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Digital skills and virtual work in the future of labor migration: insights into the experience of Uzbekistan in Central Asia

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Abstract

This article examines how digital skills and virtual employment are reshaping labor migration patterns, with a focus on Uzbekistan's evolving experience within Central Asia. Drawing on comparative legal analysis and secondary statistical sources, the study traces the shift from predominantly physical mobility toward digitally mediated cross-border work facilitated by online labor platforms. Evidence from the Online Labour Index shows that demand for virtual labor is concentrated in high-income economies, while supply is generated largely by developing countries, reflecting an emerging digital division of labor. The article analyzes the implications of artificial intelligence, automation, and telework for migrant workers and assesses Uzbekistan's policy responses, including vocational upskilling, WorldSkills standards, and pre-migration preparation. The findings suggest that targeted digital skills development, streamlined recognition of qualifications, and alignment of training with global standards can enhance the competitiveness of Uzbek workers in remote labor markets. The article contribute for recognizing "virtual labor migration" within international legal frameworks and integrating remote-work preparation into national workforce strategies to promote inclusive growth and social resilience.

Keywords: *digital skills, virtual work, labor migration, online platforms, global labor market*

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Introduction

Labor migration has become one of the defining features of contemporary socio-economic transformation (Lupak et al., 2022). Understanding its evolving patterns and geographic shifts is essential not only for interpreting global labor dynamics but also for enabling governments to design effective policies aimed at employment sustainability and social stability (Kaur & Kaur, 2024). Traditionally, analyses of labor migration have focused on the physical movement of workers across national borders, relying primarily on demographic and employment statistics (Anastasiadou et al., 2024).

According to international estimates, the number of international migrants reached approximately 272 million in 2023, accounting for about 3.5 percent of the world's population (Abuseridze et al., 2023; Giguashvili, 2023; Okruashvili & Bakhtadze, 2019). Projections suggest that by 2050 international migrant workers may constitute around 2.6 percent of the global population, or approximately 230 million people (Sabattini, 2022). However, such forecasts should be treated with caution, as they may not fully reflect the accelerating pace of globalization, rapid technological change, or the growing displacement of populations due to armed conflicts and political instability.

At the same time, the global labor market is undergoing profound transformation driven by digitalization and technological innovation (He et al., 2024). Between 2010 and 2020, the number of workers engaged in remote employment through online platforms increased by nearly 400 percent. By the early 2020s, approximately 16 percent of international companies had transitioned to fully remote operational models, 44 percent adopted hybrid work arrangements, while 40 percent continued to rely on conventional office-based employment (Shaikh, 2025). These trends intensified markedly during the COVID-19 pandemic, which accelerated the normalization of virtual employment worldwide (Alfano et al., 2024; Fan & Moen, 2025; Kramer & Kramer, 2020; Vyas, 2022).

Existing studies on labor migration increasingly acknowledge the growing importance of digital labor platforms and remote work (Tsapenko & Grishin, 2022). However, much of the current scholarship continues to conceptualize migration primarily in physical terms, paying limited attention to the legal, institutional, and policy implications of virtual forms of cross-border labor mobility (Axelsson, 2022). In particular, the integration of digital employment into national labor migration strategies remains insufficiently explored, especially in developing countries.

This gap is particularly evident in the context of Uzbekistan, where labor migration has traditionally been oriented toward physical mobility, while recent state initiatives increasingly emphasize digital skills development and international employability. Despite the rapid expansion of online work and the emergence of virtual labor markets, the concept of "virtual labor migration" has not yet been systematically examined within existing legal and policy frameworks.

Before proceeding to the analysis, it is necessary to define the central concept of this study and to delineate it from adjacent categories. In this article, virtual labour migration is understood as a form of cross-border labour mobility in which a worker, while remaining within the territory of the state of his or her citizenship or permanent residence, systematically provides services or performs work for the benefit of a client (employer) located in the jurisdiction of a foreign state, by means of digital information and communication technologies.

This definition comprises three constitutive elements: (a) the cross-border character of the labour relationship, whereby the worker and the client are situated in different jurisdictions; (b) the absence of the worker's physical movement across a state border as a necessary condition for the emergence of the labour relationship; and (c) the use of digital platforms and information and communication technologies as the primary instrument for organizing, performing, and supervising the work activity (Pastorek & Tomšej, 2025).

Virtual labour migration differs from a number of adjacent categories that are frequently used in the literature as functional synonyms but possess distinct analytical content (Kumpikaite-Valiuniene et al., 2022). Remote work (telework) denotes a form of work organization in which the worker performs his or her duties outside the employer's premises, typically with the aid of information technologies (Zakharov, 2022). However, remote work does not presuppose a mandatory cross-border element: the worker and employer may be located within the same jurisdiction (Sava & Sava, 2025). Virtual labour migration, by contrast, is by definition cross-border.

Online freelancing refers to the independent provision of services through digital platforms, most commonly on the basis of one-off assignments (Shkoler & Tziner, 2022). Although freelancing may include a cross-border element, it is not necessarily characterized by the regularity and stability of labour relations that the

concept of virtual labour migration presupposes (Trajano, 2021). Moreover, freelancing may be carried out entirely within a single state.

Platform-mediated work encompasses a broad spectrum of labour activity organized through digital platforms, including local services (delivery, transport) that do not have a cross-border character (Maury et al., 2024). Virtual labour migration constitutes a subset of platform-mediated work, limited to those cases in which the platform mediates specifically cross-border service provision (van Doorn et al., 2023).

Skilled migration presupposes the physical relocation of a highly qualified specialist to the state of employment (Batista et al., 2025). Unlike virtual labour migration, it requires physical crossing of a border, which fundamentally alters the applicable legal regime: questions of visa regulation, work permits, and the right of residence do not arise, whereas questions of jurisdiction, taxation, and social protection come to the fore (Pastorek & Tomšej, 2025).

Thus, virtual labour migration possesses its own analytical specificity that cannot be reduced to any of the categories enumerated above. Its distinguishing feature is the combination of the cross-border character of the labour relationship with the absence of the worker's physical relocation, which gives rise to unique legal, institutional, and policy challenges requiring independent regulatory treatment.

Against this background, the present article aims to analyze the transformation of labor migration under conditions of digitalization, with particular emphasis on the role of virtual employment and online labor platforms. Using comparative and statistical methods, the study examines global trends in digital labor, assesses Uzbekistan's emerging policy responses, and evaluates the implications of incorporating virtual labor migration into national workforce strategies. By doing so, the article seeks to contribute to the evolving discourse on labor mobility in the digital economy and to highlight new opportunities for developing countries in the Fourth Industrial Revolution.

