms of Urbanization, which seek to move beyond the rigid urban–rural dichotomy by recognizing more interconnected and

dynamic settlement systems (Champion & Hugo, 2004).

Collectively, these approaches can be understood as variations of a proximity-centered explanatory model, wherein spatial distance from urban centers plays a central role in determining rural settlement viability, demographic trends, and long-term development potential.

Data and methodology

Data

The analysis is based on extensive demographic data on rural settlements, derived from the national censuses of 1989, 1999, 2009, and 2024, as well as statistical records from the Bureau of National Statistics and the Ministry of Digital Development, Innovations, and Aerospace Industry of the Republic of Kazakhstan. The dataset includes all rural settlements that have existed at any point between 1989 and 2024, totaling 8,583 villages. Of these, 1,829 settlements have been removed from official records during this period due to depopulation—that is, they ceased to exist as functioning communities. These eliminated villages represent approximately 27.3% of all rural settlements in the country, highlighting the widespread nature of rural depopulation and the administrative disappearance of settlements. The spatial demographic shifts observed over this period have been particularly pronounced.

To facilitate the analysis, this study uses second-level administrative divisions—districts (rayons)—as the basic units of measurement for rural population dynamics. These districts represent sub-regional (provincial) entities within the broader administrative framework of Kazakhstan.

The analysis includes 170 districts, which differs from the official current total of 195. This discrepancy is due to two key reasons. First, urban districts belonging to major cities are excluded, as the focus of this study is on rural demographics. However, some urban administrative territories with significant rural land areas are included. For instance, the territory of Ekibastuz city in Pavlodar Region is counted as a separate unit because it contains a substantial rural area of nearly 18.9 thousand square kilometers. Such rural-dominated urban administrations are incorporated into the dataset to ensure that the full extent of Kazakhstan's rural territory is represented.

Second, the number of districts differs due to changes in administrative boundaries over time. Specifically, the study disregards the post-2007 par-

titioning of certain districts, as statistical data for the newly created districts are not available for earlier periods when they were part of larger administrative units. To maintain temporal continuity in the dataset, the analysis relies on the pre-2007 district boundaries, which allow consistent comparisons over time.

Methodology

The methodological approach of this study involves statistical analysis at the district level for both eliminated and existing rural settlements, allowing comprehensive coverage of rural demographic dynamics across Kazakhstan over the last three intercensal periods: 1989–1999, 1999–2009, and 2009–2021. A proximity-based framework is applied to assess the spatial relationship between rural depopulation and access to major urban centers. For this purpose, major cities are defined as those with a population exceeding 200,000 and/or functioning as regional administrative centers. Rural settlements are divided into three buffer zones depending on their distance from the nearest major city: the first buffer zone includes areas within 50

km of a major city; the second includes areas between 50 and 100 km; and the third includes areas located more than 100 km away, representing remote rural regions. Basically, for each buffer zone (*bf*) the share of rural population (*S*) living in it is calculated as:

$$S_{bf} = \frac{\sum_{i \in bf} P_i}{\sum_i P_i}, \quad (1)$$

where P_i is population in rural settlement i .

Results and discussion

Figure 1 presents the evolution of urban and rural populations in Kazakhstan from 1989 to 2024. Although the broader context of this study is rural depopulation, the data reveal that there has been no absolute decline in Kazakhstan's rural population during this period. In fact, the rural population has increased slightly from 7.19 million in 1989 to 7.53 million in 2024. This highlights an important distinction: urbanization does not necessarily imply an absolute decrease in rural population, but rather a faster relative growth of urban centers.

