

REGIONAL LABOUR MOBILITY DIAGNOSTICS IN UZBEKISTAN'S TRANSFORMING LABOUR MARKET

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Annotatsiya. Maqolada O'zbekiston hududiy mehnat bozorlarida mehnat mobilligini diagnostik baholashning mualliflik yondashuvi asoslangan. Mehnat mobilligi faqat migratsiya emas, balki ishchi kuchining hududlar, tarmoqlar, kasblar hamda rasmiy va norasmiy ish bilan bandlik shakllari o'rtasidagi o'tishlarini ta'minlovchi ichki iqtisodiy mexanizm sifatida talqin etiladi. Ishsizlik, ish haqi, norasmiy ish bilan bandlik, yalpi hududiy mahsulot, xizmatlar sig'imi va Beverij tafovuti ko'rsatkichlari asosida hududlarni funksional tiplarga ajratish taklif qilinadi. Natijalar hududlar uchun tabaqalashtirilgan mehnat siyosati, raqamli matching, kasbiy qayta tayyorlash va maqsadli mobillik paketlarini joriy etish zarurligini ko'rsatadi.

Kalit so'zlar: mehnat mobilligi, hududiy mehnat bozori, tarkibiy ishsizlik, ko'nikmalar nomuvofiqligi, norasmiy ish bilan bandlik, diagnostik indeks, O'zbekiston.

Аннотация. В статье обоснован авторский подход к диагностической оценке трудовой мобильности на региональных рынках труда Узбекистана. Трудовая мобильность рассматривается не только как миграция, но и как внутренний экономический механизм перехода рабочей силы между территориями, отраслями, профессиями, формальной и неформальной занятостью. Предложено типологизировать регионы на основе показателей безработицы, заработной платы, неформальной занятости, валового регионального продукта, емкости услуг и разрыва Бевериджа. Результаты подтверждают необходимость дифференцированной региональной политики, цифрового согласования вакансий и навыков, профессиональной переподготовки и адресных пакетов поддержки мобильности.

Ключевые слова: трудовая мобильность, региональный рынок труда, структурная безработица, несоответствие навыков, неформальная занятость, диагностический индекс, Узбекистан.

Abstract. The paper develops a diagnostic approach to labour mobility in Uzbekistan's regional labour markets. Labour mobility is interpreted not merely as migration, but as an internal economic mechanism that redistributes labour across territories, sectors, occupations, and formal and informal employment statuses. A regional diagnostic framework is proposed using unemployment, wages, informal employment, gross regional product, service-sector capacity, and the Beveridge gap. The results support a functional typology of regions and demonstrate the need for differentiated labour-market regulation, digital vacancy-skills matching, demand-oriented retraining, and targeted mobility support packages.

Keywords: labour mobility, regional labour market, structural unemployment, skills mismatch, informal employment, diagnostic index, Uzbekistan.

Introduction

The transformation of labour markets is increasingly determined not by the absolute number of jobs alone, but by the capacity of workers to move efficiently between territories, sectors, occupations and forms of employment. Digitalisation, artificial intelligence, the green transition and demographic shifts are changing occupational structures and accelerating the obsolescence of skills. Global estimates indicate that by 2030 a substantial share of jobs will be transformed, while employers already identify skills shortages as one of the main constraints on organisational change [10. 2025]. Under these conditions, labour mobility becomes a strategic mechanism for reducing structural unemployment and reallocating human capital towards more productive activities.

The relevance of this issue is particularly high for Uzbekistan. The country's permanent population exceeded 38.2 million at the beginning of 2026, while the urban-rural distribution remained almost balanced. In 2025, the unemployment rate declined to approximately 4.8-4.9%, but informal employment remained significant and regional wage differences were considerable. The average monthly nominal wage reached 6,376.7 thousand soums, compared with 10,753.8 thousand soums in Tashkent city and 4,476.7

thousand soums in Kashkadarya region [6. 2026]. Such disparities create incentives for mobility, but they also reveal unequal access to productive jobs, housing, transport, information and skills development.

The purpose of this paper is to present a methodological framework for diagnosing labour mobility potential in Uzbekistan's regions and to formulate differentiated policy priorities for regional labour-market regulation. The central hypothesis is that uniform employment measures are insufficient because regions differ not only in unemployment levels, but also in formal-sector capacity, wage signals, service-sector development, informality, skills mismatch and the direction of labour flows.

Conceptual approach

Classical migration theory explains labour movement through differences in expected income and employment probability [3. 1970:P.126-142]. Contemporary labour economics expands this view by emphasising technological change, task restructuring and the growing role of skills [2. 2019:P.3-30]. Skills mismatch research also demonstrates that unemployment may coexist with vacancies when workers' qualifications, location or occupational profiles do not correspond to employers' needs [5. 2018:P.985-1015].

Accordingly, labour mobility should not be reduced to interregional or international migration. In the proposed approach, it includes territorial mobility, intersectoral transitions, occupational and qualification mobility, movement between organisations, transition from informal to formal employment, and entry into digitally mediated forms of work. This broader interpretation allows labour mobility to be treated as an internal economic mechanism of labour-market adaptation. Its effectiveness is reflected not only in the number of movements, but also in shorter job-search duration, higher job retention, formalisation, income growth, improved vacancy filling and lower structural unemployment.