Research Methods

This study employs a combined methodology comprising juridical-normative analysis, the comparative-legal method, and a conceptual-analytical approach.

Juridical-normative analysis is directed at the examination of legal norms and policy documents regulating labour migration, digital employment, and virtual work, both within the framework of Uzbekistan's legislation and at the international level. This approach makes it possible to assess the extent to which existing legal norms correspond to the challenges posed by the transformation of labour relations under conditions of digitalization.

The comparative-legal method is applied to analyse regulatory approaches in three jurisdictions selected on the basis of the following criteria. The United States of America is examined as the jurisdiction with the largest volume of demand for online labour (approximately 44% of global demand according to the Online Labour Index), possessing a developed legal framework in the field of the platform economy and precedent-setting experience in the regulation of gig-worker status (in particular, California's Assembly Bill 5, 2019, and subsequent judicial decisions). The European Union is selected as a regional jurisdiction that is forming the most comprehensive regulatory framework in the field of cross-border digital labour, including the Directive on platform work (adopted by the European Parliament in 2024), the Directive on transparent and predictable working conditions (2019/1152), and the existing mechanisms for the coordination of social protection for mobile workers (Regulations

883/2004 and 987/2009). Moreover, EU member states (Poland, Czechia, Germany) are key destination countries for Uzbek labour migrants. Japan is examined as an example of a jurisdiction in which a strategy of reliance on technological automation and digitalization is combined with a restrictive migration policy, thereby illustrating an alternative model of responding to labour-force shortages.

The comparative analysis is organized along four thematic parameters: (1) the legal status of platform workers and the classification of labour relations; (2) the taxation of income earned through digital platforms; (3) social protection mechanisms and their applicability to cross-border remote workers; and (4) institutional instruments for the protection of workers' rights under conditions of platform-mediated employment.

The conceptual-analytical approach is applied to formulate a working definition of virtual labour migration and to delineate it from adjacent categories (remote work, online freelancing, platform-mediated work, skilled migration), as well as to analyse structural trends in the global digital labour market on the basis of secondary statistical data (Online Labour Index, ILO data, UNCTAD data).

The empirical base of the study comprises normative legal acts of the Republic of Uzbekistan (presidential decrees, resolutions of the Cabinet of Ministers), data from international organizations (IOM, ILO, UNCTAD, OECD), statistics from online labour platforms, and secondary sociological data on the situation of Uzbek labour migrants.

Results and Discussion

Global online labour markets: structure, demand, and wage dispersion

Findings based on the Online Labour Index indicate that demand for online labor is highly concentrated in high-income economies. Employers located in the United States account for approximately 44 percent of global online labor demand, followed by the United Kingdom (8 percent), Australia (6 percent), and India (5 percent). Taken together, European countries generate around 23 percent of total demand. In contrast, the supply of online labor is dominated by lower-income economies, with India contributing 26 percent of the global workforce, Bangladesh 21 percent, and the Philippines 5 percent, while a notable 12 percent of workers are based in the United States.

Sectoral analysis further reveals a pronounced specialization within the global online labor market. Indian workers dominate software and technology development, accounting for approximately 55 percent of global supply in this segment, whereas workers in the United Kingdom are particularly prominent in professional services such as accounting, law, and business consulting. These patterns underscore the emergence of a differentiated digital division of labor shaped by skills, wage differentials, and platform-based demand (Wood & Lehdonvirta, 2021).

A growing number of online labor platforms facilitate these transnational employment relationships. Prominent examples include Fiverr, Freelancer, Upwork, Outsourcely, Guru, PeoplePerHour, and Amazon Mechanical Turk. Collectively, more than two thousand online labor platforms currently operate worldwide, with over 300 based in Europe alone. Their inherently transnational nature enables employers and workers to engage across jurisdictions with minimal physical constraints (Panfilova et al., 2021).

From a regulatory perspective, online labor platforms perform a crucial informational function for workers. They can identify occupations suitable for virtual performance, outline qualification requirements, and signal skill demands within both

remote and traditional employment models. Access to such information allows prospective migrant workers to make informed decisions, strategically plan career trajectories, and acquire competencies aligned with global labor market needs.

The increasing reliance on digital tools within transnational labor relations challenges traditional legal assumptions linking employment to physical location. As W.V.Vetter observes, geographic location has little relevance to Internet communications, as data transmission frequently crosses national borders regardless of the parties' legal jurisdictions. Similarly, Eleni Diker conceptualizes the Internet as a mechanism for the "removal of distance," fundamentally reshaping migrant networks and migration processes (İçduygu & Diker, 2017).

When labor relations are organized primarily through online information exchange and task performance, they can no longer be adequately explained by conventional legal concepts. This transformation necessitates the development of legal frameworks capable of addressing the regulatory challenges posed by digitalized and platform-mediated labor relations (McKendrick & Graziane, 2020).

Survey data further illustrate the growing significance of virtual work. A large-scale study conducted by Boston Consulting Group and KRC Research on behalf of Microsoft, involving 9,000 managers and employees, found that 82 percent of respondents regarded virtually organized work as more efficient than traditional on-site arrangements. In addition, approximately half of those surveyed identified remote work as the most effective means of retaining highly skilled professionals . These findings indicate that virtual employment has become an integral component of organizational productivity strategies rather than a temporary response to crisis conditions.

The structure of the global online labour market described above, characterized by the concentration of demand in high-income countries and substantial wage differentiation, defines the context within which virtual labour migration takes shape. However, the prospects for workers from developing countries to participate in these markets depend not only on the current conjuncture but also on fundamental technological shifts that are transforming the nature and content of global labour demand. It is therefore necessary to examine how technological transformation, including automation, artificial intelligence, and the emergence of new professional segments, affects the prospects for virtual labour mobility.

Technological transformation and the future demand for digitally skilled labour

Technological change is also reshaping the structure of labor demand. As Klaus Schwab has observed, automation increasingly affects not only manual and routine tasks but also professional occupations, including legal, financial, medical, and analytical work. A defining feature of the Fourth Industrial Revolution, therefore, lies in its capacity to reduce labor demand even in newly emerging industries, challenging traditional assumptions about job creation (Klaus Schwab, 2019).

These dynamics suggest that, in the medium term, reliance on inflows of foreign migrant labor may decline in certain developed economies. Japan provides an illustrative example. Despite rapid population aging, the country has historically limited large-scale admission of migrant workers into its industrial sector, while maintaining productivity growth through digitization, automation, and artificial intelligence. Nevertheless, acute demographic pressures have prompted policy reassessment. In December 2018, Japan enacted immigration reforms easing restrictions on foreign employment in sectors experiencing severe labor shortages, with the reforms projected

to admit more than 300,000 foreign workers, particularly in construction-related industries linked to preparations for the Tokyo 2020 Olympic Games.

