

ISSUES OF RATIONAL USE OF LABOR RESOURCES IN INCREASING POPULATION EMPLOYMENT

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Abstract. This article examines the rational use of labor resources as a factor in increasing population employment in Uzbekistan. The study applies descriptive statistical analysis, comparative regional assessment and policy analysis to evaluate employment-rate dynamics across Uzbekistan and its regions for 2020-2024. The empirical results show that the national employment rate increased from 66.0% in 2020 to 68.3% in 2024, while regional outcomes remained uneven. The largest positive changes were observed in Kashkadarya and Tashkent regions, whereas Bukhara, Jizzakh and Surkhandarya showed slight declines. The findings indicate that employment policy should not be limited to aggregate job creation: it must combine regional specialization, formalization of informal work, vocational retraining, women and youth employment support, digital skills development, and private-sector job creation. The article concludes with practical recommendations for improving labor resource management in the context of demographic pressure and digital transformation.

Keywords: population employment, labor resources, labor market, human capital, regional employment, informal employment, digital economy, Uzbekistan.

1. Introduction

Employment is one of the core indicators of socio-economic stability because it connects income generation, poverty reduction, human capital utilization and regional development. In transition economies, the problem is not only to create additional jobs but also to ensure that labor resources are allocated efficiently across sectors and territories. For Uzbekistan, this issue is particularly important due to demographic growth, a high share of young people in the population, regional differences in economic specialization, and the expansion of new forms of work in the digital economy.

Since the beginning of market reforms, Uzbekistan has experienced major changes in ownership relations, enterprise structure and labor demand. The emergence of private enterprises, small business, self-employment, service-sector expansion and digital platforms has diversified employment opportunities. At the same time, these changes have increased the need for active labor-market policy, vocational retraining and better matching between workers' skills and employers' needs.

The national policy framework also gives employment a strategic role. The Development Strategy of New Uzbekistan for 2022-2026 identifies job creation, income growth and poverty reduction as key objectives. This makes the rational use of labor resources not simply an economic issue, but a practical governance problem requiring statistical monitoring, regional targeting and institutional coordination.

The purpose of this article is to analyze the role of rational use of labor resources in increasing population employment in Uzbekistan. The research focuses on three questions: how the employment rate changed in 2020-2024; which regions demonstrated stronger or weaker

employment dynamics; and what mechanisms can improve the efficiency of labor-resource use under the conditions of demographic pressure and digital transformation.

2. Literature Review

In classical and neoclassical economic theory, employment is explained through the interaction of labor supply and labor demand, wage flexibility and productivity. However, contemporary labor economics treats employment as a broader institutional process affected by education, skills, migration, labor regulation, entrepreneurship, demographic structure and regional development policy.

Uzbek and foreign scholars have studied labor resources mainly through labor-market equilibrium, human capital formation, productivity growth and social protection. Q.X. Abdurakhmonov emphasizes the importance of labor-market institutions and human capital in employment policy. A. Olmasov and A. Vakhobov connect employment outcomes with entrepreneurship, income distribution and macroeconomic stability. International organizations, including the ILO, World Bank and Asian Development Bank, stress that employment expansion requires active labor-market programs, vocational education, formalization of work and support for private-sector job creation.

Recent international research is especially relevant for Uzbekistan because global labor markets are changing under the influence of digitalization, platform work and skills mismatch. The ILO's employment reports show that unemployment alone does not fully describe labor-market problems; job quality, informality, youth transitions and the participation of women are also critical. The World Bank's studies on Uzbekistan emphasize that private-sector growth, skills development and regional opportunities are central to sustainable job creation.

The gap in the existing literature is that many studies discuss employment in general terms, while fewer works combine regional statistical dynamics with policy mechanisms for rational labor-resource use. This article addresses that gap by linking regional employment-rate changes with practical employment-policy directions.

3. Materials and Methods

The study uses a descriptive-analytical research design. The empirical base consists of official labor-market indicators for Uzbekistan and its regions for 2020-2024. The main quantitative indicator is the employment rate, defined as the share of employed persons in the relevant working-age or economically active population according to the national statistical methodology. The regional data were systematized from the Statistics Agency's labor-market datasets and the employment table provided in the initial manuscript.

The analysis applies three methods. First, time-series comparison is used to identify national employment-rate dynamics for 2020-2024. Second, regional benchmarking is used to compare the employment-rate changes of regions and to classify them into higher-growth, moderate-growth and weak or declining groups. Third, policy analysis is used to interpret the results in relation to labor-market programs, vocational training, entrepreneurship support, formalization and digital-economy development.

Two simple indicators were calculated for each region: absolute change in percentage points, calculated as Employment rate in 2024 minus Employment rate in 2020; and the growth coefficient, calculated as Employment rate in 2024 divided by Employment rate in 2020. These indicators are suitable for an article based on regional descriptive statistics because they show both the size and proportional direction of employment changes without making unsupported causal claims.

