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THE IMPACT OF MIGRATION ON INFRASTRUCTURE DEVELOPMENT IN CENTRAL ASIA

Aida SARSEITOVA¹

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ABSTRACT

The Impact of Migration on Infrastructure Development in Central Asia

Using a mixed-methods approach, the study examines the impact of labor migration on infrastructure development in Central Asia, revealing that remittances from labor migration have played a significant role in Central Asia's socioeconomic development. Migrant workers' money transfers account for a substantial share of the gross domestic product. However, the distribution of these transfers has been uneven, with the majority allocated to housing construction. The study also highlights that regions with higher levels of out-migration have experienced better housing and urban development, while rural areas continue to face neglect in infrastructure development.

KEYWORDS: demographic challenges, remittances, employment, infrastructure projects, regional strategy, socioeconomic development

IZVLEČEK

Vpliv migracij na razvoj infrastrukture v Srednji Aziji

Avtorica v prispevku preučuje vpliv delovnih migracij na razvoj infrastrukture v Srednji Aziji, pri čemer uporablja mešani metodološki pristop. Študija je pokazala, da imajo nakazila delovnih migrantov pomembno vlogo v družbeno-ekonomskem razvoju Srednje Azije. Denarni transferji delavcev migrantov predstavljajo znaten delež bruto domačega proizvoda, pri čemer pa so ta sredstva neenakomerno porazdeljena, saj jih je večina namenjenih gradnji stanovanj. Študija je pokazala tudi, da so regije z izrazitejšimi migracijskimi trendi deležne boljšega stanovanjskega in urbanega razvoja, medtem ko so podeželska območja na področju razvoja infrastrukture še naprej zapostavljena.

KLJUČNE BESEDE: demografski izzivi, denarna nakazila, zaposlovanje, infrastrukturni projekti, regionalna strategija, družbenoekonomski razvoj

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INTRODUCTION

The study's relevance stems from the growing impact of migration on socioeconomic development and infrastructure transformations in Central Asia. The out-migration of the working-age population and reliance on remittances create both opportunities and challenges for the region, especially amid uneven infrastructure development and limited access to basic services. In this article, *remittances* refers to resources sent by labor migrants to households in their countries of origin. *Money transfers* refers to formally recorded remittance transfers sent through official channels. The lack of a coordinated migration management policy exacerbates urban–rural disparities, underscoring the need for a comprehensive analysis of the factors driving migrant returns and their impact on transport, social, and housing infrastructure, as well as an assessment of the role of international initiatives in addressing these challenges.

A review of scientific sources identified the key impacts of migration processes on infrastructure in Central Asia and gaps in existing research. Asylbayev et al. (2021) analyzed the problems of residential migration in the formation of smart agglomeration in Central Asia, noting that urbanization processes caused by migration affected the concentration of the population in agglomerations, creating an additional burden on housing infrastructure and the real estate market. However, the study did not sufficiently highlight the impact of migration patterns on the development of related infrastructure sectors, particularly transport and utilities, an important aspect for comprehensively understanding the impact of housing migration.

Salmorbekova (2022) examined the socioeconomic consequences of migration in Kyrgyzstan, in particular, the impact of remittances on household support. The primary focus was on social aspects, such as changes in employment and living conditions. However, the study did not sufficiently emphasize the impact of these processes on the development of critical infrastructure sectors, such as transport and energy systems. Salimova-Tekay (2022) analyzed infrastructure financing in Kyrgyzstan, noting the substantial role of state and international investment programs in supporting strategically important facilities. As a result, attention to money transfers as a source of financing for infrastructure projects remained limited. The main focus was on public funding mechanisms, which did not allow for assessing the full potential of migration patterns in this process.

Nuraliev et al. (2024) focused on the problems and strategies for managing the construction sector in the context of migration in Kyrgyzstan. They mentioned that remittances had contributed substantially to the expansion of housing construction, but attention to the impact on related infrastructure sectors remained limited. In particular, the development of transport and municipal infrastructure in response to changes in migration patterns was not sufficiently covered. Niiazalieva et al. (2023) reviewed the processes of urbanization in Central Asia resulting from migration. Urban population growth and its impact on housing infrastructure were highlighted, but the expansion and modernization of transport systems needed to adapt

to changing migration patterns were only partially considered. The study did not provide a comprehensive analysis of how urbanization processes affected the planning and development of municipal infrastructure.

The World Health Organization (WHO, 2024) analyzed the main health problems in Kyrgyzstan. The effectiveness of existing health facilities and their ability to respond to demographic changes driven by migration processes were considered. However, the impact of money transfers on the development of medical infrastructure was only partially considered, without a detailed analysis of their contribution to improving access to health services. Saleh and Bejaoui (2024) provided a strategic analysis of Kyrgyzstan's development opportunities in the context of international support. The role of international organizations in financing infrastructure projects was considered, but their relationship with migration processes remained insufficiently covered. The specifics of using money transfers for infrastructure development were also not fully examined. Assylbayev et al. (2024) underlined the relationship between migration and housing markets in transition economies. They stressed that migration patterns contributed to the active development of private housing construction but overlooked their impact on regional imbalances in infrastructure access.

Akmoldoev (2022) considered the economic perspective of the One Belt, One Road Initiative in Central Asia. The main focus was on the impact of Chinese investment on transport infrastructure development, yet the relationship between migration and the expansion needs of these infrastructure projects remained poorly understood. Nicharapova (2022) investigated cooperation between China and Kyrgyzstan within the framework of the One Belt, One Road Initiative, particularly in transport infrastructure construction. The author reviewed the implemented and planned road projects but did not adequately address the impact of these infrastructure changes on the internal population mobility, migration processes, and economic opportunities of local communities.

The purpose of the study was to determine the impact of labor migration on the social, transport, and municipal infrastructure of Central Asian countries, and to identify the main problems and challenges associated with these processes. In addition, a review of opportunities to improve infrastructure due to migration patterns was conducted, with an emphasis on the need for effective regional development strategies.

MATERIALS AND METHODS

The comprehensive study combined elements of descriptive and analytical approaches. The analysis covered the period from 2020 to 2024, which allowed for considering current trends in migration processes and their impact on the infrastructure of Central Asian countries. It focused on examining the quantitative and

qualitative aspects of the interaction between labor migration and socioeconomic transformations.

Data collection was based on official statistical sources (Bureau of National Statistics, 2025; National Statistics Committee of the Republic of Uzbekistan, 2025; National Statistical Committee of the Kyrgyz Republic, 2025; Agency on Statistics under the President of the Republic of Tajikistan, 2025; State Committee of Statistics of Turkmenistan, 2022). In addition, secondary sources played an important role in the study, including data from international organizations such as the World Bank (2023), the United Nations Development Program (UNDP, 2017), the Organization for Economic Cooperation and Development (OECD, 2024), and the International Organization for Migration (IOM, 2025). These sources are crucial, as they offer additional analytical data that help deepen the understanding of migration processes and their impact on the region's economy and social infrastructure, while also enabling comparisons between local data and global trends.