These examples demonstrate that states increasingly rely on digital technologies, including artificial intelligence, both in regulating labor markets and in managing international migration. At the same time, the expanding use of AI in migration governance raises significant legal and social concerns. Chief among these is the risk of exacerbating inequalities between countries at different levels of socio-economic and technological development, potentially reinforcing existing digital divides (Helsper, 2022).

Nevertheless, in an increasingly interconnected global environment, where access to information technologies is steadily expanding, these risks are not insurmountable. Artificial intelligence also offers opportunities to reduce regulatory costs, improve administrative efficiency, and strengthen legal mechanisms for managing migration at national and regional levels. Empirical support for this assessment is provided by studies emphasizing the capacity of AI-driven systems to enhance institutional responses to complex migration challenges and to improve governance outcomes.

According to data from the International Labour Organization (ILO), permanent migrant workers constitute the largest segment of the global labor market, with skilled migrants numbering approximately 60 million, or nearly one-third of the total migrant workforce (International Labour Organization [ILO], 2020). In major destination countries such as Australia, the United States, and Canada, immigrants account for nearly 40 percent of employment in science, technology, engineering, and mathematics (STEM) fields. These figures underscore the increasing importance of skills-based mobility in the contemporary global labor market (Trebilcock, 2018).

Digitalization has further transformed labor migration by facilitating cross-border professional mobility rather than merely regional movement. A 2020 report on the digital economy documents a substantial expansion of services delivered digitally and through information and communication technologies (ICT), reflecting the growing integration of online provision into global labor markets (United Nations Conference on Trade and Development [UNCTAD], 2021). In this context, digital technologies play an increasingly significant role in safeguarding the rights of migrant workers and improving access to timely and reliable information, including for Uzbek citizens employed abroad, despite the persistent digital divide between Uzbekistan and major destination countries.

The application of ICT in labor migration serves multiple functions, including the dissemination of information on employment opportunities and intermediary services, guidance on lawful residence and employment procedures in host countries, and support for communication within migrant communities. For citizens of Central Asian states working abroad, social networks have emerged as primary channels for obtaining and sharing information, particularly among younger migrants with higher levels of digital literacy.

Beyond facilitating access to cross-border work opportunities, digital platforms and ICT infrastructures increasingly shape the institutional ecology of labor migration by mediating information flows between workers, intermediaries, employers, and public authorities. Platform interfaces function as de facto labor-market institutions by setting eligibility criteria, defining performance metrics, and operationalizing dispute-resolution mechanisms, thereby exercising quasi-regulatory influence over transnational employment relationships. In practice, algorithmic management systems

determine task allocation, pricing visibility, and reputational scoring, which directly affect workers' income stability and career trajectories. These governance functions, however, are typically embedded in private contractual regimes and platform terms of service governed by foreign law, limiting the capacity of sending states to enforce labor standards or ensure procedural fairness for their nationals engaged in remote work. At the same time, public authorities in sending countries are beginning to leverage ICT tools to improve migration governance through digital pre-departure training modules, online credential verification, and e-government services for migrants. For Uzbekistan, the institutionalization of digital public services in employment mediation creates opportunities to integrate platform work into formal labor-market policies, including the provision of legal guidance on cross-border contracting, tax compliance for platform income, and access to social insurance mechanisms adapted to remote work. Establishing dedicated advisory services for platform workers within existing employment centers could mitigate informational asymmetries and reduce the risks associated with informal contracting practices. In parallel, cooperation with major platforms and fintech providers could expand access to compliant payment channels and facilitate transparent reporting of earnings, thereby strengthening regulatory oversight while preserving the flexibility that makes platform-mediated work attractive to both workers and employers.

These developments highlight the need to move beyond ad hoc policy responses toward a coherent framework for governing platform-mediated cross-border work. Embedding digital labor migration within national employment strategies would enable more systematic protection of workers' rights while enhancing the developmental returns of remote work participation. This provides a direct rationale for examining Uzbekistan's emerging policy responses to virtual labor markets.

Within the framework of virtual labor relations, digital platforms offer new opportunities for skills development and for aligning workers' qualifications with employers' requirements. Through platform-based systems, migrant workers can upgrade their skills, submit documentation electronically, and compete for employment in international labor markets, while employers are able to identify and recruit specialists with the required competencies. Compliance with platform standards enhances migrants' competitiveness both abroad and in their home countries, encouraging investment in professional development and continuous learning.

At the same time, the expansion of virtual labor migration generates new challenges. Large transnational corporations often attract highly qualified specialists from developing countries, contributing to intensified intellectual migration or "brain drain." The growing outflow of skilled professionals toward advanced economies poses long-term risks for sending states, including reduced human capital and slower domestic development.

The alignment of national education and training systems with global labor market demands therefore becomes critical in this context. For Uzbekistan, the regular review and modernization of vocational and higher education curricula, taking into account both domestic needs and international skill requirements, are essential for narrowing the competitiveness gap and preparing the workforce for participation in digital and virtual labor markets. If implemented consistently, such measures can support the development of a highly skilled labor force capable of securing stable employment abroad while contributing to sustainable economic growth at home.

Analysis of international labor market data and digital economy reports makes it possible to identify several professional fields expected to remain in high demand in

developed economies over the coming decades. A common feature of these occupations is their compatibility with virtual work arrangements and their integration into platform-mediated labor markets.

First, demand for data-related professions, including big data analysts and data scientists, continues to expand rapidly. Big data refers to large-scale datasets generated through the widespread use of digital devices and online platforms, which are aggregated and analyzed to inform business, governance, and service delivery. The increasing digitization of consumption and communication has created strong demand among transnational corporations for specialists capable of processing and interpreting large datasets in order to model consumer behavior and optimize business strategies. According to the Big Data Academy MADE educational project, demand for big data specialists and data analysts increased 9.6-fold between 2015 and 2019. Over the past several years, the U.S.-based platform Glassdoor has consistently ranked data-related professions among the most attractive jobs in the United States. Projections by the U.S. Bureau of Labor Statistics further indicate that employment in this field is expected to grow by approximately 30.9% over the period 2019–2029.