The study has limitations. It does not estimate a regression model and therefore does not claim a causal effect of any single policy instrument on employment. The findings should be

interpreted as descriptive evidence of regional employment dynamics and as a basis for developing policy recommendations.

4. Results

4.1 National employment dynamics

The national employment rate increased from 66.0% in 2020 to 68.3% in 2024. The total increase was 2.3 percentage points, which indicates a gradual recovery and expansion of employment opportunities after the economic disruptions of the early 2020s. The strongest national movement occurred not as a sharp one-year jump, but as a consistent upward trend: 67.0% in 2021, 67.2% in 2022, 67.9% in 2023 and 68.3% in 2024.

This trend suggests that employment growth was supported by several interacting mechanisms: expansion of small business and entrepreneurship, self-employment registration, service-sector development, public employment programs, vocational training and stronger regional investment activity. However, the national average hides substantial territorial differences, which makes regional analysis necessary.

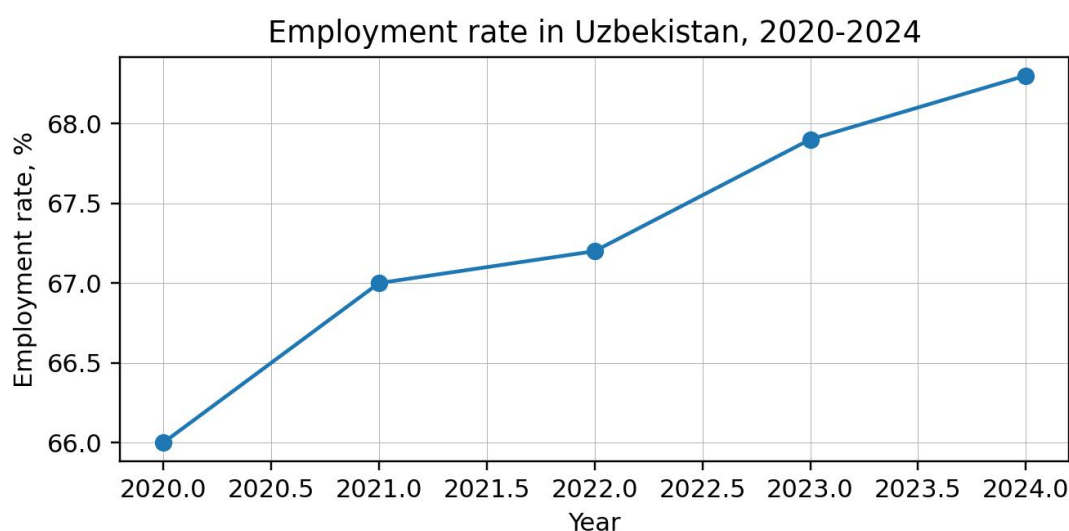


Figure 1. Employment-rate dynamics in Uzbekistan, 2020-2024. Source: compiled by the authors based on national labor-market statistics.

4.2 Regional employment-rate changes

Table 1 presents employment-rate indicators by region. The table corrects the analytical part of the initial manuscript by adding recalculated percentage-point changes and growth coefficients. This makes the regional comparison clearer and methodologically consistent.

Table 1.

Employment rate in Uzbekistan by region, 2020-2024. Source: compiled by the authors based on the Statistics Agency labor-market datasets and calculations from the manuscript table.

Region	2020	2021	2022	2023	2024	Change, pp	Growth coef.
Republic of Uzbekistan	66.0	67.0	67.2	67.9	68.3	2.3	1.035
Republic of Karakalpakstan	62.0	61.1	61.6	62.9	64.3	2.3	1.037
Andijan	66.0	68.0	69.0	70.0	70.0	3.7	1.056

region	5	2	5	6	2		
Bukhara region	68. 3	67. 2	67. 2	68. 7	67. 7	-0.6	0.991
Jizzakh region	66. 2	67. 5	66. 2	66. 3	66. 0	-0.2	0.997
Kashkadar ya region	60. 9	62. 2	61. 9	61. 9	65. 0	4.1	1.067
Navoi region	66. 8	68. 3	67. 7	69. 8	70. 5	3.7	1.055
Namangan region	65. 0	65. 5	64. 8	65. 9	66. 8	1.8	1.028
Samarkan d region	63. 2	63. 7	64. 7	65. 0	64. 8	1.6	1.025
Surkhanda rya region	63. 9	64. 5	64. 2	63. 8	63. 7	-0.2	0.997
Syrdarya region	64. 8	64. 5	64. 0	63. 8	65. 3	0.5	1.008
Tashkent region	68. 2	72. 4	71. 0	72. 2	72. 3	4.1	1.060
Fergana region	65. 1	66. 2	67. 1	68. 4	68. 0	2.9	1.045
Khorezm region	63. 7	64. 0	64. 7	66. 9	66. 2	2.5	1.039
Tashkent city	81. 7	81. 3	82. 5	82. 3	82. 3	0.6	1.007

The highest positive change was recorded in Kashkadarya region and Tashkent region, where the employment rate increased by 4.1 percentage points. Andijan and Navoi regions also demonstrated strong growth, with increases of 3.7 percentage points. Fergana region increased by 2.9 percentage points and Khorezm by 2.5 percentage points, which places them above the national average in terms of regional improvement.