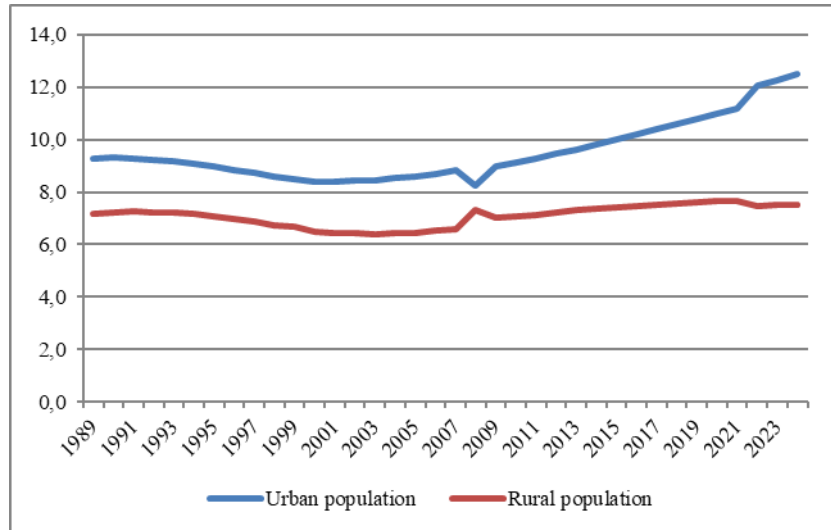


Figure 1 – Urban vs Rural Population in Kazakhstan in 1989-2024
Source – Authors' calculations based on Kazakhstan national census data.

As the figure shows, the urban population has grown steadily and substantially, reflecting national trends toward urban concentration and internal migration toward larger cities. In contrast, the rural population has remained relatively stable, with modest fluctuations. Therefore, rural depopulation

in this study refers not to a nationwide decline in rural inhabitants, but to a selective and spatially uneven process that affects specific rural districts and small settlements disproportionately.

Our dataset identifies a total of 8,583 rural settlements that have existed at any time between 1989

and 2024. Of these, 1,829 settlements, or approximately 27.3%, have been eliminated during this period, either due to population decline to zero or the administrative removal of settlements that no longer function as inhabited communities.

Figure 2 illustrates the distribution of these eliminated settlements across different intercensal periods. The highest rate of village disappearance occurred between 2000 and 2009, when 37.1% of all eliminated villages were removed from the national records. This was followed by 31.7% during 2010–2021 and 29.3% in the early post-Soviet decade of 1989–1999.

These results indicate that the process of rural depopulation and village abandonment has been persistent and cumulative, with significant waves of elimination continuing well into the 21st century. The findings also reveal how turbulent and uneven the spatial dynamics of Kazakhstan's rural population have been – patterns that are not apparent when looking solely at aggregate rural population statistics. Although the pace has slowed in recent years, the process of rural settlement disappearance is still ongoing, suggesting that the restructuring of the rural settlement system in Kazakhstan is still an ongoing process.

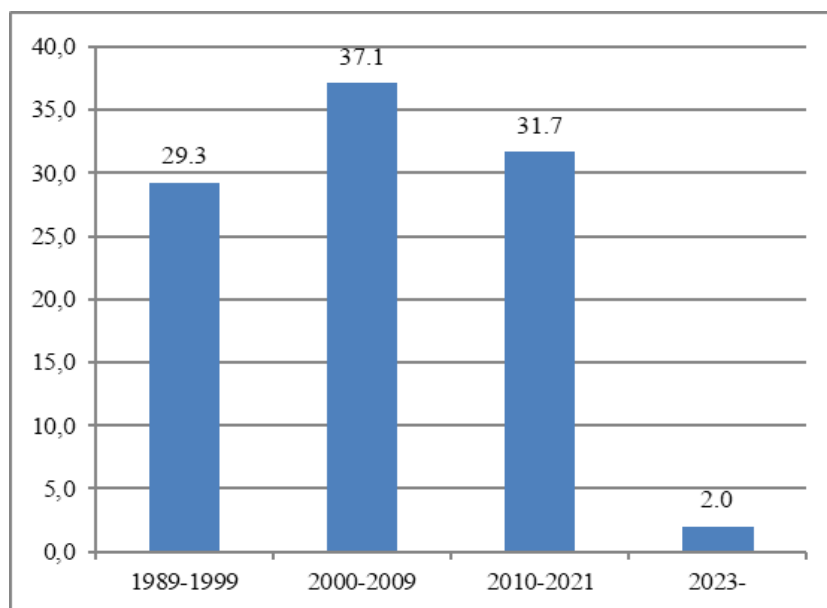


Figure 2 – Percentage of Eliminated Rural Settlements by Intercensal Periods
Source – Authors' calculations based on Kazakhstan national census data.