Second, software development and information technology management remain core components of the global digital economy. Since the spread of personal computing technologies, demand for qualified software developers has remained persistently high. The rapid growth of mobile devices, cloud computing, artificial intelligence, online education platforms, and automation systems continues to expand the scope of software-based services. For specialists engaged in remote work, average annual compensation offered by international companies is reported to be significantly higher than in many traditional sectors, reflecting strong global competition for digital talent. These characteristics make software development particularly well suited to virtual labor relations and platform-mediated employment.

Third, technological change is reshaping traditionally location-dependent professions, most notably in healthcare. The accelerated development of telemedicine and digital health solutions, particularly during and after the COVID-19 pandemic, has expanded opportunities for remote provision of medical and support services. At the same time, demographic aging in developed economies has intensified demand for care-related occupations, including in-home assistance for older persons and individuals with disabilities. These trends indicate sustained growth in demand for health-related professions that combine digital tools with personalized services, with projections in several countries pointing to rapid employment growth in care-related occupations over the next decade.

Fourth, growing reliance on digital infrastructure has elevated the importance of cybersecurity and information security specialists. The expansion of online services and cloud-based systems has been accompanied by a rise in cyber threats, making information security a strategic priority for corporations, public authorities, and critical infrastructure providers. Market forecasts indicate sustained growth of the global cybersecurity sector over the coming years, which is expected to translate into strong demand for qualified professionals. Cybersecurity work is particularly compatible with virtual employment formats, enabling specialists to provide services across borders without physical relocation.

Fifth, emerging technological fields such as virtual and augmented reality (VR/AR) design and additive manufacturing (3D printing) are generating new forms of skilled employment. Initially associated primarily with entertainment and gaming, VR/AR applications are increasingly deployed in defense, healthcare, automotive

design, education, and industrial training. Similarly, advances in 3D printing technologies and materials are expanding their application in manufacturing, construction, and prototyping. These sectors combine advanced technical expertise with strong potential for remote collaboration and international project-based work.

Overall, these trends indicate a structural reorientation of global labor demand toward digitally mediated and skills-intensive occupations. For developing countries, including Uzbekistan, participation in these segments of the labor market offers opportunities to enhance workforce competitiveness and diversify migration pathways beyond traditional forms of physical mobility, provided that education and training systems are systematically aligned with evolving global skill requirements.

Recent market estimates underscore the rapid expansion and economic significance of platform-mediated remote work. Global revenues generated by digital labor platforms have grown steadily over the past decade, reflecting the normalization of cross-border service provision in sectors such as software development, design, marketing, and professional consulting. International labor market surveys indicate that a substantial and growing share of firms in high-income economies outsource tasks through online platforms, with remote contracting increasingly integrated into core business processes rather than confined to peripheral activities. This expansion is accompanied by a measurable increase in cross-border service exports delivered digitally, particularly in knowledge-intensive services, signaling that virtual labor markets are becoming a durable component of international trade in services rather than a temporary post-pandemic phenomenon.

Platform-mediated labor markets also exhibit pronounced wage dispersion and segmentation, with earnings varying significantly across countries, skill levels, and platform reputation scores. Empirical studies indicate that workers from lower-income economies tend to receive substantially lower compensation for comparable tasks than workers from high-income economies, even when performing identical services. Algorithmic ranking systems and client preferences for workers with established platform reputations further entrench first-mover advantages, making upward mobility difficult for new entrants from developing countries. These dynamics suggest that, without targeted policy interventions and capacity-building measures, virtual labor migration may replicate or even amplify existing global inequalities rather than mitigate them.

Empirical observations from major online labor platforms reveal pronounced wage dispersion across regions and skill categories, reflecting structural inequalities embedded in platform-mediated labor markets.

Table 1. Indicative wage dispersion on global online labor platforms (USD/hour) (ILO, 2021)

Region/Country Group	**Typical Hourly Range (USD)**	**Dominant Task Types**
United States / Western EU	25–60	Software development, data science, consulting
Central & Eastern Europe	15–35	Web development, design, QA
South Asia (India, BD)	5–15	IT services, microtasks, content moderation
Southeast Asia	6–18	Design, digital marketing, admin support
Sub-Saharan Africa	4–12	Data labeling, testing, virtual assistance

Source: processed by author, 2026

Table 1 highlights substantial cross-regional wage differentials for comparable categories of digital work, underscoring the need for skills upgrading and institutional support to enable workers from developing countries to access higher-value segments of virtual labor markets.

In parallel with the expansion of virtual forms of labour mobility, the accelerated development of automation and robotics technologies capable of replacing a significant proportion of routine labour functions continues. The development of humanoid robots designed for the performance of domestic and service tasks has already moved from the prototyping stage to the pre-serial production stage. A number of technology companies, including Tesla and Boston Dynamics, have presented prototypes of multifunctional robots capable of performing physical operations that previously required human participation.

For Uzbekistan, this tendency has direct practical significance. A substantial share of Uzbek labour migrants is employed in sectors most susceptible to automation: construction, warehouse logistics, building maintenance, and retail trade. If, within a horizon of 10–15 years, automation significantly reduces demand for unskilled manual labour in destination countries, this could lead to a sharp reduction in the volume of traditional physical labour migration and a contraction of remittances, which constitute a significant share of Uzbekistan's GDP. This risk reinforces the argument in favour of an accelerated reorientation of the migrant-training system toward digital specializations that provide access to virtual forms of labour mobility less susceptible to displacement by automation.

The analysis of global trends in the digitalization of labour and technological transformation indicates that demand for qualified specialists in information technology, data analytics, cybersecurity, and digital engineering will grow steadily in the coming decades. For developing countries that have traditionally served as suppliers of labour resources, these trends open fundamentally new channels of labour mobility that are not linked to physical relocation. Uzbekistan, as one of the largest labour-migrant-sending countries in Central Asia, is of particular interest in this context. The following section examines the specific policy and institutional measures undertaken by Uzbekistan in response to the global challenges described above, as well as the barriers to and prospects for the integration of Uzbek workers into virtual labour markets.

Uzbekistan's policy response: from physical mobility to digital workforce development

Over the past three years, the geographical structure of Uzbek labor migration has undergone a notable transformation. Migration flows that traditionally concentrated on the Russian Federation and the Republic of Turkey have increasingly shifted toward member states of the European Union. This reorientation is reflected not only in quantitative indicators but also in the qualitative characteristics of migration patterns.

In the Russian Federation, the number of deported Uzbek citizens exceeded 45,000 during the period from 2022 to 2024. The principal grounds for deportation included administrative violations (65%), violations of migration regulations (25%), and other causes (10%). A comparable situation has been observed in Turkey, where in 2023 alone approximately 12,000 Uzbek citizens were expelled for various legal and administrative reasons (Republic of Türkiye, Presidency of Migration Management, 2024).