At the same time, three regions showed negative dynamics: Bukhara region decreased by 0.6 percentage points, Jizzakh by 0.2 percentage points and Surkhandarya by 0.2 percentage points. These decreases are small, but they are analytically important because they show that employment policy cannot rely only on national averages. Regional employment outcomes depend on industrial structure, agricultural seasonality, migration, investment distribution, labor mobility, vocational-training quality and local entrepreneurship conditions.

Tashkent city remained the highest-employment territory throughout the period, with an employment rate of 82.3% in 2024. This result reflects the concentration of services, public administration, finance, education, logistics and private-sector employment in the capital. However, a high level does not necessarily mean a high growth rate: Tashkent city's increase was only 0.6 percentage points over 2020-2024, suggesting that it has a more mature labor market with less room for rapid expansion.

5. Discussion

The findings confirm that rational use of labor resources must be understood as a regional and sectoral management problem. The national employment rate improved, but the uneven regional pattern shows that identical policy tools will not produce identical results everywhere. Regions with strong industrial, construction, logistics or service-sector growth can absorb labor faster,

while regions dependent on seasonal agriculture or with weaker private-sector development may require targeted interventions.

The first policy implication is the need to move from general employment programs to region-specific employment portfolios. For example, densely populated regions such as Andijan, Fergana and Namangan require policies focused on small business, household entrepreneurship, services, vocational training and labor-intensive manufacturing. Regions with agricultural specialization need agro-processing, storage, logistics and rural non-farm employment. Regions with industrial potential, such as Navoi and Tashkent region, need technical skills and stronger links between vocational education and employers.

The second implication concerns youth employment. Uzbekistan's demographic structure creates a permanent inflow of young people into the labor market. If vocational training and job creation do not expand at the same pace, demographic potential can turn into unemployment, informal work or labor migration. Therefore, youth employment policy should focus on first-job placement, dual education, digital skills, entrepreneurship and career guidance.

The third implication is the need to formalize informal employment. Informal work can reduce short-term unemployment pressure, but it weakens social protection, tax revenue, pension accumulation and labor rights. Employment policy should therefore combine simplified registration, tax incentives, social insurance coverage and digital platforms that make formal self-employment easier.

The fourth implication relates to digital transformation. Digital economy development creates new employment opportunities in IT services, e-commerce, platform work, logistics, online education and digital public services. However, it also creates a skills gap. Without digital literacy and vocational retraining, part of the labor force may be excluded from new job opportunities. This means that digital employment policy must be linked to practical training, certification and regional internet infrastructure.

Finally, employment policy should be evaluated not only by the number of jobs created but also by job quality. Sustainable employment requires stable income, legal registration, productivity growth, social protection and skills development. Otherwise, quantitative employment growth may not translate into poverty reduction or human capital improvement.

6. Practical Recommendations

1. Develop regional employment maps based on employment rate, unemployment, sectoral specialization, migration and youth labor-force entry.
2. Strengthen vocational retraining programs in cooperation with employers, especially in construction, services, logistics, agro-processing, IT and industrial maintenance.
3. Expand formal self-employment and small-business registration through simplified digital procedures and targeted tax incentives.
4. Prioritize women and youth employment through childcare support, flexible training schedules, first-job programs and entrepreneurship grants.
5. Link labor-market policy with regional investment policy so that new enterprises are created in regions with higher demographic pressure.
6. Improve monitoring indicators: employment rate should be assessed together with job quality, informality, wages, skill match and social-insurance coverage.

7. Conclusion

The study shows that the rational use of labor resources is a decisive factor in increasing population employment in Uzbekistan. During 2020-2024, the national employment rate rose from 66.0% to 68.3%, but regional dynamics were uneven. Kashkadarya, Tashkent, Andijan and Navoi regions demonstrated the strongest positive changes, while Bukhara, Jizzakh and Surkhandarya recorded slight declines.

The main conclusion is that employment policy must be differentiated by region, sector and demographic group. Aggregate job creation is necessary but insufficient. Uzbekistan needs an integrated mechanism that combines private-sector development, human capital investment, vocational retraining, formalization, digital skills and targeted support for women and youth.

Future research should use microdata or panel econometric methods to estimate the causal impact of specific labor-market policies on employment outcomes. Separate analysis of youth employment, women's employment, informal work and sectoral labor productivity would further strengthen evidence-based policymaking.

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