Table 1 provides additional insights into the dynamics of rural settlement elimination across intercensal periods. Between 1989 and 1999, a total of 633 villages were depopulated, followed by 528 in 1999–2009, and 542 in 2009–2021. While the number of eliminated villages remained relatively stable over time, an interesting pattern emerges in terms of their population size prior to elimination. In the earliest period, the average population of a village before disappearance was 129.3, which declined to 106.6 in the second period and dropped further to 65.1 in the most recent one. This suggests that larger villages were more likely to be depopulated in the 1990s, possibly reflecting the faster and more abrupt

demographic shifts characteristic of the early post-Soviet transition. This interpretation aligns with the broader context of the 1990s, a decade marked by high mobility, economic dislocation, and significant population redistribution.

At the same time, the average population size of existing villages has steadily increased from 995 in 1989–1999 to 1,189 in 2009–2021. This is a logical outcome, given that the total rural population has remained relatively stable, while the number of villages has declined. As a result, there is a general trend toward the consolidation and enlargement of surviving rural settlements, as rural residents become concentrated in fewer localities.

Table 1 – Information about Rural Settlements by Intercesal Periods

	1989-1999	1999-2009	2009-2021
Number of depopulated villages	633	528	542
Average population size of village before elimination	129.3	106.6	65.1
Average population size of existing villages	995	1054	1189
Source – Authors' calculations based on Kazakhstan national census data			

Using rural demographics and rates of village depopulation, we analyzed how proximity to major cities influences rural population growth and the likelihood of settlement elimination. The results, presented in Table 2, show a clear spatial gradient. Districts located within 50 km of a major city experienced the highest average rural population growth (1.430), while those more than 100 km away recorded the lowest growth (0.642). At the same time, the average percentage of eliminated villages increases

sharply with distance from 7.8% in the closest zone to 24.7% in the most remote areas. This means that village elimination is more than three times more frequent in remote districts compared to those near major cities, highlighting the strong link between remoteness and rural settlement decline. These findings suggest that rural areas situated closer to urban centers benefit from demographic persistence, while distance from cities significantly increases the risk of depopulation and abandonment.

Table 2 – Dynamics of Rural Population and Rural Settlements vs Distance to Nearest Major City during 1989-2024

	<50 km	50-100 km	>100 km
Average rural population growth in districts	1.430	0.898	0.642
Average percentage of eliminated villages in districts	7.8	18.1	24.7
Source – Authors' calculations based on census data.			

Figure 3 presents the spatial distribution of village depopulation across Kazakhstan's districts during the period 1989–2024. The map reveals a highly uneven territorial pattern, with the darkest areas, indicating the highest frequency of rural settlement elimination concentrated in the northern and central parts of the country, including large sections of North Kazakhstan, Kostanay, Akmola, Pavlodar, and Karaganda regions. These depopulation hotspots appear where remoteness from major urban centers overlaps with additional contributing factors, such as ethnic emigration, which was particularly intense in the 1990s mentioned in Rowland (1999). Although the ethnic dimension is not the focus of this study, its spatial overlap with areas

of rural decline is noteworthy in understanding the broader demographic context of the early post-Soviet transition.

In contrast, districts that host major cities or are adjacent to them appear visibly brighter on the map, indicating substantially lower rates of village depopulation. These peri-urban and urban-linked districts benefit from better infrastructure, access to services, and economic linkages, which likely help maintain population in nearby rural areas. The map allow to see the territorial imbalance of rural depopulation in Kazakhstan, pointing to a process that is not only demographic but also spatially structured, with remote and economically peripheral districts bearing the brunt of village loss.