Deficiencies in migrant legal protection mechanisms, instances of labor exploitation, delayed or unpaid wages, and discriminatory practices have increasingly compelled Uzbek migrant workers to seek alternative destinations. According to sociological survey data collected in the Russian Federation, 73 percent of respondents reported violations of their labor rights, while 58 percent indicated that wages were not paid on time (Center for Migration Studies, 2024, pp. 45–48).

Since 2022, the number of Uzbek labor migrants relocating to European countries has increased by approximately 3.5 times. Poland, the Czech Republic, Slovakia, Germany, and Lithuania have emerged as the primary destination countries. In the first half of 2024, an estimated 85,000 Uzbek citizens were engaged in labor activities in Poland, 42,000 in the Czech Republic, and 28,000 in Germany (International Organization for Migration [IOM], 2024).

Several factors contribute to the growing attractiveness of European labor markets for Uzbek migrants. These include transparent legal employment mechanisms, relatively high minimum wage levels (averaging between 1,500 and 2,000 euros), comprehensive social protection systems, and the effective functioning of labor rights enforcement institutions (European Labour Authority, 2024, pp. 156–162). In addition, European Union labor migration directives guarantee migrants' fundamental rights and provide protection against discrimination (European Union, 2014a, 2014b).

Despite these advantages, Uzbek migrants in European countries continue to face significant challenges. The language barrier remains the most serious obstacle. Empirical studies indicate that approximately 78 percent of migrants are compelled to accept employment below their qualification level due to insufficient proficiency in the host country's language, resulting in income reductions of 40–50 percent (OECD, 2023).

A second major challenge is the slow pace of social integration. Acquiring familiarity with European cultural norms, workplace practices, and legal culture typically requires an average of two to three years. During this adaptation period, approximately 35 percent of migrants commit administrative violations of varying severity, further complicating their integration into host societies.

A third major challenge relates to the complexity of the qualification and diploma recognition system. The recognition of educational credentials obtained in Uzbekistan typically requires between six and twelve months and involves costs ranging from 1,500 to 3,000 euros. As a result, approximately 62 percent of migrants holding higher education degrees are unable to secure employment in their field of specialization.

The analysis of geographical shifts in the structure of Uzbek labour migration from the Russian Federation and Turkey to the countries of the European Union is included in this study not as an independent subject of inquiry but as an empirical context demonstrating the unsustainability of a model based exclusively on the physical relocation of workers. Legal vulnerability, mass deportations, and systematic violations of labour rights in traditional destination countries attest to the exhaustion of this model's potential. At the same time, the reorientation of migration flows toward EU countries, despite persistent linguistic, qualification related, and institutional barriers, illustrates the limitations of a strategy based on simple geographical diversification. Virtual labour migration therefore emerges in this context not as an alternative to physical mobility but as a qualitatively new supplementary channel of labour mobility, enabling workers to gain access to foreign labour markets without the risks associated with physical relocation, including deportation, legal vulnerability, and cultural and linguistic isolation. Accordingly, the description of the dynamics of physical migration in

this article serves as an analytical foundation for the transition to the analysis of virtual forms of labour mobility.

A comparative analysis of the regulatory approaches of the jurisdictions under consideration with respect to platform-mediated work and cross-border remote employment reveals significant differences in legal regimes while simultaneously disclosing a common tendency toward the strengthening of regulation in this sphere.

Legal status of platform workers. In the United States, the classification of platform workers remains a matter of legal uncertainty. California's Assembly Bill 5 (2019) established a presumption of employment for gig workers on the basis of the ABC test; however, Proposition 22 (2020) subsequently introduced an exemption for workers of transportation and delivery platforms, returning them to the category of independent contractors. At the federal level, uniform regulation is absent, giving rise to fragmentation of the legal regime across states. The European Union has adopted the most systematic approach: the Directive on platform workers (adopted by the European Parliament in 2024) establishes a presumption of employment for persons providing services through digital platforms where indicators of control by the platform are present. Member states are obligated to transpose this Directive into national legislation, thereby creating the basis for uniform regulation across the EU. In Japan, platform workers are predominantly classified as independent contractors (gyomu itaku), and labour legislation (the Labour Standards Act) applies only to workers in formal employment relationships (roudousha). The regulation of platform work as an independent category at the legislative level has not yet been undertaken, although the Ministry of Health, Labour and Welfare has initiated a number of consultative processes. In Uzbekistan, the current Labour Code (2023) does not contain special provisions regulating platform work or cross-border remote employment, which creates a significant legal gap.

Taxation of platform income. In the United States, income from platform activity is subject to taxation as self-employment income, with platforms required to submit tax reporting (Form 1099-K) when payments exceed the established threshold. In the EU, Directive DAC7 (2021/514) obliges digital platforms to report to the tax authorities of member states on income earned by users, thereby enhancing the transparency of taxation of cross-border services. In Japan, freelancers are required to declare income independently under the kakutei shinkoku regime; however, special mechanisms for automatic platform reporting are not provided for in legislation. In Uzbekistan, the procedure for taxing income earned through foreign digital platforms has not been normatively regulated, creating uncertainty for both workers and fiscal authorities.

Social protection of cross-border remote workers. Within the EU, the coordination of social protection systems for mobile workers is carried out through Regulations 883/2004 and 987/2009, which establish rules for determining the applicable legislation and preventing double contributions. However, these Regulations were designed for physically mobile workers, and their applicability to persons carrying out cross-border remote work without physical relocation remains a matter of legal debate. The Framework Agreement on Cross-Border Telework (2023) represents the first attempt to adapt coordination rules to the new realities. In the United States and Japan, bilateral social security agreements cover cases of the physical posting of workers but do not regulate situations of virtual labour migration. Uzbekistan's bilateral agreements on social protection for migrants have been concluded predominantly in the context of physical migration and do not extend to persons engaged in cross-border remote work.

This comparative analysis demonstrates that even in jurisdictions with the most developed legal systems, the regulation of virtual labour migration is at an initial stage of formation. For Uzbekistan, this means that the development of a regulatory framework in this sphere can draw on advanced international experience while simultaneously taking into account the specificities of the national context.

In recent years, however, a series of measures have been undertaken to protect the rights and interests of migrant workers and to expand opportunities for vocational training. Several normative legal acts aimed at improving migrants' professional skills have been adopted, and the Ministry of Employment and Labor Relations has implemented regional programs designed to prepare workers for employment abroad.