The study collected qualitative data reflecting the impact of migration processes on social, transport, and municipal infrastructure. These data covered indicators of housing development, the modernization of transport networks, and access to medical and educational services across the region's countries. Special attention was paid to regional differences, enabling the assessment of the specific impacts of migration on urban and rural areas.

The comparative analysis examined regional differences in the impact of labor migration on the infrastructure of various Central Asian countries, in particular, Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, and Turkmenistan. This method was used to identify key features of migration patterns, differences in the use of money transfers, and their impact on social, transport, and municipal infrastructure. This helped to identify not only common trends but also unique challenges for each country.

A systematic approach was used to comprehensively analyze the relationship between migration processes, socioeconomic changes, and infrastructure transformations. It examined how migration affects various aspects of infrastructure, including housing development, modernization of transport networks, and access to health and educational services. This approach identified the primary problems and opportunities for improving infrastructure policy amid increasing migration.

An integrated approach was used to interpret the results obtained, considering the multidimensional impact of labor migration on infrastructure. The analysis compared quantitative and qualitative indicators to assess how remittance volumes relate to levels of in- and out-migration, and to the development of social, transport, and municipal infrastructure. The results were evaluated in the context of socioeconomic transformations, in particular, changes in household structure, access to basic services, and demographic shifts. This provided a systematic understanding of the key impacts of migration processes.

Special attention was paid to regional differences, with consideration of the specifics of each Central Asian country. The interpretation of the results was also based on integrating quantitative data with qualitative conclusions obtained from the analysis of scientific sources. This allowed identifying not only general trends but also unique challenges for each country, in particular regarding the distribution of remittances, their impact on rural and urban communities, and the efficiency of using resources for infrastructure development.

RESULTS

Theoretical approaches to examining migration processes in the context of infrastructure development provide a basis for understanding the links between migration, remittances, and changes in the socioeconomic environment. These processes are considered from different theoretical perspectives of economic, social, and political geography, offering tools for assessing their impact on infrastructure and socioeconomic systems at different scales. This analysis covers both local transformations and transnational interactions caused by population displacement.

The theory of transit migration examines how changes in a country's level of economic development are associated with shifts in dominant migration patterns, including transitions from emigration to immigration or transit roles over time (Öğüt, 2015). In the early stages of economic development, migration is primarily internal, which leads to substantial infrastructure needs within the country, especially in urban centers. With economic stability achieved, migration trends shift toward international movements, requiring new strategies to develop transnational infrastructure and promote international cooperation. However, this theory only partially explains the situation in Central Asia. The region's countries show a high level of international migration even in the absence of economic stability, contradicting the classical idea of a gradual transition from internal to external migration flows. For instance, despite economic instability in Kyrgyzstan and Tajikistan, a significant portion of their populations migrates abroad, challenging the traditional view that internal migration should occur before global migration (Isabekov et al., 2024). Additionally, factors such as significant socioeconomic disparities between rural and urban areas and political influences on migration decisions are not sufficiently addressed in traditional models. Migrant workers' remittances have become an essential component of the economies of nations like Kazakhstan. However, they are mostly used to build new homes rather than to fill gaps in energy or transportation infrastructure. The need for a more complex understanding of migration dynamics in Central Asia is thus highlighted by the fact that transit migration theory does not account for these unusual circumstances.

In the context of social geography, the theory of social mobility is important for understanding how migration acts as a catalyst for social transformation, in

particular, by improving living conditions (Heath & Li, 2023). Migration is often a driving force for people looking for better economic and social opportunities. The growing demand for education, health care, and other basic services demonstrates its impact on social infrastructure, making the modernization of infrastructure facilities necessary. However, in Central Asian countries, access to social goods remains uneven, and the effectiveness of social mobility depends on regional economic opportunities. In particular, migrant remittances are often used to meet basic household needs rather than to invest in education or professional development, which limits the long-term impact of migration on social progress.

Migration especially impacts youth and women's social mobility by creating new economic opportunities and promoting social change. As they assume more significant roles in running the home and running a business, women in Central Asia have seen an increase in economic agency and workforce participation as a result of male family members' migration. This change increases women's long-term mobility by challenging traditional gender roles and providing opportunities for education and career training. In a similar vein, remittances frequently help young people pay for their higher education, improving their chances of moving up the social ladder. However, because remittances are occasionally used for urgent household needs rather than for investments in education or skill development, the benefits of migration for social mobility are not always fully realized.

The theory of economic globalization emphasizes the relationship between economic dynamics and migration in the context of infrastructure development (Robinson, 2007). Labor migration, as a key driver of economic growth in host countries, provides affordable labor for infrastructure projects such as road construction, housing, and industrial facilities. In addition, globalization contributes to new transport routes and communication networks that facilitate not only the mobility of labor but also that of capital. However, for Central Asia, this theory has limited explanatory power, as the region is characterized by low economic diversification, a high dependence on migration to specific areas, and a weak institutional capacity to implement large-scale infrastructure projects aimed at long-term development. The theory of production network economies positions migration as an integral part of the global economic network, in which infrastructure develops through the interaction of local and global processes (Arora et al., 2021). In- and out-migration patterns create new economic and social links, which require infrastructure to support them. For example, the development of information technologies and mobile networks in response to increased mobility creates new business opportunities and reduces communicative and social distance between migrants and their families by facilitating regular contact, money transfers, and access to shared social services, thereby contributing to transformations in social infrastructure. However, in Central Asian countries, the impact of the production network economy remains limited due to the underdevelopment of digital instruments and the lack of integration of regional markets.

Migration policy theory explains how government strategies and policies affect migration and infrastructure development (Chernysh & Solovei, 2021). Policy decisions can promote or limit infrastructure growth. In countries where governments actively support migration, programs are being implemented to adapt infrastructure to changing conditions. For example, Kazakhstan is executing programs of resettlement from the southern to the northern regions with the expansion of housing and social infrastructure, Uzbekistan is implementing initiatives to reintegrate migrants through job creation and access to microcredit, and Tajikistan is developing programs to direct migrant workers' remittances to use in housing construction, road modernization, and the development of electricity networks. These efforts include initiatives for housing development, modernization of public utilities, and renewal of transport networks, which contribute to more efficient population movement and an improved integration of migration into socioeconomic systems. However, in Central Asian countries, migration regulation policies are fragmented, and measures for migrant reintegration often remain underdeveloped, making it difficult to use their economic potential (O'Reilly, 2022).

Migration capital theory conceptualizes migration not primarily in financial terms, but as the accumulation of attitudes, skills, knowledge, and social resources generated through individual and intergenerational migration experiences, which shape perceptions of the costs and benefits of mobility (Bernard & Perales, 2024). These forms of migration capital may indirectly influence development processes in countries of origin by affecting household strategies, patterns of social organization, and the allocation of resources within families and communities. In the Central Asian context, however, the developmental effects associated with migration capital tend to manifest predominantly at the household level, most notably through investments in housing and improved living conditions, rather than through collective or public infrastructure initiatives. As a result, the broader potential of migration-related resources to contribute to regional or community-level development remains limited.

