



UO'K: 91(575.141)

Xamidullo FOZILOV,

Associate Professor, Department of Socio-Economic Geography, Samarkand State University named after Sharaf Rashidov
E-mail: hamidullofozilov90@gmail.com, <https://orcid.org/0009-0008-7561-6703>

Shodiyor BOBOYEV,

Associate Professor, Department of Socio-Economic Geography, Samarkand State University named after Sharaf Rashidov
Azamat AHMEDOV,

Independent researcher at Samarkand State University named after Sharaf Rashidov

Chirchiq davlat pedagogika universiteti dotsenti, g.f.f.d (PhD) J.A.Namozov taqrizi asosida

ASSESSMENT OF FUTURE CHANGES IN LABOR RESOURCES AND POPULATION MIGRATION OF SAMARKAND REGION

Annotation

This article was written with the aim of identifying and assessing future changes and territorial differences in labor resources and population migration of Samarkand region up to 2040. Using the extrapolation method, this article forecasts how the labor resources of Samarkand region, their composition, as well as the emigration and immigration migration processes in urban and district sections, will change in the future. Throughout the article, the forecast results are analyzed from the perspective of their impact on the territorial movement of the population and the development of the labor market.

Keywords: labor resources, migration, emigration, immigration, extrapolation, forecast, demographic development, economically active population.

SAMARQAND VILOYATI MEHNAT RESURLARI VA AHOLI MIGRATSIYASINING ISTIQBOLDAGI O'ZGARISHLARNI BAHOLASH

Аннотация

Samarqand viloyatining hozirgi vaqtdagi mehnat resurslari aholi migratsiyasining iqtiboldagi o'zgarishlari va hududiy tofovudlari viloyatning 2040-yilgacha bo'lgan prognoz parametrlarini ishlab chiqish hamda aholisining ish bilan bandligini to'g'ri va aniq rejalashtirish asosiy maqsad qilib olingan shu jumladan ijtimoiy-iqtisodiy taraqqiyotida aholi migratsiyasining ahamiyati kabi masalalar tahlil qilingan.

Kalit so'zlar: demografiya, aholi, migratsiya, Samarqand viloyati, mehnat resurslari, ekstrapolyasiya usullari, iqtisodiy faol aholi.

ОЦЕНКА ПЕРСПЕКТИВНЫХ ИЗМЕНЕНИЙ ТРУДОВЫХ РЕСУРСОВ И МИГРАЦИИ НАСЕЛЕНИЯ САМАРКАНДСКОЙ ОБЛАСТИ

Аннотация

Основной целью является анализ текущего состояния трудовых ресурсов Самаркандской области, перспективных изменений в миграции населения и территориальных различий, разработка прогнозных параметров региона до 2040 года, а также точное и эффективное планирование занятости населения. Кроме того, рассмотрены вопросы значения миграции населения в социально-экономическом развитии региона.

Ключевые слова: демография, население, миграция, Самаркандская область, трудовые ресурсы, методы экстраполяции, экономически активное население.

Introduction. In regions where the share of youth in the population is high and demographic potential is strong, it is of great importance to study employment, the growth of labor resources, and the increase in unemployment among the population. Labor resources are the part of the population that possesses mental and physical (physiological) capabilities and is able to create material goods and services through their labor. Its composition includes the economically active population, those who are not working and not seeking employment, as well as full-time students. The year-by-year growth of labor resources increases pressure on the labor market. It is known that in Uzbekistan, the working-age population is divided into three groups: 1. Those below working age: 0–15 years.

Literature review. In the republic, many scholars have conducted research on employment and the formation of labor resources, including Q.X. Abdurahmonov, B.X. Umurzakov, Z.N. Tojiyeva, R.A. Ubaydullaeva, A.A. Qayumov, R.B. Qodirov, N.U. Arabov, L.Z. Ibragimov and others. In regions experiencing economic growth, it is important to study employment, the formation of labor resources, labor migration and the factors influencing it, its regional characteristics, as well as the effective use of labor migrants.

Research methodology. In developing such programs, it is important to take into account the total number of the population of the region under study, especially labor resources, those of working age, the economically active population, official and informal employment of the population, as well as the future number of unemployed and changes in its composition, as well as the correct management of labor migrants.