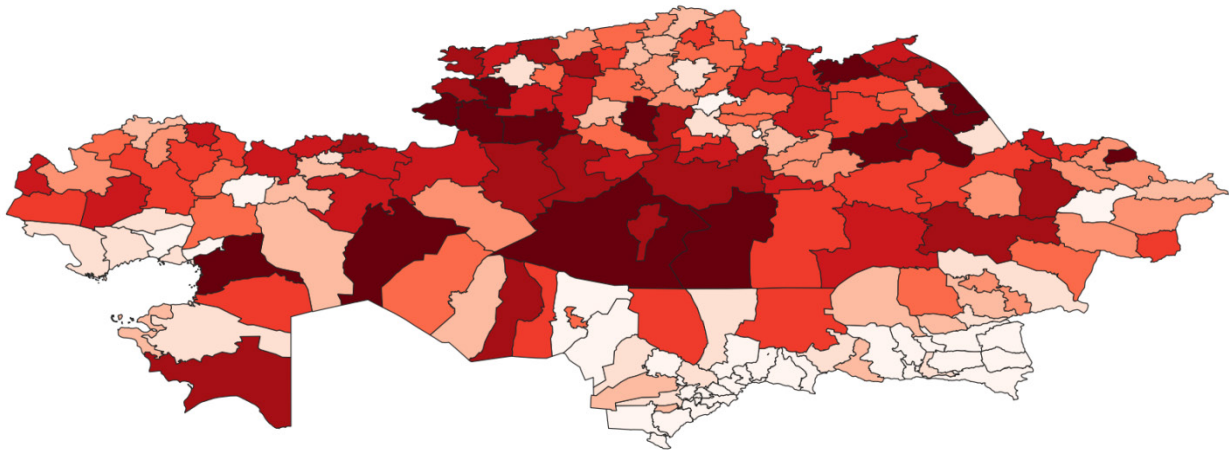


Figure 3 – Frequency of Village Depopulation by Districts in Kazakhstan during 1989-2021

Source – Elaborated by Authors based on Kazakhstan national census data.

Table 3 – Dynamics of Average Population Size of Rural Settlements vs Distance to Nearest Major City during 1989-2024

	<50 km	50-100 km	>100 km
Average population size of villages in districts in 1989	1168	1029	858
Average population size of villages in districts in 1999	1253	1183	819
Average population size of villages in districts in 2009	1482	1298	771
Average population size of villages in districts in 2021	1987	1145	763
Source – Authors' calculations based on census data.			

This uneven geography of village disappearance also finds reflection in the evolution of population size within surviving rural settlements. A closer look at the population averages across districts reveals a consistent trend: villages located closer to major cities have grown significantly larger over time, while those in more remote areas have either stagnated or declined in size. Already in 1989, there was a clear gradient—villages within 50 km of major urban centers had an average population of 1,168, compared to just 858 in districts located more than 100 km away. Over the next three decades, this gap widened substantially.

By 2021, the average village near a major city had grown to nearly 2,000 residents, while the average for remote districts remained under 800. Interestingly, the most rapid growth occurred in

peri-urban areas, especially between 2009 and 2021, when the population size in these villages increased by over 500 people on average. In contrast, remote villages not only failed to grow but showed a continued decline in average population size, suggesting a process of slow demographic erosion even among settlements that remain inhabited.

These figures point to a broader process of rural consolidation: as smaller and more isolated settlements disappear, rural populations increasingly concentrate in larger, better-connected villages, particularly those located near major urban centers. This shift reflects not only patterns of migration and economic opportunity but also the growing functional integration between urban cores and their rural peripheries.