Integrating migration processes with infrastructure development requires an interdisciplinary approach that includes elements of economic, social, and political geography. Such a comprehensive analysis is necessary to understand the interactions among migration patterns, money transfers, and social change and their overall contribution to infrastructure development at both the local and regional levels. The use of various theoretical approaches provides a holistic understanding of how migration affects the infrastructure of Central Asian countries and highlights the challenges these countries face.

To effectively analyze the relationship between migration and infrastructure development, it is important to examine the economic, social, and political factors. The interdisciplinary approach enables an assessment of the various aspects of migration that affect infrastructure development, offering an understanding of their impact at different levels—from local to regional. This approach is particularly

relevant for Central Asian countries, where labor migration is instrumental in stimulating economic and social transformation. For example, in Kyrgyzstan, the substantial impact of out-migration illustrates how these processes are changing not only the country's economic landscape but also its social structure. According to the National Statistical Committee of the Kyrgyz Republic (2025), more than 1.25 million people worked abroad in 2024—around 21% of the working-age population. Of these, approximately 34% worked in Kazakhstan. Migrant workers' money transfers substantially support households, especially in rural areas where economic conditions are more difficult, as evidenced by statistics on improved housing conditions and increased access to social services in these areas.

Table 1 shows the main socioeconomic consequences of labor migration from Kyrgyzstan. It offers a detailed breakdown of the impact, including household financial support, investment in education and health infrastructure, and changes in the labor market and social structure. These data provide a comprehensive picture of how labor migration shapes socioeconomic dynamics and infrastructure development in Kyrgyzstan.

Impact aspect	Explanation	Social consequences	Economic consequences
Household support	Money transfers from migrant workers to their families in Kyrgyzstan.	Improving housing conditions, reducing financial difficulties in families, and changing the social structure of households.	Growth of consumer demand for goods and services, and an increase in local economic activity.
Investing in education	Some of the transfers are used to finance children's education, improving access to better opportunities, especially in rural areas.	Improving the level of education among young people, access to better educational opportunities.	Remittances contribute to the strengthening of human capital by supporting education and skills development, which will lead to higher skills in the future.
Investment in medical infrastructure	Money transfers to pay for medical services and investments in improving health.	Improving access to health services, reducing morbidity and mortality.	Increase demand for medical services, support the development of local hospitals and clinics.

Changes in the social structure	Prolonged absence of one of the parents due to labor migration.	Changing social roles, greater participation of women in household management and economic activities.	Lack of local labor, the need for new forms of support for households and social institutions.
Impact on the labor market	A substantial part of the labor force migrated abroad.	Reduced labor supply in key sectors and higher unemployment among remaining workers (skills/sectoral mismatch).	Growing demand for jobs in the service sector, construction, and agriculture; shortage of jobs in certain industries.
Investment in construction	Use of money transfers for the purchase and repair of housing.	Improving living conditions and improving the standard of living in local communities.	Development of the construction industry, stimulating demand for building materials, promoting the economic development of cities and villages.
Impact on the demographic situation	Labor migration causes changes in the size of the able-bodied population.	Demographic changes include a decrease in the number of people of working age and an increase in the economic role of women.	Redistribution of labor resources, changes in the employment structure, and out-migration of skilled labor.
Infrastructure support	Migration transfers are used for infrastructure development, especially in the transport sector.	Improvement of local infrastructure, modernization of roads, and access to new technologies in the field of transport.	Stimulating the development of infrastructure projects and improving local transport accessibility.

Table 1: Key aspects of the impact of labor migration from Kyrgyzstan. Source: compiled by the author based on United Nations Development Program (UNDP, 2017), Organization for Economic Cooperation and Development (OECD, 2024), International Organization for Migration (IOM, 2025), and Brettell and Hollifield (2022).

As shown in Table 1, labor migration from Kyrgyzstan has a substantial impact on the country's various socioeconomic aspects. Remittances from migrant workers have become a vital source of financial support for households, especially in rural areas where economic problems are more pronounced. These funds have contributed

to better housing conditions, better access to education and health care, and the promotion of local economic activity. According to the National Statistical Committee of the Kyrgyz Republic (2025), in about 37% of households in which men worked abroad in 2024, women handled family affairs, indicating the growing role of women in household management and child-rearing in the absence of men. This indicator is accompanied by a rise in women's employment within the regions of origin to 42%, indicating their growing participation in local labor markets and their contribution to household stability and social well-being.

In addition, labor out-migration led to personnel shortages in the domestic labor market. This was reflected in rising unemployment—8.5% in the Osh, Batken, and Jalal-Abad regions of Kyrgyzstan—as a result of skills and sectoral mismatches. In addition, labor out-migration contributed to personnel shortages in key sectors, alongside rising unemployment (8.5% in Osh, Batken, and Jalal-Abad), reflecting a skills and sectoral mismatch in local labor markets. The number of qualified workers decreased by 5% between 2015 and 2024. This underscored the need for innovative job-creation strategies, especially in critical sectors such as construction and agriculture, to bridge these gaps. In turn, migrant investment in housing and improved living conditions has partially offset these labor market disruptions by stimulating demand in construction and related sectors, thereby supporting employment and contributing indirectly to local infrastructure development. At the same time, these developments have strained local resources and created new social challenges, including demographic changes and increased dependence on external economic factors. These combined effects highlight the complex relationship between migration processes and socioeconomic transformation in Kyrgyzstan.

Labor migration has also played a substantial role in shaping Kyrgyzstan's infrastructure. The out-migration was observed in construction and agriculture (National Statistical Committee of the Kyrgyz Republic, 2025), where the shortage of personnel slowed work and increased the burden on existing personnel. In rural areas, the 12% decrease in the number of seasonal workers complicated harvesting and other agricultural processes. In addition, the shortage of qualified specialists, particularly medical workers, reached 18%, creating difficulties in providing the necessary services, especially in regions with high levels of migration. In areas with an employee shortage, employers were forced to raise wages by an average of 15% to attract and retain personnel. However, this did not always compensate for the out-migration of specialists, leading to staff overload, reduced work quality, and uneven economic sector development. The level of automation in production processes increased by 10% as employers tried to compensate for labor shortages by adopting new technologies or attracting workers from neighboring regions, changing the dynamics of labor relations in the country.

One of the most important aspects of labor migration is its contribution to household support. Funds sent by migrants, especially from Kazakhstan and other Commonwealth of Independent States (CIS) countries, substantially improve the

standard of living of recipient families. According to the National Statistical Committee of the Kyrgyz Republic (2025), the volume of remittances totaled USD 2.5 billion in 2024, approximately 30% of the country's gross domestic product (GDP). These funds are often used for essential expenses, such as food and utilities, as well as for basic social services, including health and education. Additionally, 28% of remittances from migrant workers were used to improve education and health care, and 65% of migrants invested in their children's education, financing higher education costs, which contributed to the development of the country's human capital. These investments support social initiatives such as the modernization of schools and healthcare facilities, which are often underfunded by the state. Such financial contributions increase access to education and health services, thereby improving the overall social well-being of the population.