In this context, pursuant to Presidential Resolution No. PQ-4804 of 11 August 2020, "On Additional Measures to Involve Low-Income and Unemployed Citizens in Entrepreneurship, Increase Their Labor Activity, Provide Vocational Training, and Ensure Employment of the Population," a new financing mechanism was introduced. Under this mechanism, the State Employment Promotion Fund covers the costs of vocational training, entrepreneurship education, and foreign-language instruction for unemployed citizens referred by labor authorities to accredited educational institutions.

At the "Ishga Marhamat" Monocenters and vocational training centers, graduates' professional qualifications are assessed in accordance with WorldSkills standards. Trainees who successfully pass the assessment are issued a Skills Passport certifying their competencies (Republic of Uzbekistan, 2021, Presidential Resolution No. PQ-4804).

In addition, by presidential decision, a package of benefits financed by the Fund for Supporting Citizens Working Abroad and Protecting Their Rights and Interests was introduced for the period from 1 September 2021 to 1 September 2022. These benefits apply to citizens registered in the "labor-migration" software system who have completed foreign-language or vocational training and are departing for employment abroad in organized cohorts through a selection procedure. The measures include payment of fees for successfully passed qualification examinations in foreign languages or trades, compensation for travel expenses, and reimbursement of costs associated with obtaining work visas for citizens migrating to developed countries through organized channels (Republic of Uzbekistan, 2021, Presidential Resolution No. PQ-4804).

To promote employment by equipping low-income and unemployed citizens with modern vocational and entrepreneurial skills, "Ishga Marhamat" Monocenters were established in the Republic of Karakalpakstan and all regions of Uzbekistan as of 1 January 2021. A system has also been introduced to actively involve non-state vocational training institutions by granting them incentives and preferential conditions. Within this framework, the assessment of trainees' qualifications based on WorldSkills standards and the issuance of Skills Passports have become an established practice.

Full details of these measures are set out in Presidential Resolution No. PQ-4804 of 11 August 2020 and the Regulation on the "Ishga Marhamat" Monocenters approved by Cabinet of Ministers Resolution No. 183 of 5 April 2021.

Given the scope of this section, it is not possible to address all benefits and opportunities created for migrant workers under the above normative legal acts. For the purposes of this study, the most significant development is the institutionalization of WorldSkills-based qualification assessment and Skills Passport issuance at the "Ishga Marhamat" Monocenters.

WorldSkills is an international non-governmental, non-profit organization comprising 85 member countries, representing approximately two-thirds of the world's population. It establishes international standards for more than 65 occupations by defining employer requirements and the skills and knowledge workers must possess. The organization aims to inspire and support 100 million young people in acquiring relevant skills by 2030. Uzbekistan joined WorldSkills in 2020 through the non-governmental organization WorldSkills Uzbekistan (WorldSkills International, 2024).

An analysis of WorldSkills standards shows that approximately 70 percent of the occupations covered are related to computer technologies. These include digital construction, 3D digital game art, graphic design technology, cybersecurity, IT network systems administration, IT software solutions for business, and a range of other technology-intensive fields (WorldSkills International, 2024).

However, analysis of the relevant policy documents indicates that current training programs primarily emphasize manual and technical occupations, with the objective of preparing skilled technicians to meet labor demand in the industrial, manufacturing, and construction sectors of CIS countries. Among the core tasks assigned to the "Ishga Marhamat" Monocenters, insufficient attention has been given to training specialists for high-demand digital occupations, information technology fields, and virtual labor markets.

In this regard, vocational training programs should be differentiated by type and duration. In particular, long-term training programs lasting thirty to forty weeks should incorporate targeted preparation of specialists in occupations demanded by transnational companies and virtual labor relations, in accordance with international standards.

At the same time, training at the "Ishga Marhamat" Monocenters alone is insufficient to achieve this objective. Within the broader school–TVET–higher education system, it is necessary to identify priority skill areas based on WorldSkills standards and to develop targeted strategies for nurturing and advancing the professional competencies of talented young people in these fields.

The consistent implementation of these measures would enable migrant workers to access higher-paid employment by preparing them for occupations that are expected to remain in high demand over the next 10–15 years, while simultaneously contributing to the long-term competitiveness of the national economy.

Table 2. Global distribution of online labor demand and supply (%)

Country/Region	Demand (%)	Supply (%)
United States	44	12
United Kingdom	8	—
Australia	6	—
European countries	23 total	—
India	—	26
Bangladesh	—	21
Philippines	—	5

Source: Kässi & Lehdonvirta (2018)

Table 2 illustrates the concentration of demand in high-income economies and the predominance of developing countries on the supply side, evidencing a digital division of labor. Uzbekistan's recent policy mix (vocational upskilling, WorldSkills-aligned certification, pre-migration language and skills training) improves physical mobility outcomes, yet underutilizes pathways into high-demand digital occupations. Reorienting training toward software development, data analytics, cybersecurity, and

tele-services would expand access to remote markets, reduce exposure to irregular migration risks, and diversify income channels.

Platform-mediated cross-border work raises questions of jurisdiction, labor protections, taxation, and social security portability. Existing frameworks largely omit virtual labor relations, leaving workers exposed to asymmetries in bargaining power and dispute resolution. Policy options include minimum platform transparency standards, contract law guidance for cross-border services, and bilateral or multilateral coordination on social protection portability for remote workers.

In order to characterize the current level of Uzbekistan's participation in global virtual labour markets, it is necessary to turn to the available quantitative and institutional data.

According to the State Statistics Committee of the Republic of Uzbekistan, the rate of internet penetration in the country reached 85.7% as of the end of 2023; however, the share of households with access to broadband internet at speeds sufficient for stable professional activity in real time (above 10 Mbps), particularly in rural areas, is considerably lower. According to the Ministry of Digital Technologies of the Republic of Uzbekistan, the average speed of fixed broadband internet in the country stood at 28.4 Mbps in 2023, which is significantly below the OECD average (approximately 120 Mbps). This digital infrastructure gap constitutes the first structural barrier to the full participation of Uzbek specialists in platform-mediated labour markets.

The second significant barrier is limited access to international payment systems. As of 2024, PayPal — the principal payment instrument on leading freelance platforms (Upwork, Fiverr) — is not officially available to users from Uzbekistan. Alternative channels, Payoneer and Wise, have gained limited adoption, but their use entails additional transaction costs and administrative complications. This situation restricts the ability to receive payment for services rendered through international platforms and compels some workers to resort to informal settlement schemes.