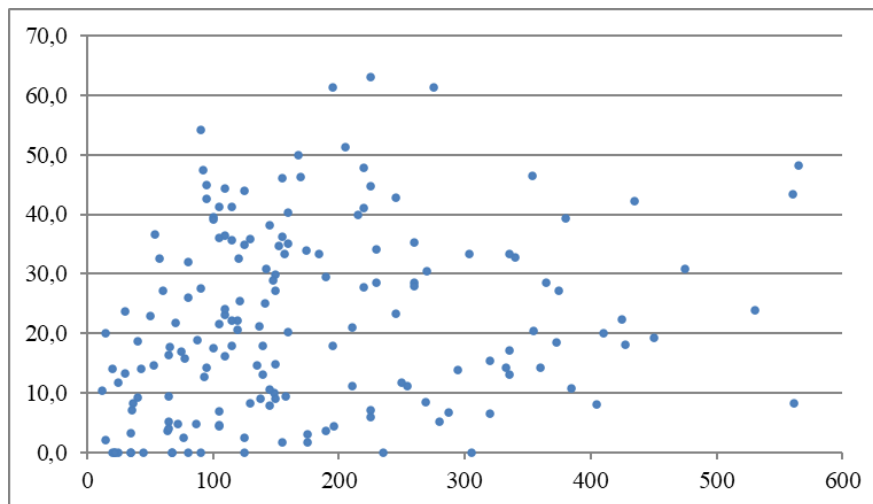


Figure 4 – Percentage of Eliminated Rural Settlements by District Since 1989 vs. Average Distance to the Nearest Mid-Sized or Major City
Source – Authors' calculations based on census data.

Our findings can be partially extended to other Eastern countries, but with serious reservations. The study focused on the post-Soviet context of Kazakhstan – the Soviet legacy, settlement structure, transport network, the role of large cities, and economic geography. As for other Eastern countries (Central Asia, the Caucasus, the Middle East, Southeast Asia), in each case, adjustments should be made for several factors. There are universal elements that can be applied, for example, periurbanization and the growth of rural areas near large cities are observed in many countries, especially where urbanization is proceeding rapidly (for example, in Uzbekistan, Turkey, China, Iran). The Kazakhstan scenario can be considered a special case of a broader pattern of urban-rural integration, observed in other Eastern countries.

A common point is the demographic concentration near transport and economic hubs, described in growth poles, central place theories.

The integration of rural and urban spaces in functionality is also observed in different cultural and economic systems. At the same time, the post-Soviet planning system in Kazakhstan (and neighboring post-Soviet countries) has a number of differences in the structure, speed and nature of depopulation. For example, in countries with highly intensive small farming (Indonesia, Vietnam), villages can maintain their numbers due to the agricultural economy, even being far from cities, and in countries with poor connectivity, the “50 km from the city” effect may not work as well as in Kazakhstan. Naturally, the rate of disappearance of remote

settlements depends on geography and climate; in the mountains and steppes, the dynamics are different. Migration policy also plays a significant role.

Conclusion

Although rural depopulation is often framed as a demographic decline, Kazakhstan's case illustrates a more complex reality. Despite decades of urban growth and sustained outmigration from many rural areas, the country's total rural population has remained relatively stable, rising slightly from 7.19 million in 1989 to 7.53 million in 2024. What emerges instead is a profound spatial reorganization of the rural population. While many districts have experienced the disappearance of settlements and net rural decline, others, especially those near major cities, have absorbed rural migrants and grown in size.

This process reflects a structural transformation of the rural settlement system in post-Soviet Kazakhstan. The most remote villages, often lacking infrastructure, employment, or connectivity, continue to lose population or vanish altogether. In contrast, rural settlements situated within 50 kilometers of major urban centers increasingly serve as extensions of the urban field, with growing population sizes and stronger demographic resilience. The overlap between rural and urban spheres is no longer peripheral, but rather it is becoming central to the new spatial logic of settlement in the country.

What is taking place, then, is not simply rural decline, but a territorial consolidation of the rural

landscape, in which the geography of rural Kazakhstan is being reshaped by processes of peri-urbanization, accessibility, and demographic concentration. This outcome is consistent with theoretical models that emphasize proximity to urban centers as a key determinant of rural viability (Champion, 1989; Tacoli, 1998; Nelson, 2004). It also aligns with central place dynamics and the persistent influence of growth poles (Christaller, 1933; Perroux, 1950; Friedmann, 1973), whereby peripheral regions fall behind while nodes closest to urban and economic cores accumulate population and opportunity.