Because the main goal of developing regions based on modern requirements is to ensure a good life for the population. In this research, the main goal is to develop forecast parameters for the labor resources of the Samarkand region, the number of the able-bodied population, the economically active population, and the number of employees in the formal and informal sectors

until 2040, as well as to correctly and accurately plan the employment of the population. In this work, the main task of forecasting is to provide labor resources with permanent jobs in the future by determining their approximate number in the near, medium, and long term. The purpose of the extrapolation method is to identify the laws of application relative to the past period characterizing the object of forecasting, and accordingly, analyze statistical data on the growth potential of this information, and then determine the values of forecasting quantities in empirical or dynamic series in the external environment. This method also has its specific disadvantage, in which the external factors affecting it remain out of consideration. Their identification, of course, depends on the skill of the researcher, a broad worldview, and a good knowledge of the territory. The socio-economic and demographic development of each province or district, as well as cities and villages, is inextricably linked with the future number and weight of the population. Through forecasting, the labor resources of the provincial territories are identified, and prospects for the development of various sectors are determined. Population forecasts play an important role in the effective use of labor resources of the research object, prevention of unemployment, and most importantly, providing the population with permanent jobs.

Therefore, future changes in the labor resources of the Samarkand region are forecast using the extrapolation method. The territory of the Samarkand region forms the central part of the Republic's territory and, according to its demographic potential, occupies one of the leading places. Nevertheless, like other regions of the republic, it is among the territories where labor resources continue to grow. Since this province is developed in the industrial and production sectors and rich in ancient monuments, it is one of the provinces that attracts foreign tourists and labor migrants. The rural population, relative to 114%, has decreased by 103%, which indicates the development of service sectors in rural areas and the emergence of new job opportunities. In the region, the number of economically active working-age population will increase by approximately 313 thousand people in 2040 compared to 2023. The number of economically active population in urban areas will increase by approximately 118 thousand people in 2040 compared to 2023. The number of economically active rural population will increase by approximately 197 thousand people in 2040 compared to 2023. The number of economically inactive population in the region in 2023 was 556.6 thousand people, and by 2040 it will reach 585.6 thousand people, with an average annual rate of 0.3%. The number of economically inactive urban population will decrease by approximately 45 thousand people in 2040 compared to 2023. The number of economically active rural population will change by approximately 98.6 thousand people in 2040 compared to 2023.

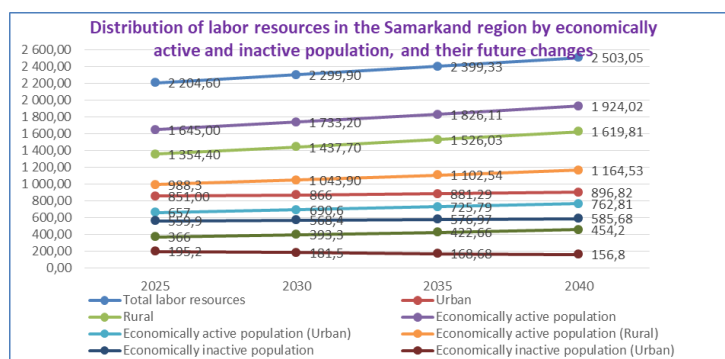


Figure 1. Distribution of labor resources in the Samarkand region by economically active and inactive population, and their future changes.

The socio-economic and demographic development of a region, district, as well as cities and rural areas is closely linked to the future size and proportion of the population. Through forecasting, the impact of population migration within the region can be determined, and the prospects for developing various sectors can be defined. If we forecast the number of people who have migrated from the population of the Samarkand region by city and district using the extrapolation method, the number of people who left Samarkand city was 4,745 in 2013, and by 2023 this indicator decreased to 2,840, accounting for 59.8%. The forecast indicator up to 2040 shows an average annual growth rate of -4.5%. The reason for this is related to economic and social factors affecting population migration, as well as the level of employment among the population. If we take 2023 as the base period for Kattakurgan city, the number of people who migrated was 667, and by 2040 it will reach 519.1 people, with an average annual growth rate of -1.55%. We can observe that migration processes in the districts of Akdarya, Bulungur, and Jomboy decreased in 2023 compared to 2013, and the forecast up to 2040 is also negative. This is due to the proximity of these districts to urban areas, the employment of the population in new industrial sectors, and the development of service industries. The number of people migrating from Ishtikhon district was 848 in 2013, increasing to 1,048 in 2023, and according to the 2040 forecast, it will reach 1,455.3 people, with an average annual growth rate of 1.95%.