This interpretation is important for public policy. Excessive mobility may indicate regional distress and the absence of local opportunities, whereas insufficient mobility may preserve unemployment and skills shortages. Therefore, the policy objective is not to maximise movement as such, but to create productive, voluntary and protected transitions that improve employment quality and the economic return on human capital [1. 2025].

Methodology of regional diagnostics

The diagnostic framework combines economic-statistical analysis, regional comparison, normalisation, indexing, functional grouping and econometric assessment. The empirical basis includes regional indicators of employment and unemployment, average wages, the share of the informal economy, gross regional product per capita, market services per capita, and information on the dominant forms of labour movement. The Beveridge gap is added as an indicator of the mismatch between unemployment and vacancy dynamics. A large gap signals that vacancies and available labour coexist because of occupational, qualification, territorial or informational barriers.

The methodology consists of five consecutive stages. First, the indicators are selected according to their economic meaning and data comparability. Second, positive and negative indicators are normalised to a common scale. For positive indicators, the normalised value is $z(i) = [x(i) - \min x] / [\max x - \min x]$; for negative indicators, $z(i) = [\max x - x(i)] / [\max x - \min x]$. Third, the indicators are aggregated as $I(r,t) = \text{sum of } w(k)z(k,r,t)$, where $w(k)$ is the group weight and all weights sum to one. Fourth, regions are grouped according to the combination of labour supply pressure, wage attractiveness, formal-sector capacity, informality and service-sector concentration. Fifth, the classification is validated through econometric estimates, sensitivity analysis and scenario comparison [9. 2026:P.150-194].

The methodological advantage of this framework is that it avoids interpreting a single indicator, such as unemployment, as a complete description of the regional labour market. Regions with similar unemployment rates may have very different wage levels, vacancy density, informality and mobility channels. The framework therefore diagnoses not only the scale of the problem but also its structure and the appropriate policy response.

Empirical findings and functional typology

The analysis identifies four functional types of regional labour markets. The first type consists of labour-attracting, high-wage centres: Tashkent city, Navoi region and Tashkent region. These territories combine relatively high employment, high wages, a large formal sector and strong service-sector concentration.

Their dominant mobility forms are interregional attraction, commuting and the inflow of highly skilled labour. The principal policy task is to reduce skills shortages and ensure that growth centres receive qualified workers without creating excessive housing and infrastructure pressure.

The second type includes mass-absorption regions: Andijan, Namangan, Samarkand and Fergana. They have high population density and substantial labour supply, while their wage and formalisation indicators remain below those of the main attraction centres. The appropriate policy objective is to absorb large labour cohorts into formal and productive employment through district-to-district mobility, commuting, vocational reorientation and expansion of urban and suburban services.

The third type comprises regions with high labour-supply pressure and a large informal sector: Kashkadarya and Surkhandarya. In 2025, employment rates in these regions were about 65.9% and 64.8%, respectively, while average monthly wages were approximately 4,476.7 and 4,481.8 thousand soums. Service-sector capacity and gross regional product per capita were also comparatively limited. The policy priority is not to attract additional labour, but to channel surplus labour towards productive interregional, intersectoral and occupational transitions, while accelerating formalisation and local job creation.

The fourth type covers transition and balancing regions: the Republic of Karakalpakstan, Bukhara, Jizzakh, Syrdarya and Khorezm. These territories combine strong and weak indicators and may simultaneously experience local labour shortages and labour surpluses. Selective attraction, selective outflow, intersectoral mobility and local commuting are therefore more appropriate than a uniform policy.

The functional typology confirms that regional labour-market regulation should be based on economic characteristics rather than administrative boundaries alone. It is dynamic: a region may move from one type to another as wages, industrial structure, service capacity, formal employment and infrastructure change. Annual recalculation of the diagnostic index would allow policymakers to detect such transitions and adjust instruments in a timely manner.

Econometric and scenario results

The econometric analysis confirms that human capital, migration duration and regional conditions significantly affect labour mobility and income outcomes. Computer literacy and educational attainment had positive and statistically significant effects on income earned abroad, while longer migration experience increased earnings through better adaptation to the destination labour market. At the same time, the negative coefficient of education in the domestic-income model suggests that part of the highly qualified workforce is unable to realise its full earning potential in the local labour market and is therefore oriented towards external employment [9. 2026:P.173-176].

A separate model identified wages, poverty and unemployment as major drivers of labour migration and explained 87.3% of the observed variation. Under a scenario of rising household incomes, expanding investment, increasing job creation and reducing poverty, the labour migration index could decline from 100 in 2025 to 63.5 in 2030. This result should be interpreted as a scenario benchmark rather than an unconditional forecast. It implies that forced, income-driven migration can gradually be transformed into selective, skills-based mobility [9. 2026:P.176-177].