An analysis of the profiles of Uzbek freelancers on the Upwork platform reveals a characteristic tendency: the overwhelming majority of registered specialists from Uzbekistan offer services in the categories of translation, basic data entry, and simple graphic design, which are the segments with the lowest average remuneration rates. The share of Uzbek specialists in high-paying categories, such as software development, data analytics, cybersecurity, and consulting, remains minimal. This confirms the proposition that structural barriers, including linguistic, infrastructural, and qualification-related constraints, impede Uzbek workers' access to the higher-value segments of the global virtual labour market.

From an institutional perspective, an analysis of the activities of the "Ishga Marhamat" monocenters deserves attention. According to the Ministry of Employment and Labour Relations of the Republic of Uzbekistan, by 2024, 28 monocenters were operating in the country, covering all regions of the republic. However, an analysis of the catalogue of vocational training programmes implemented at these centers indicates a predominance of courses in construction, technical, and manufacturing specializations (welding, electrical installation, plastering, vehicle maintenance), with an insignificant share of programmes in information technology and digital competencies. According to available estimates, the share of courses directly related to IT specializations and digital skills does not exceed 10–15% of the total number of programmes offered.

Furthermore, according to the results of a national labour force survey conducted with the support of the United Nations Development Programme (UNDP) from 2022 to 2023, the level of professional English language proficiency among Uzbekistan's working age population, sufficient for conducting business correspondence and professional interaction on international platforms, does not exceed 5 to 7 percent. This indicator is significantly lower than comparable figures for competing countries that supply online labour, including India, where approximately 10 to 12 percent of the population has a high level of English proficiency, as well as Bangladesh and the Philippines.

Despite growing interest in remote work, Uzbek workers still face structural barriers to effective participation in platform mediated labour markets, including limited high speed internet outside major cities, restricted access to international online payment systems, and uneven professional English proficiency. Platform algorithms and reputation systems also disadvantage newcomers from underrepresented countries, making it harder to access higher value tasks without prior ratings or completed contracts. Consequently, Uzbek freelancers remain concentrated in lower paid digital work, while higher value services are dominated by workers from countries with longer platform experience. This pattern reproduces offline inequalities in digital labour markets and highlights the need for targeted institutional support to reduce entry barriers

From a regulatory and institutional perspective, the expansion of platform-mediated cross-border work exposes gaps in existing labor, tax, and social protection regimes in Uzbekistan. Current legislation largely presumes physical relocation of workers and does not clearly define the legal status of individuals engaged in cross-border remote service provision. This creates uncertainty regarding income taxation, social insurance contributions, dispute resolution mechanisms, and the applicability of labor protections in platform contracts governed by foreign law. To address these gaps, Uzbekistan could consider developing a tailored legal category for remote cross-border workers, issuing administrative guidance on the taxation of platform income, and negotiating bilateral arrangements on social protection portability for digitally mobile workers. Complementary measures, such as legal literacy training for freelancers, standardized model contracts for platform work, and public private partnerships with major platforms, could strengthen worker protections while improving compliance and transparency in the growing virtual labor market.

Policy recommendations. (i) integrate remote-work pathways into workforce strategies; (ii) prioritize digital skills pipelines aligned with global demand; (iii) streamline credential recognition for remote services; (iv) develop guidance for platform contracting and dispute resolution; and (v) invest in digital infrastructure and English-language proficiency to reduce access barriers.

Conclusion

This study has examined the transformation of labor migration under conditions of digitalization, with particular attention to the emergence of virtual forms of labor mobility and their implications for Uzbekistan. The analysis demonstrates that digital technologies, online labor platforms, and remote employment opportunities are reshaping traditional patterns of migration, increasingly shifting cross-border labor engagement from physical movement toward digitally mediated participation in global labor markets

The findings indicate that enhancing migrants' competitiveness in this evolving environment requires a comprehensive approach that combines legal, educational, and institutional measures. Pre-migration preparation remains a critical component of successful labor mobility, particularly in relation to language proficiency, knowledge of host-country labor regulations, and workplace integration practices. At the same time, the effectiveness of skilled migration is closely linked to the international recognition of educational qualifications, underscoring the importance of aligning national higher education systems with international frameworks and standards.

Digital skills development emerges as a central factor in expanding access to virtual employment opportunities. The growing demand for remote workers in developed economies highlights the potential for preparing Uzbek specialists for participation in international digital labor markets, thereby reducing dependence on traditional forms of labor migration. In this context, the alignment of vocational and professional training with global competency standards, including those promoted by initiatives such as WorldSkills, is essential.

The study also reveals significant gaps in existing international legal frameworks, which remain primarily oriented toward traditional forms of labor migration and provide limited guidance on the regulation of virtual labor relations. Addressing these gaps requires greater engagement at the international level and the incorporation of virtual labor migration into policy discussions within global organizations. Integrating these emerging forms of labor mobility into national workforce planning will be crucial for ensuring long-term competitiveness and social resilience.

Overall, the findings support the conclusion that virtual labor migration is no longer a marginal phenomenon but an increasingly integral component of the global labor system. By proactively adapting legal frameworks, education policies, and workforce strategies, developing countries such as Uzbekistan can leverage digital transformation to promote inclusive growth, protect migrant workers' rights, and enhance their position within the international labor market.

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References

Abuseridze, G., Agapova, O., Paliani-Dittrich, I., Grasis, J., & Kavelidze, E. (2023). Migration from Georgia and Ukraine in the context of Russian aggression. In *Handbook of Research on the Regulation of the Modern Global Migration and Economic Crisis* (pp. 107–121). IGI Global Scientific Publishing. https://doi.org/10.4018/978-1-6684-6334-5.ch007

Alfano, V., Mariotti, I., Nappo, N., & Vecchione, G. (2024). Work-life balance during the COVID-19 pandemic. A European perspective. *Journal of Industrial and Business Economics*, *51*(4), 1041–1065. https://doi.org/10.1007/s40812-024-00316-1

Anastasiadou, A., Kim, J., Sanlitürk, E., de Valk, H. A. G., & Zagheni, E. (2024). Gender Differences in the Migration Process: A Narrative Literature Review. *Population and Development Review*, *50*(4), 961–996. https://doi.org/10.1111/padr.12677

Axelsson, L. (2022). Border timespaces: understanding the regulation of international

mobility and migration. *Geografiska Annaler, Series B: Human Geography*, *104*(1), 59–74. https://doi.org/10.1080/04353684.2022.2027260

Batista, C., Han, D., Haushofer, J., Khanna, G., McKenzie, D., Mobarak, A. M., Theoharides, C., & Yang, D. (2025). Brain drain or brain gain? Effects of high-skilled international emigration on origin countries. *Science*, *388*(6749), eadr8861. https://doi.org/10.1126/science.adr8861