Remittances from migrant workers have played an important role in financing infrastructure projects in Kyrgyzstan, especially in the regions with the most significant out-migration, that is, the Osh, Batken, and Jalal-Abad regions. These regions experience high levels of labor migration due to limited employment opportunities and low economic activity (National Statistical Committee of the Kyrgyz Republic, 2025). Part of the money transferred went toward the construction and repair of housing, contributing to the modernization of the housing stock, especially in rural areas. In addition, infrastructure improvement initiatives were implemented in communities with active migration: laying and repairing roads, and improving water supply and electrification systems, which enhanced the standard of living of the local population.

Migration, however, also has social repercussions outside cities. The reallocation of financial resources has caused significant problems in rural areas, where access to essential services may be restricted. Disparities in infrastructure are exacerbated when rural areas frequently receive less in remittances than cities receive from investments in housing and transportation. Because of this, rural areas are currently falling behind in access to services such as healthcare, education, and transportation, even though the nation receives substantial amounts of remittances.

One of the important consequences of remittances was the acceleration of urbanization processes, especially in Bishkek and Osh, regions to which a substantial share of families receiving remittances moved. This contributed to the growth of the urban population and increased demand for urban infrastructure, particularly transport networks, residential complexes, and utilities. In response, some cities saw the expansion of transport networks, the construction of new roads, improvements to public transport, and the modernization of public infrastructure.

Furthermore, in the context of globalization, Central Asian migration patterns have significantly affected infrastructure development. For example, migration trends and the development of contemporary technologies, such as mobile networks and digital connectivity, have a synergistic relationship due to remittance-driven infrastructure growth. Returning migrants bring new experiences and abilities that

impact the modernization of local infrastructure. However, the disparity between urban and rural development has widened due to the lack of coordinated regional policies to steer investments into strategically important areas, such as rural health-care and transportation networks.

Labor migration has economic consequences that extend beyond individual families and to the national labor market. The departure of a substantial part of the labor force abroad reduces the number of working-age people in the country, leading to a decrease in overall economic activity and creating problems in sectors such as agriculture, construction, and industry. Such a labor shortage can exacerbate unemployment and hinder economic growth in key industries.

Labor migration brings substantial economic benefits through remittances, thus stabilizing the financial situation of many families. These remittance receipts increase demand for consumer goods and support investment in local infrastructure, such as housing, and stimulate economic activity in local communities. As a result, labor migration promotes the growth of small and medium-sized enterprises and encourages investment in other important sectors, such as transport, construction, and services that contribute to general economic development.

Labor migration has led to substantial demographic changes with major socioeconomic consequences. The migration of young and skilled workers to economically developed countries has led to an “aging” labor force and increased pressure on social services serving pensioners and vulnerable segments of the population. Consequently, the Kyrgyz government faces the challenge of adapting its pension and social support policies to these demographic shifts.

Migrant labor investments in construction and local infrastructure have no less impact. Monetary transfers are often used not only to build or repair housing but also to improve the community’s infrastructure. This includes road repairs, the development of public utilities, and expanding access to modern technologies such as the Internet. These changes improve living conditions and contribute to the growth of economic and social infrastructure, positively affecting the overall quality of life.

Remittances play a crucial role in financing regional development in Central Asia, stimulating economic growth, strengthening social infrastructure, and developing transport and utility systems. However, the use of remittances varies from region to region, depending on the volume and structure of remittance flows and the unique socioeconomic characteristics of each region.

Figure 1 shows the distribution and total remittance flows between Central Asian countries, illustrating their regional impact and importance.

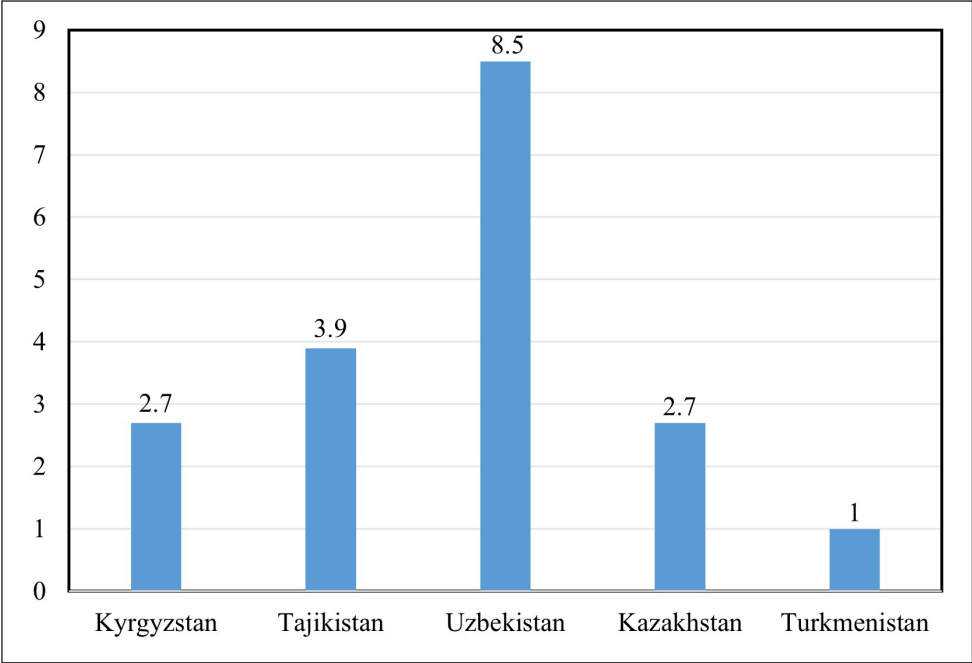


Figure 1: Remittances to Central Asia in 2024 (USD billion). Source: compiled by the author based on Bureau of National Statistics (2025), National Statistics Committee of the Republic of Uzbekistan (2025), National Statistical Committee of the Kyrgyz Republic (2025), Agency on Statistics under the President of the Republic of Tajikistan (2025), State Committee of Statistics of Turkmenistan (2022), World Bank (2023), United Nations Development Program (UNDP, 2017), Organization for Economic Cooperation and Development (OECD, 2024), and International Organization for Migration (IOM, 2025).

In Central Asia, the unequal distribution of remittances drastically alters the distribution of financial and human resources between urban and rural areas. As migrants and their families settle in cities, remittance receipts tend to shift toward urban centers, leading to rapid infrastructure expansion and urbanization. Rural regions, on the other hand, receive fewer remittances due to higher labor out-migration, which exacerbates infrastructure deficiencies. Cities enjoy superior transportation, health-care, and educational systems due to greater urbanization, whereas rural areas face challenges in meeting their basic infrastructure requirements. Because investments in cities do not result in balanced growth across the region, this imbalance restricts rural development and perpetuates regional inequality.