Table 1

Forecast indicators of the number of people expected to migrate from the Samarkand region (persons)

Administrative-territorial units	Forecast years			
	2025	2030	2035	2040
Samarkand region	15213,2	15251,3	15289,4	15327,7
Samarkand city	2587,4	2050,0	1624,2	1286,8
Kattaqo'rg'on sh.	656,2	606,9	561,3	519,1
Oqdaryo	508,1	418,6	344,9	284,2
Bulung'ur	765,4	737,1	709,9	683,7
Jomboy	423,1	390,3	360,1	332,2
Ishtixon	1089,3	1199,7	1321,3	1455,3
Kattaqo'rg'on	1111,9	1330,2	1591,4	1903,8
Qo'shrabot	1028,6	1312,8	1675,5	2138,5
Narpay	841,2	996,6	1180,8	1399,1
Payariq	1283,0	1455,2	1650,4	1871,8
Pastdarg'om	886,7	911,3	936,7	962,7

Paxtachi	1383,2	1851,0	2477,0	3314,8
Samarkand	787,0	804,9	823,2	841,9
Nurobod	544,1	597,8	656,8	721,6
Urgut	1269,8	1574,8	1953,1	2422,3
Toyloq	292,2	234,5	188,2	151,1

Source: Developed based on data from the External Migration Agency of Samarkand region

The number of people migrating from Kattakurgan district almost doubled in 2023 compared to 2013, and the forecasted average annual growth rate is also high at 3.65%. In Kushrabot district, the number of migrants in 2023 is relatively higher than in 2013, and according to the 2040 forecast, it has the highest average annual growth rate among the districts at 5%. This is due to the relatively low level of employment of the population compared to other districts.

The number of people migrating from Narpay district was 539 thousand in 2013, increasing to 786 thousand in 2023, and according to the forecast, it will reach 1,399.1 thousand by 2040. In Payariq district, the 10-year growth rate of migrants is 131.7%, and the forecast up to 2040 shows 1,871.8 thousand people, with an average annual growth rate of 2.5%. In Pastdargom district, the number of people who migrated was 822 in 2013, increasing to 877 in 2023, representing 106.6% growth, and the forecast indicates that it will reach 962.7 people by 2040.

Analysis and results. According to the calculations, the average annual forecast figure is lower than in other districts. This is due to the fact that Pastdargom district is located near the city area, the employment level of its population is high, there are many manufacturing enterprises, and the service sectors are well-developed. The number of people who migrated from the Pakhtachi district is somewhat higher than in other districts: while 649 people migrated in 2013, by 2023 this number almost doubled, reaching 1.2 thousand people. The forecast result for 2040 is also very high, expected to reach 3.3 thousand people, showing an average annual growth of 6 percent. The number of people who migrated from the Samarkand district was 742 in 2013, and by 2023 it reached 780 people; the forecast indicators remained almost unchanged at 0.45 percent. This can be explained by the fact that the territory of the Samarkand district is very close to the city area and its population is employed in industry, manufacturing, and service sectors.

The emigration rate of the Nurabod district population was 427 people in 2013, and by 2023 it increased to 524 people. By 2040, the forecast result is identified to reach 721.6 people, with an average annual growth of 1.9 percent. As a result of the very rapid growth of the Urgut district population, the emigration indicator is also high: it was 726 people in 2013, and by 2023 it increased to 1,165 people; the forecast result is also expected to rise to 2,422 people by 2040. The number of people who migrated from the Toyloq district was 517 in 2013, and by 2023 it amounted to 319 people. This shows that the emigration rate of the district population has decreased, and the forecast indicator stands at 151.1 people. From this, we can see that the economic indicators of the district have grown, the employment level of the population has increased, and the economic and social sectors are well-developed. If we forecast the number of people who migrated to the Samarkand region by cities and districts using the extrapolation method, 3,015 people migrated to Samarkand city in 2013, and by 2023 this number amounts to 4,707 people. The forecast indicator is observed to reach 9,396 people by 2040, showing an average annual growth of 4.1 percent. In Kattakurgan city, we can see that the number of people who migrated in 2023 is lower compared to 2013; the forecast indicator is also low, showing an average annual growth of -0.8 percent. The number of people who migrated to Akdarya, Bulungur, Jomboy, Ishtikhon, Kattakurgan, and Koshrabot districts decreased by 2023 compared to 2013, and we can see that the average annual percentage of the forecast indicator also has a negative value.