The spatial redistribution of rural population observed in this study reveals a broader pattern of post-Soviet urban–rural integration. As Kazakhstan’s settlement system continues to evolve, it does

so not through the disappearance of the rural per se, but through the emergence of a functionally differentiated rural space, shrinking at the margins, yet consolidating around urban centers. Rural depopulation, therefore, is not an end point but part of a longer transformation in the structure of national territory.

Funding statement:

This article was prepared with funding from the Program-Targeted Financing (PTF) project “BR21882416 Historical Geography of Central Asia,” provided by the Committee of Science of the Ministry of Science and Higher Education of the Republic of Kazakhstan.

References

- Amirova, G., Bodaukhan, K., & Daurenbekov, K. (2024). Rural depopulation in Kazakhstan: Mechanisms of regulation. *Problems of AgriMarket*, (3), Article 20. <https://doi.org/10.46666/2024-3.2708-9991.20>
- Amirova, G. K., Assanova, A. B., Zhenshan, D., & Appazova, G. Zh. (2024). Depopulation in rural areas of the North Kazakhstan region: Social, economic problems and regulatory mechanisms. *Bulletin of Turan University*, (3), 195–206. <https://doi.org/10.46914/1562-2959-2024-1-3-195-206>
- Kireyeva, A. A., Vasa, L., Nurlanova, N. K., Lee, J. W., & Moldabekova, A. (2023). Factors causing depopulation of vulnerable regions: Evidence from Kazakhstan, 2009–2019. *Regional Statistics*, 13(3), 559–580. <https://doi.org/10.15196/RS130308>
- Kireyeva, A. A., Nurlanova, N. K., Moldabekova, A., Urdabayev, M., & Mussayeva, D. (2021). Methodological approaches to assessing the level of vulnerability of settlements in Kazakhstan. *E3S Web of Conferences*, 291, 03004. <https://doi.org/10.1051/e3sconf/202129103004>
- Kireyeva, A. A., Nurlanova, N. K., Vasa, L., & Lee, J. W. (2025). Corporate social responsibility and rural population dynamics in Kazakhstan: A structural equation modeling analysis of the Akmola region. *SSRN*. <https://doi.org/10.2139/ssrn.5252295>
- Amirova, G. K., Assanova, A. B., Zhenshan, D., & Appazova, G. Zh. (2024). Depopulation in rural areas of the North Kazakhstan region: Social, economic problems and regulatory mechanisms. *Bulletin of Turan University*, (3), 195–206. <https://doi.org/10.46914/1562-2959-2024-1-3-195-206>
- Amirova, G., Bodaukhan, K., & Daurenbekov, K. (2024). Rural depopulation in Kazakhstan: Mechanisms of regulation. *Problems of AgriMarket*, (3), 217–228. <https://doi.org/10.46666/2024-3.2708-9991.20>
- Kireyeva, A. A., Vasa, L., Nurlanova, N. K., Lee, J. W., & Moldabekova, A. (2023). Factors causing depopulation of vulnerable regions: Evidence from Kazakhstan, 2009–2019. *Regional Statistics*, 13(3), 559–580. <https://doi.org/10.15196/RS130308>
- Aidarkhanova, G., Zhumagulov, C., Nyussupova, G., & Kholina, V. (2025). Assessing the impact of demographic growth on the educational infrastructure for sustainable regional development: Forecasting demand for preschool and primary school enrollment in Kazakhstan. *Sustainability*, 17(9), 4212. <https://doi.org/10.3390/su17094212>
- Kireyeva, A. A., Vasa, L., Nurlanova, N. K., Lee, J. W., & Moldabekova, A. (2023). Factors causing depopulation of vulnerable regions: Evidence from Kazakhstan, 2009–2019. *Regional Statistics*, 13(3), 559–580. <https://doi.org/10.15196/RS130308>
- Makhanov, K. (2023). Soviet and post-Soviet transformations of urban system: Case of Kazakhstan from 1979 to 2022. *Eurasian Research Journal*, 5(1), 43–58. <https://doi.org/10.53277/2519-2442-2023.1-03>
- Rowland, R. H. (1989) National and Regional Population Trends in the USSR, 1979–89: Preliminary Results from the 1989 Census. *Soviet Geography* 30(9), 635–669.
- Rowland, R. H. (1990) Economic Region net Migration Patterns in the USSR: 1979–89. *Soviet Geography* 31(9), 657–678.
- Rowland, R. H. (1994) Declining Towns in the Former USSR. *Post-Soviet Geography* 35(6), 352–365.
- Rowland, R. H. (1995) Rapidly Growing Towns in the Former USSR and Russia, 1970–1993. *Post-Soviet Geography* 36(3), 133–156.
- Rowland, R. H. (1999) Urban Population Trends in Kazakhstan during the 1990s. *Post-Soviet Geography and Economics* 40(7), 519–552.
- Rowland, R. H. (2001) Regional Population Change in Kazakhstan during the 1990s and the Impact of Nationality Population Patterns: Results from the Recent Census of Kazakhstan. *Post-Soviet Geography and Economics*, 42(8), 571–614.
- Rakhmetova, R. U., & Abenova, K. A. (2013). The main demographic trends of rural and urban population of Kazakhstan. *World Applied Sciences Journal*, 27(13A), 273–277.
- Rural/urban differentials in demographic processes: The Central Asian states. *Population Research and Policy Review*, 17(1), 71–89. <https://doi.org/10.1023/A:1005911222221>