In Kyrgyzstan, remittances played an important role in socioeconomic development by supporting housing, education, and health care. In Tajikistan, they were primarily used for housing, basic household needs, and medical services. In Uzbekistan, remittances contributed to small business support, education, and housing modernization, while in Kazakhstan, they were actively invested in education,

housing construction, and transport infrastructure. In Turkmenistan, remittances mainly supported families and improved housing conditions, particularly in the capital. Despite these positive effects, common limitations emerged across the region: remittance flows were often unevenly distributed, favoring urban centers over rural areas and creating disparities in infrastructure development; limited access to social services in peripheral regions; and reinforced regional dependence on remittances from abroad.

Table 2 highlights regional differences in remittance receipts across Central Asia and demonstrates how such money transfers contribute to the development of social, transport, and municipal infrastructure, including housing, education, health, and infrastructure improvements in both urban and rural areas.

Country	Main uses of remittances	Regional differences in usage	Impact on social infrastructure	Impact on transport infrastructure	Impact on public infrastructure
Kyrgyzstan	Housing, education, and health-care	Most transfers go to cities, while remote villages receive less	Improving access to education and health services	Repair and construction of roads in remote areas	Repair of water supply and sewerage systems
Tajikistan	Housing, food, and health	Money transfers are concentrated in cities; less goes to villages	Improving living conditions in cities	Limited investment in transport infrastructure	Changes in urban utilities
Uzbekistan	Housing construction, small business, and education	Money transfers are used more evenly across the country	Development of educational and medical institutions	Repair and construction of roads in cities	Improving water supply and sanitation
Kazakhstan	Housing construction, education, and business investment	Cities receive most of the money transfers, while villages have less access	Expansion of schools and hospitals in major cities	Important investments in urban transport	Improving infrastructure in new residential areas

Turkmenistan	Housing construction, family support, and agriculture	More money transfers go to the capital, and the national level is limited	Improving medical institutions in cities	Road repairs in the capital and surrounding regions	Improving the water supply in the capital
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Table 2: Regional differences in the volume and use of remittances. Source: compiled by the author based on Okello et al., 2021.

Table 2 shows notable regional variations in remittance distribution across Central Asia. For instance, a significant amount of remittances in Kyrgyzstan are used to build homes, especially in rural areas. Since Kyrgyzstan’s housing sector has long been underdeveloped, remittances are a crucial source of income for many households, allowing them to make home improvements, invest in new construction, or improve living conditions. The country’s overall economic structure is reflected in the high demand for housing improvements in rural and peri-urban areas, where many families rely on low-wage labor or agricultural work. Uzbekistan, on the other hand, exhibits a distinct pattern, with a larger percentage of remittances going toward education. To ensure improved employment opportunities and economic mobility for the next generation, remittances are frequently utilized to finance both domestic and foreign higher education. The growing need for skilled labor also impacts this educational investment. The shift in Uzbekistan’s emphasis from housing to education is indicative of the nation’s ongoing transformation and the growing importance of education as a strategy for ensuring long-term economic success.

Targeted strategies that prioritize housing and human capital investments should be put in place to address the unequal distribution of remittances and optimize their potential for infrastructure development. Central Asian governments could implement incentive schemes to persuade migrants to allocate their remittances to rural infrastructure projects, like energy systems, road upgrades, and modern housing. For migrants who invest in rural development, especially in underfunded sectors, this could take the form of tax breaks or subsidies. Furthermore, encouraging public-private partnerships may stimulate investment in vital infrastructure, guaranteeing more equitable access to resources and services for rural communities. Additionally, improving the connections between education and migration policies may help address regional disparities in remittance allocation.

With varying degrees of success, Central Asian governments have launched several programs to increase the use of remittances for infrastructure development. The National Development Strategy of the Kyrgyz Republic for 2018–2040 (2018) and the Law of the Kyrgyz Republic No. 4 “On External Labor Migration” (2006) both stressed the importance of directing remittances toward environmentally friendly infrastructure projects in Kyrgyzstan, such as housing and utility

systems. Although the National Development Strategy outlines ways to mobilize remittances to support infrastructure modernization and regional development, ensuring that these funds are distributed to key sectors such as energy and transportation remains an issue. With an emphasis on utilizing migrant investments for regional development, the Decree of the President of the Republic of Uzbekistan No. UP-59 “On additional measures to improve labor migration processes and support persons engaged in temporary work abroad” (Decree of the President of the Republic, 2024) emphasizes the contribution of remittances to the nation’s infrastructure. However, the absence of thorough coordination and oversight procedures to guarantee that remittances are utilized efficiently has limited the impact of these initiatives. Although the Law of the Republic of Kazakhstan No. 477-IV “On Population Migration” (2011) aims to incorporate remittances into infrastructure projects, the emphasis has frequently been on helping individual migrant families rather than major development initiatives. The effectiveness of these mechanisms is still mixed, and to maximize the impact of remittances on infrastructure development, there is a need for improved coordination between government programs, migrant communities, and international stakeholders. Nevertheless, these laws and strategies reflect the growing recognition of remittances’ potential to drive infrastructure improvements.

Regional approaches are based on statistical analysis to effectively address specific infrastructure needs. Demographic statistics are vital because they provide information on the population’s size and structure, the level of urbanization, and the geographical distribution of migrants (Table 3). These data help to identify regional differences in social and transport infrastructure needs and highlight areas with the most urgent development needs. Data on internal migration are particularly valuable for understanding the dynamics of population movements between rural and urban areas, thereby enabling the development of individual strategies to regulate them.

Parameter	Kazakhstan	Uzbekistan	Tajikistan	Kyrgyzstan	Turkmenistan
Population (million people)	19.8	36.5	10.4	6.9	6.3
Urbanization rate (%)	58	51	28	37	54
Population growth (% per year)	1.1	1.6	2.2	1.8	1.4
Working-age population (%)	65	63	60	61	62

Internal migration rate (% of the population)	10.3	7.0	6.0	8.7	4.5
Main directions of internal migration	Cities and industrial regions	Big cities	Cities and suburbs	Urbanized areas	Cities, oases

Table 3: Key aspects of the demographic situation across Central Asia in 2024. Source: compiled by the author based on Bureau of National Statistics (2025), National Statistics Committee of the Republic of Uzbekistan (2025), National Statistical Committee of the Kyrgyz Republic (2025), Agency on Statistics under the President of the Republic of Tajikistan (2025), State Committee of Statistics of Turkmenistan (2022), World Bank (2023), United Nations Development Program (UNDP, 2017), Organization for Economic Cooperation and Development (OECD, 2024), and International Organization for Migration (IOM, 2025).