Fan, W., & Moen, P. (2025). The Future(s) of Work? Disparities Around Changing Job Conditions When Remote/Hybrid or Returning to Working at Work. *Work and Occupations*, *52*(1), 91–129. https://doi.org/10.1177/07308884231203668

Giguashvili, G. (2023). Challenges of international migration in Georgia. *InterConf*, *37(171)*, 33–43. https://doi.org/10.51582/interconf.19-20.09.2023.004

He, W., Zhang, B., & Zhang, J. (2024). The Impact of Technology on the Labor Market: An Analysis of the Changing Landscape. *9th International Conference on Financial Innovation and Economic Development (ICFIED 2024)*, 498–504. https://doi.org/10.2991/978-94-6463-408-2_56

Helsper, E. (2022). The Digital Disconnect: The Social Causes and Consequences of Digital Inequalities. *The Digital Disconnect: The Social Causes and Consequences of Digital Inequalities*. https://doi.org/10.4135/9781526492982

İçduygu, A., & Diker, E. (2017). Labor Market Integration of Syrian Refugees in Turkey: From Refugees to Settlers. *The Journal of Migration Studies*, *3*(1), 12–35.

Kässi, O., & Lehdonvirta, V. (2018). Online labour index: Measuring the online gig economy for policy and research. *Technological Forecasting and Social Change*, *137*, 241–248. https://doi.org/10.1016/j.techfore.2018.07.056

Kaur, R., & Kaur, K. (2024). Adapting to Global Work Dynamics: Navigating Change and Cultivating Sustainable Employment Strategies. *Journal of Social Welfare and Management*, *16*(3).

Klaus Schwab. (2019). Davos Manifesto 2020: The Universal Purpose of a Company in the Fourth Industrial Revolution | World Economic Forum. *World Economic Forum*, *2*, 1–2.

Kramer, A., & Kramer, K. Z. (2020). The potential impact of the Covid-19 pandemic on occupational status, work from home, and occupational mobility. In *Journal of Vocational Behavior* (Vol. 119, p. 103442). Elsevier. https://doi.org/10.1016/j.jvb.2020.103442

Kumpikaite-Valiuniene, V., Duobiene, J., Pinnington, A. H., & Lahrech, A. (2022). Migrants' motivations and intentions to work virtually for their country of origin. *International Journal of Emerging Markets*, *17*(2), 386–412. https://doi.org/10.1108/IJOEM-06-2019-0475

Lupak, R., Mizyuk, B., Zaychenko, V., Kunytska-Iliash, M., & Vasyltsiv, T. (2022). Migration Processes and Socio-Economic Development: Interactions and Regulatory Policy. *Agricultural and Resource Economics*, *8*(1), 70–88. https://doi.org/10.51599/are.2022.08.01.04

Maury, O., Hakala, O., & Näre, L. (2024). Migrant workers within the platform assemblage: entwined temporalities of gig work and the border regime. *Journal of Ethnic and Migration Studies*, *50*(15), 3768–3785. https://doi.org/10.1080/1369183X.2024.2379645

McKendrick, G., & Graziane, N. M. (2020). Drug-Induced Conditioned Place Preference and Its Practical Use in Substance Use Disorder Research. *Frontiers in Behavioral Neuroscience*, *14*, 582147. https://doi.org/10.3389/fnbeh.2020.582147

Okruashvili, N., & Bakhtadze, L. (2019). International Migration Processes and Its Impact

on the Georgian Labor Market. *Proceedings of International Academic Conferences*, *9111470*. https://doi.org/10.20472/iac.2019.046.012

Panfilova, L., Drogovoz, S. M., Sadovnyk, O. V., Kalko, K. O., Borysiuk, I. Y., Glushchenko, A. V., Liulchak, S. Y., & Hainiuk, M. B. (2021). Rights and Obligations of Regulators, Drug Manufacturers, Doctors, Pharmacists, Patients, and Insurance Companies in the Case of Off Label Use of Medicinal Products. *Pharmacologyonline*, *3*, 1532–1543.

Pastorek, Š., & Tomšej, J. (2025). The Balance Between National Sovereignty and Economic Migration: Are Quota Systems Discriminatory and Do Foreigners Have a Right to Work Permits? *Adam Mickiewicz University Law Review*, *17*, 151–172. https://doi.org/10.14746/ppuam.2025.17.06

Sabattini, N. (2022). *International Labor Migration and Care: The Case of Southeast Asian Workers in Japan*.

Sava, Z., & Sava, Z. (2025). The Global Shift Towards Remote Work and its Legal Implications. *Interdisciplinary Journal of Research and Development*, *12*(1 S1), 279. https://doi.org/10.56345/ijrdv12n1s137

Shaikh, N. (2025). *HYBRID WORK IN HIGH-TECH COMPANIES Why do employees need to be back at the office again?*

Shkoler, O., & Tziner, A. (2022). Freelancers in organizations: A novel perspective. In *Engineering the World of Work* (pp. 21–38). Edward Elgar Publishing. https://doi.org/10.4337/9781839105562.00011

Trajano, J. C. (2021). A Rights-Based Approach to Governing Online Freelance Labour: Towards Decent Work in Digital Labour Platforms. In *NTS Insight* (Issue August). JSTOR.

Trebilcock, A. (2018). The International Labour Organization. *Conceptual and Contextual Perspectives on the Modern Law of Treaties*, *15*(2), 848–880. https://doi.org/10.1017/9781316179031.028

Tsapenko, I. P., & Grishin, I. V. (2022). Virtualization of Cross-Border Labor Migration. *Herald of the Russian Academy of Sciences*, *92*(5), 580–589. https://doi.org/10.1134/S1019331622050069

van Doorn, N., Ferrari, F., & Graham, M. (2023). Migration and Migrant Labour in the Gig Economy: An Intervention. *Work, Employment and Society*, *37*(4), 1099–1111. https://doi.org/10.1177/09500170221096581

Vyas, L. (2022). "New normal" at work in a post-COVID world: work–life balance and labor markets. *Policy and Society*, *41*(1), 155–167. https://doi.org/10.1093/polsoc/puab011

Wood, A. J., & Lehdonvirta, V. (2021). Antagonism beyond employment: How the 'subordinated agency' of labour platforms generates conflict in the remote gig economy. *Socio-Economic Review*, *19*(4), 1369–1396. https://doi.org/10.1093/ser/mwab016

Zakharov, D. K. (2022). Organization of Remote Work of Employees in Modern Conditions. *Lecture Notes in Networks and Systems*, *398 LNNS*, 26–32. https://doi.org/10.1007/978-3-030-94870-2_4