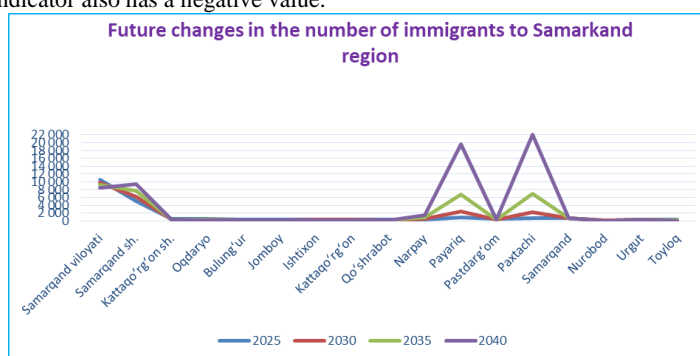


Figure 3. The table was compiled by the author based on data from the Samarkand regional statistics department

While the number of people migrating to the Narpay district was 104 in 2013, it amounts to 292 people by 2023; the forecast indicator is expected to reach 1,442 people by 2040. We can observe that the number of people who migrated to Payariq and Pakhtachi districts increased very sharply by 2023 compared to 2013, and we can see from the calculations that the forecast results also have a much higher indicator compared to other districts. We can witness that the forecast results for Pastdargom, Samarkand district, Nurobod, and Toyloq districts, specifically the average annual growth by 2040, show a negative value. In the Urgut district, on the contrary, the number of people who migrated in 2013 increased somewhat by 2023. We can see that the forecast result is also positive, with an average annual growth rate of 1.4 percent. The results of the forecast analysis show that the number of migrants in the region is divided into areas where it increases and decreases year by year. To prevent this, it is necessary to ensure the equal distribution of labor resources across the region by organizing the internal migration of the population from districts with a higher supply of labor resources to those with a lower supply. In general, internal labor migrants have directions at the Republican level, such as from villages to cities, from one city to another, to suburban areas, from district centers to large cities, and from one region to another.

Conclusion/Recommendations. Considering the high level of external migration in the region, it is necessary to expand the geography of migration, open branches of mono-centers in districts, organize short interactive courses on the geography of countries with high migration rates, take measures to send skilled workers abroad, and develop prospective plans and roadmaps on this issue for each district. It is also considered necessary to establish cooperation with relevant government bodies, private

companies, and organizations engaged in migration in order to analyze migration issues in the regions and process statistical data, as well as to create a unified and coordinated monitoring platform with them.

REFERENCES

1. Ibragimov L.Z, Fozilov X.X. *Hududlarda ishchi kuchi migratsiyasi va unga ta'sir etuvchi ijtimoiy-iqtisodiy omillar. Oila, xotin-qizlar va ijtimoiy hayot elektron ilmiy jurnal. ISSN 9874-4126 Toshkent. 2022.-35-44 b.*
2. Ibragimov, L. Z. (2016). State policy in supporting an employment of population in Uzbekistan. *Lucrările Seminarului Geografic Dimitrie Cantemir*, 41, 105-110.
3. Khamroeva, F. A., & Ibragimov, L. Z. (2019). The importance of educational portals on teaching natural geographical subjects. *Наукаимир*, 1(2), 35.
4. Ibragimov, L. Z. (2017). The influence of demographic factors on employment and labor market (A case study of Samarkand Region). *Lucrările Seminarului Geografic, Dimitrie Cantemir*, 45, 151-158.
5. VVL, A. P., Suhail, M., Lutfullo, I., & Shodiyor, B. (2024). A Comparative Study of Three Supervised Algorithms for Mixed Crop Classification. In *E3S Web of Conferences* (Vol. 590, p. 01004). EDP Sciences.
6. Ibragimov, L. Z., & Khamroyeva, F. A. (2021). Development of Small Business and entrepreneurship in industry and its influence on employment of population. *The American Journal of Social Science and Education Innovations*, 3(03), 163-170.
7. Тожиева З.Н. Ўзбекистон аҳолиси: ўсиши ва жойланиши. – Т.: Фан ва технология. 2010. -162 б.
8. Fozilov X.X. “Samarqand viloyatida aholi migratsiyasi va uning hududiy xususiyatlari” dissertatsiya. Qo‘lyozma huquqida UDK: 91(575.141) Samarqand 2025.
9. Fozilov X.X. “Samarqand viloyatida aholi migratsiyasi va uning hududiy xususiyatlari” avtoreferat. Qo‘lyozma huquqida UDK:91(575.141) Samarqand 2025.
10. Fazilov Khamidullo Khikmatovich, Sultonmurodova Ruxshona G‘ulom qizi, Yuldoshev Shohjaxon Zafar o‘g‘li - Main directions and current trends of female labor migration. “Geodeziya, kartografiya va geoinformatika” Ilmiy-texnik jurnal 2025-yil 1-son 277-b.
11. Rustamov J.Fozilov X. “The Main Flows of Female Lobar Migration” “The Main Flows of Female Lobar Migration” ISSN: 2795-4846 Volume 15(Apr-2023)-34-38b.
12. <http://www.mineconomu.uz>
13. <https://samstat.uz/>