Migration processes have a substantial impact on Kyrgyzstan's infrastructure development, creating both new challenges and opportunities for modernizing key sectors. The out-migration of the working-age population from rural regions and their concentration in large cities changes the spatial distribution of resources, creating imbalances in the development of different territories. On the one hand, migration exacerbates infrastructure decline in regions with high population out-migration; on the other hand, migrant remittances are becoming a major source of funding for local initiatives, especially in housing, transport, medicine, and education. Table 4 presents the key issues arising from migration and the possible ways to overcome them to improve infrastructure.

Aspect	Key issues	Opportunities for improvement
Housing infrastructure	Growing burden on housing stock in cities, decline in housing in rural areas	Use of remittances for housing modernization and urban development
Transport system	Oversaturation of urban transport networks due to urbanization, and insufficient road infrastructure	Investment in public transport, expansion of the road network
Municipal infrastructure	Deterioration of water supply, power grids, and sewerage systems in areas with population out-migration	Use of migrant funds for the renewal and modernization of public utilities
Medical infrastructure	Shortage of doctors and medical staff, lack of modern equipment	Stimulating investment in medical institutions, introducing telemedicine

Educational infrastructure	Overloading of schools in cities, decline of educational institutions in small localities	Development of distance education, money transfers directed to school modernization
Social infrastructure	Regional development disparity, social isolation of migrant workers and their families	Development of social adaptation programs, creation of support centers
Labor market and employment	Shortage of skilled labor in key sectors of the economy	Raising salaries, creating attractive working conditions for personnel retention
Rural development	Population decline, degradation of economic activity	Using money transfers to support small businesses and develop the local economy

Table 4: Impact of migration processes on infrastructure: main challenges and areas of improvement. Source: compiled by the author.

One of the critical consequences of migration is a change in the spatial structure of settlements, which affects economic activity and the efficiency of infrastructure development. The high concentration of remittances in certain urban areas encourages the construction of residential complexes and municipal infrastructure. Migration also significantly contributes to the development of transport and communication networks, which are essential for global economic connectivity. As migrants move across borders, they drive the expansion of transport corridors and digital infrastructures, such as roads, rail systems, and mobile money platforms. In Central Asia, countries like Kazakhstan and Uzbekistan have enhanced infrastructure to support both migrant labor and trade, integrating regional economies into global markets. As a result, these processes are uneven. In large cities, social services are overloaded, while in depressed rural areas, due to a lack of investment, infrastructure is gradually deteriorating. This creates additional pressure on local authorities, who are forced to look for ways to efficiently distribute financial flows and state programs to support regional development.

Changes in the employment structure and labor-market needs are important factors in the impact of migration on infrastructure. The massive out-migration of qualified personnel across the construction, medical, and educational sectors creates a shortage of specialists, complicating the implementation of infrastructure projects. The lack of a sufficient number of specialists limits the ability to modernize residential, medical, and educational facilities, which directly affects the quality of services available to the local population. In response to these challenges, part of the investment is directed at developing alternative forms of education and encouraging the return of migrants by creating competitive working conditions in local communities.

In addition, migration patterns contribute to the formation of new economic initiatives related to private construction and the development of small businesses in the service sector. Transferred funds are often used not only to improve housing conditions but also to open small businesses that create jobs and promote economic growth in certain regions. The lack of effective mechanisms for channeling these resources into strategically important infrastructure projects remains a serious problem. This requires developing programs to attract private investment in engineering networks, urban planning, and the modernization of critical sectors, thereby balancing the impact of migration and contributing to long-term infrastructure development.

In Central Asian regions that receive substantial remittances from migrant workers, housing infrastructure development is uneven. In major cities, such as Bishkek (Kyrgyzstan), Tashkent (Uzbekistan), Dushanbe (Tajikistan), and Almaty (Kazakhstan), the growth in the volume of remittances contributed to the active construction of residential complexes during 2015–2024. This led to an expansion of the suburbs and an increase in housing construction, driven by migrants' desire to invest in real estate for their stay or to provide housing conditions for their families. Meanwhile, in remote rural areas such as the Osh region in Kyrgyzstan, the Khatlon region in Tajikistan, and the Ferghana Valley in Uzbekistan, housing construction is primarily individual and not accompanied by the integrated development of social and engineering infrastructure. This leads to an uneven distribution of investment and increases the disparity between urban and rural areas.

Access to water and electricity in Central Asian countries has also changed due to remittances from migrant workers. In Uzbekistan and Kazakhstan, during 2015–2024, state programs to modernize the water supply systems were implemented, thereby improving the drinking water supply to urban and rural settlements. Water supply problems remain significant in Kyrgyzstan and Tajikistan, especially in high-altitude areas with limited access to centralized networks and primarily privately funded individual well drilling. In the field of electricity supply, Kazakhstan shows more stable indicators due to its developed energy infrastructure, while in Kyrgyzstan and Tajikistan, due to limited capacity and worn-out power grids, regular interruptions are observed, especially in winter. Attracting private investment by migrants in the installation of autonomous energy sources, such as solar panels and generators, partially compensates for energy problems. However, without a comprehensive state approach, these measures remain local and fail to deliver systematic infrastructure improvements.

The study indicated that migrant remittances are an important source of funding for social needs and infrastructure projects in Central Asia. However, their effectiveness depends on regional characteristics, management strategies, and the level of infrastructure development in specific regions. Problems, especially in rural areas, include an uneven distribution of funds, which highlights the need to adjust distribution policies.

The return of migrant workers, many of whom have business experience or specialized skills, is vital to modernizing the local economy. It is necessary to create an enabling environment for entrepreneurship, including tax incentives, access to funding, and support for innovation initiatives to tap into this potential. Such measures will promote the integration of returning migrants into the economic landscape and encourage the creation of new jobs and the growth of local businesses.

Kyrgyzstan is a prime example of the profound impact of migration processes on social and economic stability. Returning migrants contributed to the growth of small businesses and actively participated in introducing innovative technologies and projects. Their expertise and financial capital have also strengthened social infrastructure, especially in the education and health sectors.

Recommendations for Central Asian countries include creating support programs to integrate migrants into the local economy. These programs may include creating consulting networks, conducting business training, and providing access to microcredit and other financial resources. Such initiatives will promote regional development and optimize migrants' potential to contribute to economic modernization and growth. A central agency should be set up to oversee remittance flows and allocate funds to priority infrastructure projects, particularly in rural areas, to enhance the use of remittances for infrastructure development. This can entail providing low-interest loans or tax breaks to immigrants who make investments in regional infrastructure. These initiatives should be spearheaded by the governments of Kyrgyzstan, Uzbekistan, and Kazakhstan, with financial and technical support from international institutions such as the World Bank and UNDP. More equitable infrastructure development throughout the region will be ensured by improving coordination between government initiatives and migration policies.