- Belgibayeva, Z., Sokira, T., & Belgibayev, A. (2021). Rural population of Kazakhstan: Demographics, statistics and trends. *Journal of Economic Research & Business Administration*, 139(1), 47–54. <https://doi.org/10.52261/1991-3494.2021.1.47>
- Dzhusupov, K. O., Nazarov, Z. T., Issanov, A., Tulebaev, K., & Aitkulova, A. (2019). Health literacy of rural population of Kazakhstan. *Iranian Journal of Public Health*, 48(11), 2067–2068.
- Amankulova, Z. (2018). How rurality affects students' higher education access in Kazakhstan: An autoethnographic account. *International Journal of Multidisciplinary Perspectives in Higher Education*, 3(1), 1–17. <https://doi.org/10.32674/jimpe.v3i1.935>
- Lee, S., Zhenskhan, D., Lim, S. S., Alipbeki, O., Balkibayeva, A., Orynbekova, G., Appazova, G., & Azan, T. (2025, January). *Corporate social responsibility and rural population dynamics in Kazakhstan: A structural equation modeling analysis of the Ak-mola Region* (Preprint). SSRN. <https://doi.org/10.2139/ssrn.5252295>
- Satybalidin, A., Sadvakassova, A., & Ilyas, A. (2021). Attitudes of Kazakh rural households towards joining and creating cooperatives: Case of dairy farming. *Agriculture*, 11(10), 990. <https://doi.org/10.3390/agriculture11100990>
- Berry, B. J. L. (1976). *Urbanization and counterurbanization*. Beverly Hills, CA: Sage.
- Champion, T. (1989). *Counterurbanization: The changing pace and nature of population deconcentration*. London: Edward Arnold.
- Champion, T., & Hugo, G. (Eds.). (2004). *New forms of urbanization: Beyond the urban-rural dichotomy*. London: Ashgate.
- Christaller, W. (1966). *Central places in southern Germany* (C. W. Baskin, Trans.). Englewood Cliffs, NJ: Prentice-Hall. (Original work published 1933)
- Friedmann, J. (1966). *Regional development policy: A case study of Venezuela*. Cambridge, MA: MIT Press.
- Friedmann, J. (1973). *Urbanization, planning, and national development*. Beverly Hills, CA: Sage.
- McGee, T. G. (1991). The emergence of desakota regions in Asia: Expanding a hypothesis. In Ginsburg, N., Koppel, B., & McGee, T. G. (Eds.), *The extended metropolis: Settlement transition in Asia* (pp. 3–25). Honolulu: University of Hawaii Press.
- Nelson, P. B. (2001). Rural restructuring in the American West: Land use, family and class discourses. *Journal of Rural Studies*, 17(4), 395–407. [https://doi.org/10.1016/S0743-0167\(01\)00012-6](https://doi.org/10.1016/S0743-0167(01)00012-6)
- Nelson, P. B. (2004). Toward a regional concept of regionalism: Rural development and spatial restructuring in the U.S. *Annals of the Association of American Geographers*, 94(1), 120–141. <https://doi.org/10.1111/j.1467-8306.2004.09401008.x>
- Perroux, F. (1950). Economic space: Theory and applications. *The Quarterly Journal of Economics*, 64(1), 89–104. <https://doi.org/10.2307/1881961>
- Rephann, T. J. (1999). Commuting and community development: Evidence from Appalachia. *Growth and Change*, 30(3), 473–496. <https://doi.org/10.1111/0017-4815.00125>
- Rogerson, P. A. (1999). *Statistical methods for geography*. London: Sage.
- Tacoli, C. (1998). Rural-urban interactions: A guide to the literature. *Environment and Urbanization*, 10(1), 147–166. <https://doi.org/10.1177/095624789801000105>