The dissertation calculations also show that directing labour from surplus regions to economically active territories and occupations can reduce unemployment by an additional 0.3-0.5 percentage points, increase the share of formal employment by 2.0-3.0 percentage points and raise labour productivity by 4.0-6.0% [9. 2026:P.18-20]. These effects depend on the simultaneous availability of transport, temporary housing, training, legal employment contracts and verified vacancies. Mobility without such complementary infrastructure may simply reproduce informality and social vulnerability in a new location.

Policy implications for Uzbekistan

The first policy implication is the introduction of differentiated regional mobility programmes. Labour-attracting centres need housing, transport and skills-recognition instruments that facilitate the inflow of qualified labour. Mass-absorption regions require expansion of formal jobs, urban services and employer-linked training. Labour-surplus regions need mobility vouchers that cover transport, temporary rent, retraining and job placement, combined with local entrepreneurship and industrial development. Transition regions require flexible programmes that can support both selective attraction and selective outflow.

The second implication is the creation of a unified digital labour-market infrastructure. Vacancies, occupational profiles, skills passports, training programmes, electronic employment contracts and placement outcomes should be integrated into one information environment. The system should not merely display vacancies; it should recommend realistic transition pathways by comparing a worker's skills with employer requirements, identifying the skills gap and linking the worker to a suitable short training programme. This would reduce information asymmetry and transaction costs, which are major barriers to mobility.

The third implication is to shift from financing activities to financing outcomes. Training providers and employment intermediaries should be evaluated by sustainable placement, six- or twelve-month job retention, wage growth and transition to formal employment rather than by the number of people enrolled. Employers that hire workers from labour-surplus regions and maintain legal employment relationships could receive time-limited incentives, while repeated use of temporary or informal arrangements should reduce eligibility.

The fourth implication is to monitor labour mobility through a three-level indicator system. Operational indicators should measure programme coverage, vouchers, training and signed contracts. Direct outcome indicators should measure placement speed, retention, vacancy filling and formalisation. Higher-level indicators should assess unemployment, informality, labour-income growth, poverty risks and the reduction of interregional disparities. Uzbekistan's 2026 policy targets - including reducing unemployment to 4.5%, reducing poverty to 2.8%, placing one million people in permanent jobs, legalising one million informal jobs and training 120,000 specialists for high-demand occupations - provide a short-term benchmark for this system [8. 2026].

The proposed approach can be implemented through annual regional labour mobility passports. Each passport would contain the diagnostic index, regional type, shortage occupations, surplus occupations, mobility barriers, infrastructure capacity and the recommended package of policy instruments. Such passports would help ministries, regional authorities, educational institutions and employers coordinate workforce planning and allocate resources to measures with the highest expected social and economic return.

Conclusion

Labour mobility is a key mechanism for adapting Uzbekistan's regional labour markets to demographic growth, technological change and unequal territorial development. The diagnostic approach proposed in this paper combines labour-market outcomes, wage signals, informality, regional production, service-sector capacity and mismatch indicators in a single analytical framework. Its main contribution is the transition from uniform administrative regulation to functional regional typology.

The results show that attraction centres, mass-absorption regions, labour-surplus regions and transition territories require different combinations of mobility, training, formalisation and infrastructure instruments. The practical effect of the methodology lies in its ability to identify where labour should be attracted, where surplus labour should be redirected, which skills should be developed and which barriers should be compensated. Applying annual regional mobility passports, digital vacancy-skills matching, mobility vouchers and outcome-based financing can transform labour mobility from a spontaneous response to regional inequality into a managed instrument of productive employment, human-capital development and inclusive economic growth in Uzbekistan.

References

1. Abdurakhmanov K.Kh., Zokirova N.K. Contemporary Labour Economics. Moscow: Delo Publishing House, 2025. 740 p.
2. Acemoglu D., Restrepo P. Automation and New Tasks: How Technology Displaces and Reinstates Labor. *Journal of Economic Perspectives*. 2019. Vol. 33, No. 2. P. 3-30.
3. Harris J.R., Todaro M.P. Migration, Unemployment and Development: A Two-Sector Analysis. *American Economic Review*. 1970. Vol. 60, No. 1. P. 126-142.
4. International Labour Organization. World Employment and Social Outlook: Trends 2025. Geneva: International Labour Office, 2025.
5. McGuinness S., Pouliakas K., Redmond P. Skills Mismatch: Concepts, Measurement and Policy Approaches. *Journal of Economic Surveys*. 2018. Vol. 32, No. 4. P. 985-1015.

6. National Statistics Committee of the Republic of Uzbekistan. Labour Market, Demographic and Wage Indicators for 2025. Tashkent: National Statistics Committee, 2026.
7. Organisation for Economic Co-operation and Development. How Do Structural Trends Affect Labour Market Shortages and Mismatch? Paris: OECD Publishing, 2025.
8. President of the Republic of Uzbekistan. Resolution No. PP-49 of 5 February 2026. Tashkent, 2026.
9. Shakarov Z.G. Improving Labour Mobility under Territorial Transformation of the Labour Market: DSc Dissertation. Tashkent, 2026.
10. World Economic Forum. The Future of Jobs Report 2025. Geneva: World Economic Forum, 2025.