The study demonstrated a substantial impact of remittances on the socio-economic development of Central Asian countries and also identified structural limitations that hindered their effectiveness. Although these financial flows contributed to improving households' standard of living and the development of housing infrastructure, the study revealed that their distribution remained uneven between regions and sectors of the economy. The lack of government mechanisms to regulate financial flows led to the dominance of investment in private construction, while critical sectors such as transport and energy infrastructure remained underfunded. This confirmed the need to develop strategic policies to effectively attract remittances to finance complex infrastructure projects that would ensure sustainable and balanced regional development.

DISCUSSION

Murakami et al. (2021) considered remittances from migrant workers as a key source of funding for infrastructure projects in countries with high migration rates. These funds were identified to help strengthen the economy by reducing dependence on external loans and international aid. It was also noted that remittances were used to develop transport, social, and energy infrastructure. However, their effectiveness largely depended on the availability of clearly defined public policies and management strategies.

These results confirmed that monetary transfers played a major role in expanding the transport network, modernizing the housing stock, and improving social services in Central Asian countries. It was determined that these funds were used to finance educational and medical institutions and to upgrade municipal infrastructure. The effectiveness of their use was limited by insufficient coordination among government programs and by the lack of long-term strategies for managing financial flows, which was consistent with previous research in this area.

Joldoshev (2022) highlighted the problem of an uneven distribution of remittances, which caused an imbalance in infrastructure financing. It was determined that a substantial portion of these funds went to private housing construction, while critical sectors, especially transport and energy infrastructure, did not receive sufficient investment. This posed a threat to sustainable regional development, limiting economic mobility and the effectiveness of communication networks. Similar trends have been observed in Central Asian countries, where remittances have played an important role in improving housing conditions but have not always contributed to integrated infrastructure development.

The study confirmed the dominance of investment in the construction sector, which leads to disproportionate financing of infrastructure projects. The analysis showed that insufficient investment in transport and energy infrastructure led to a deterioration in their condition, increased maintenance costs, and limited access to quality services. This was consistent with Abduvaliev and Bustillo (2020), who found that remittances have a positive impact on overcoming poverty and improving household living standards. These financial flows promote access to food, education, health, and housing while maintaining economic stability in the region, according to the authors.

Furthermore, Komendantova et al. (2022) found that remittances stimulated the local economy through the development of the construction sector. Similar processes were observed in Central Asian countries, where investment in the construction sector supported employment growth and expanded the market for building materials and services. The analysis confirmed that although these financial flows had a substantial impact on job creation and economic activity in the region, they required a more balanced approach to resource allocation to ensure even infrastructure development.

Yavuz and Bahadir (2022) found that money transfers not only met personal needs but also contributed to the development of local businesses, particularly to small and medium-sized businesses. Some of these financial revenues were invested in entrepreneurial initiatives that helped create jobs and support economic growth. It was determined that remittance use in business projects increased regional economic development, but the main share of funds continued to be allocated to housing construction. This showed that improving housing conditions remained a key priority for recipients, while business investment helped gradually strengthen local economic stability.

The results confirmed the conclusions regarding the role of remittances in stimulating socioeconomic development. The analysis showed that some of these funds were used to finance small businesses, which contributed to the diversification of economic opportunities in Central Asian countries. Olivie and O'Shea (2022) stressed the importance of remittances in expanding access to social services, in particular, education and health. The researchers state that these financial revenues contributed to the development of social infrastructure, thereby positively impacting the population's standard of living. Similar processes have been observed in Central Asian countries, where remittances have supported health and education institutions, especially in regions with limited public funding. This provided additional opportunities to improve access to basic social services, which was consistent with trends identified in previous publications.

Mohamad et al. (2022) showed that the effectiveness of remittance as a development mechanism largely depended on state support. It was determined that active government agency involvement in managing financial flows contributed to the successful implementation of infrastructure projects. However, a lack of coordination and political support limited the potential of these funds. The analysis showed that in Central Asian countries, remittances were largely directed to the housing sector, while transport infrastructure development remained underfunded, hindering the regions' economic integration.

Dependence on remittances created additional economic risks, in line with the findings of Suárez Roldan et al. (2023). It was determined that a substantial share of the GDP of some countries in the region was generated by external financial flows, which made their economies vulnerable to changes in migration trends. Fluctuations in the number of migrant workers or changes in migration directions directly affected the availability of financial resources for the social and economic sectors. This posed risks to long-term economic stability, requiring the development of government mechanisms to reduce dependence on external sources of income.

The study also confirmed that remittances compensated for the lack of public funding in critical sectors, which was consistent with the findings of Ullah et al. (2022). In Central Asian countries, these financial revenues were identified as crucial for providing access to health services, education, and housing, especially in regions with insufficient public funding. Remittances factually replaced government

investment, with a dual effect: on the one hand, they ensured the sustainability of social infrastructure, and on the other, they did not stimulate government initiatives for the systematic development of these sectors.

Furthermore, Azizi (2021) analyzed the impact of remittances on social inequality. It was established that while these funds contributed to poverty reduction at the household level, their regional distribution remained uneven. Similar patterns were observed in Central Asian countries, where financial flows were concentrated in certain regions, creating imbalances in economic development. In less developed areas, limited access to remittances has hindered social advancement and economic development, exacerbated regional disparities, and posed additional challenges for balanced growth.

The findings of this study align with the conclusions of Brownbridge and Canagarajah (2020) on the importance of remittances for household financial support in Kyrgyzstan and Uzbekistan. It was confirmed that these funds played a substantial role in maintaining the population's economic stability, but their impact on social infrastructure remained uneven. The analysis showed that while remittances contributed to better housing conditions, their effectiveness in funding education and health was largely dependent on regional characteristics and public policies.

The results also confirmed the conclusions of Amrin et al. (2020), claiming that migration processes caused substantial urbanization changes, which affected the development of urban infrastructure in Kazakhstan. It was established that the growth of the urban population increased demand for housing and transport infrastructure, in line with general trends in Central Asia. The analysis showed that regions depopulated due to migration processes faced infrastructure decline, which limited their socioeconomic development. However, strategically managed migration flows can contribute to long-term sustainable development. Remittances, for example, can be used to fund infrastructure initiatives that improve the resilience of both rural and urban regions. In important industries such as construction, technology, and education, migrants frequently return with priceless skills and experiences that can spur innovation and growth. Countries can develop sustainable growth models that balance urban expansion and rural revitalization by incorporating migration dynamics into their national development strategies. This will guarantee more equitable access to opportunities and resources throughout the region.

The relationship between climate change and migration, examined by Kaczan and Orgill-Meyer (2020), was also confirmed by the study's results. The analysis showed that climate factors affected population mobility, stimulating migration to regions with more stable environmental conditions. At the same time, it was affirmed that this process had a substantial impact on the state of infrastructure, as adapting mechanisms to respond to climate change required modernizing utility systems and expanding housing stock in regions of in-migration.

Sunam et al. (2021) studied the social integration of migrants and validated the data obtained on the impact of labor migration on infrastructure changes. It

was confirmed that the reintegration of migrants created an additional burden on housing and communal resources, in particular, in the regions of return. The effectiveness of infrastructure changes largely depended on state support and strategies for managing the return of migrants.