Information about authors:

Kanat Makhanov (corresponding author) – doctoral student of the Department of Social Geography and Regional Development Planning at the University of Debrecen (Debrecen, Hungary, e-mail: kanat.makhanov@science.unideb.hu)

Azimzhan Khitakhunov – PhD in Economics, senior research fellow, CAPS Unlock (Almaty, Kazakhstan, email: akhitakhunov@capsunlock.org)

Zhengizkhan Zhanaltay – Deputy Director, Eurasian Research Institute (Almaty, Kazakhstan, email: z.zhanaltay@ayu.edu.kz)

Marat Mussabekov – Research fellow, Eurasian Research Institute (Almaty, Kazakhstan, e-mail: m.mussabekov@ayu.edu.kz)

Авторлар туралы мәлімет:

Қанат Маханов (корреспондент-автор) – Дебрецен университетінің Әлеуметтік география және өңірлік даму жоспарлау кафедрасының докторанты (Дебрецен, Венгрия, эл.пошта: kanat.makhanov@science.unideb.hu)

Азимжан Хитахунов – PhD (экономика ғылымдары), аға ғылыми қызметкер, CAPS Unlock (Алматы, Қазақстан, эл.пошта: akhitakhunov@capsunlock.org)

Женгізхан Жаналтай – директордың орынбасары, Еуразия ғылыми-зерттеу институты (Алматы, Қазақстан, эл.пошта: z.zhanaltay@ayu.edu.kz)

Марат Мусабеков – Еуразия ғылыми-зерттеу институтының ғылыми қызметкері (Алматы, Қазақстан, эл.пошта: m.mussabekov@ayu.edu.kz)

Сведения об авторах:

Канат Маханов (корреспондент-автор) – докторант кафедры социальной географии и планирования регионального развития Университета Дебрецена (Дебрецен, Венгрия, эл. почта: kanat.makhanov@science.unideb.hu).

Азимжан Хитахунов – PhD в экономике, старший научный сотрудник, CAPS Unlock (Алматы, Казахстан, эл. почта: akhitakhunov@capsunlock.org).

Женгізхан Жаналтай – зам. директора Евразийского научно-исследовательского института (Алматы, Казахстан, эл. почта: z.zhanaltay@ayu.edu.kz).

Марат Мусабеков – научный сотрудник Евразийского научно-исследовательского института (Алматы, Казахстан, эл. почта: m.mussabekov@ayu.edu.kz).

Received May 10, 2025
Accepted August 13, 2025