Hulsewé (2022) explored Chinese investment in Central Asian transport infrastructure and indicated the impact of external financial injections on the development of logistics capabilities in the region. The analysis confirmed that such investments contributed to improving transport infrastructure, but their impact on local communities remained mixed. It was determined that the expansion of transport networks was not always accompanied by improvements in socioeconomic conditions for the local population, which was consistent with the conclusions of previous studies.

The results of the study also correlated with the statements of Tulegenov (2023) on international agreements in the regulation of labor migration. The analysis confirmed that such agreements helped to stabilize migration flows and improve migrants' social protection, but their impact on infrastructure development in the regions of origin remained limited. It was determined that the lack of mechanisms to reinvest remittances into strategically important infrastructure projects hindered regional development and limited the long-term socioeconomic impact of migration processes.

The influential role of remittances in the socioeconomic development of Central Asian countries was highlighted, along with structural imbalances in their use. These financial flows were identified as contributing to the growth of housing construction, small business development, and social infrastructure improvement, but their impact on the transport and energy sectors remained limited. The lack of state regulation of remittance distribution led to uneven infrastructure development across regions, further hindering balanced economic growth. The results highlighted the need for an integrated approach to managing these resources, enabling them to be directed at strategically important projects and ensuring the long-term development of the region.

CONCLUSIONS

The study substantiated the considerable impact of labor migration on the socioeconomic development of Central Asian countries, particularly on the financing of infrastructure projects. Migrant remittances remained a key source of household financing and regional development. In 2024, the volume of remittances in Kyrgyzstan totaled 2.5 billion US dollars, which corresponded to approximately 30% of the country's GDP. In Uzbekistan, this figure exceeded 20%, and in Tajikistan, 25%. It was noted that the bulk of these funds was allocated to housing construction, while funding for transport, energy, and municipal infrastructure remained insufficient.

Migration also significantly contributed to the development of transport and communication networks, helping to foster global economic connectivity and integrate regional economies into the global market.

The analysis showed that in regions with high migration, financial flows were unevenly distributed. For example, in Kyrgyzstan, urban areas received the bulk of investments, while rural areas experienced a shortage of funding for infrastructure projects. In 2024, about 37% of households in which men worked abroad were headed by women, and women's employment increased to 42%. This indicated changes in the social structure of society.

Regarding the impact of labor migration on the labor market, the out-migration of personnel contributed to an increase in unemployment to 8.5% in the Osh, Batken, and Jalal-Abad regions of Kyrgyzstan. The shortage of qualified workers in the construction and medical sectors reached 18%, hindering the implementation of infrastructure projects. Enterprises sought technological solutions to compensate for labor shortages, leading to a 10% increase in the automation of production processes in Kyrgyzstan. However, by facilitating the return of skilled migrants and allocating remittances toward infrastructure development, strategically managed migration can help address labor shortages in critical sectors and promote long-term sustainable development.

The study's results indicated the need to develop government strategies to optimize the use of remittances from migrant workers to support sustainable infrastructure development. Specifically, it is recommended to create mechanisms to allocate part of these funds to finance transport, energy, and utilities projects, thereby facilitating more balanced regional development. In addition, an important task is to develop policies to encourage the return of migrants by supporting their economic activity, particularly by providing tax incentives and access to credit and promoting the creation of small businesses. Given the unequal distribution of infrastructure resources between cities and rural areas, it is advisable to implement regional development programs that account for demographic trends and the level of urbanization. Central Asian governments should collaborate with global institutions such as the World Bank and UNDP to develop frameworks that optimize the impact of remittances on infrastructure initiatives, especially in underserved rural areas.

Further research may focus on a more detailed analysis of the impact of migration processes on the region's energy infrastructure and environmental sustainability. It is also advisable to investigate the mechanisms by which the state regulates financial flows of money transfers and to evaluate the effectiveness of various strategies for integrating these resources into long-term infrastructure projects. A separate area for future research may be the assessment of the social impact of labor migration, in particular changes in household structure, women's and youth employment levels, and impacts on the education and health systems.

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All data presented can be traced through the bibliography.

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POVZETEK

VPLIV MIGRACIJ NA RAZVOJ INFRASTRUKTURE V SREDNJI AZIJI

Aida Sarseitova

Avtorica v prispevku obravnava vpliv delovnih migracij na razvoj infrastrukture v Srednji Aziji, s posebnim poudarkom na vplivu denarnih nakazil na stanovanjsko, prometno in komunalno infrastrukturo. V svoji študiji kombinira kvalitativne informacije o regionalnem razvoju s kvantitativnimi podatki iz uradnih statistik za obdobje med letoma 2020 in 2024.

V državah, kot so Kirgizistan, Uzbekistan in Tadžikistan, so nakazila migrantov postala pomemben vir dohodka, ki pomembno prispeva k bruto družbenem proizvodu teh držav. Vendar pa je večina teh sredstev namenjenih za stanovanja, zlasti v mestih, zaradi česar prihaja do neenakomernega razvoja infrastrukture. Medtem ko v kirgiških mestih, kot sta Biškek in Oš, prihaja do napredka, so podeželska območja še vedno deležna premalo sredstev za nujne storitve, kot so zdravstvo, izobraževanje in promet.

Delovne migracije so povzročile tudi znatne družbene spremembe. Ker moški odhajajo na delo v tujino, vse več žensk prevzema vodenje gospodinjstev, hkrati pa se je povečala tudi stopnja zaposlenosti žensk. Vendar pa zaradi migracij kvalificiranih delavcev prihaja do pomanjkanja delovne sile, zlasti v kmetijstvu, zdravstvu in gradbeništvu, zaradi česar se je na podeželju povečala stopnja brezposelnosti.

Med posameznimi državami so opazne razlike v uporabi nakazil – tako v Uzbekistanu namenjajo večjo pozornost izobraževanju, v Kirgizistanu pa stanovanjem. Podeželska območja se sicer še vedno spopadajo z izzivi pri razvoju infrastrukture, a je pritek nakazil tudi na teh območjih prispeval k urbanizaciji in večjemu povpraševanju po mestni infrastrukturi. Nakazila pozitivno vplivajo na gospodarstvo, a ker je večina denarja porabljenega za zasebno potrošnjo, je njihov vpliv na dolgoročne izboljšave infrastrukture omejen.

Avtorica v zaključku ugotavlja, da bi bilo za maksimizacijo vpliva denarnih nakazil treba vzpostaviti politike za usmerjanje sredstev v trajnostne infrastrukturne projekte, zlasti na podeželskih območjih. Države bi lahko s spodbujanjem rasti malih podjetij in njihovim ponovnim vključevanjem v skupnost spodbudile tudi vračanje kvalificiranih delavcev migrantov. Na ta način bi lahko prispevale k zmanjševanju regionalnih neravnovesij ter k bolj uravnoteženemu razvoju v vsej Srednji Aziji.

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