ENSURING EMPLOYMENT OF THE POPULATION IN MAHALLAS:

DIGITAL PLATFORMS AND COOPERATION MECHANISMS

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ABSTRACT

This study examines the role of digital platforms and cooperation mechanisms in enhancing employment among mahalla residents in Uzbekistan — a developing economy undergoing rapid digital transformation. Using official employment statistics, comparative case studies, and policy analysis covering ***2026-2026, the paper identifies structural barriers to community-level employment*** and evaluates outcomes from digitally enabled cooperative frameworks. Findings reveal that despite moderate progress, Uzbekistan's unemployment rate stood at 9.4% in 2023 [1], with youth unemployment at 15.9% and informal employment comprising 51.4% of total employment [2]. Pilot implementation of the Mahalla.uz digital employment platform across 1,200 communities yielded a 5.2% improvement in employment outcomes [3], while international precedents from South Korea and India demonstrate significantly higher gains of 12.3% and 8.7%, respectively [8, 9]. The study argues that a hybrid cooperative model — integrating digital infrastructure with mahalla self-governance and state facilitation — represents the most viable strategy for sustainable community-level employment development. Policy recommendations address digital literacy gaps, platform interoperability, and incentive alignment between mahalla institutions, enterprises, and the state.

Keywords: mahalla; digital employment platforms; cooperative mechanisms; labour market; informal economy; Uzbekistan; community-based development

1. INTRODUCTION

Unemployment and underemployment remain among the most pressing socioeconomic challenges in Uzbekistan, a lower-middle-income country with a population of approximately 36.9 million [1]. The country's labour market is characterised by persistently high rates of informal employment, elevated youth unemployment, and substantial outmigration — structural vulnerabilities that manifest acutely at the community level [2, 6]. Within this context, the mahalla — a traditional community self-governance unit with deep roots in Central Asian civic history — has emerged as the primary institutional channel for state-directed social policy, including targeted employment initiatives [14].

Uzbekistan's approximately 10,800 officially registered mahallas collectively represent a decentralised institutional infrastructure capable, in principle, of facilitating both demand-side identification and supply-side mobilisation of local labour [15]. However, the capacity of mahallas to function as effective employment intermediaries has been constrained by informational asymmetries, weak coordination mechanisms between community institutions and enterprises, and limited access to digital tools [12]. The rapid development of Uzbekistan's digital economy — reflected in the government's Digital Uzbekistan 2030 strategy and the Cabinet of Ministers' Resolution No. 267 of 2022 — presents a novel and urgent opportunity to address these structural limitations [15].

Digital employment platforms — broadly defined as ICT-based systems that connect job seekers with employment opportunities, training resources, and cooperative networks — have demonstrated measurable impact across a range of developing economy contexts [7]. Their integration with community-based governance institutions such as mahallas remains, however, underexplored in the post-Soviet Central Asian setting, creating a policy gap that this paper seeks to address.

This paper pursues three research objectives: (1) to characterise the current employment landscape within Uzbekistan's mahalla system using recent empirical data; (2) to assess the effectiveness of existing and pilot digital platform models in

enhancing mahalla-level employment outcomes through comparative international evidence; and (3) to identify the structural features of cooperation mechanisms most conducive to sustainable employment development at the community level.

2. METHODS

This study employs a mixed-method analytical framework combining quantitative descriptive analysis with qualitative comparative case study methodology. Quantitative data were sourced from the State Statistics Committee of the Republic of Uzbekistan (annual statistical yearbooks, 2019–2023), the International Labour Organization World Employment and Social Outlook 2023, the World Bank Uzbekistan Economic Update series, and the Asian Development Bank Key Indicators 2023 [1, 2, 4, 11]. These sources provide nationally representative labour market statistics enabling longitudinal trend analysis across a five-year observation window that includes both the COVID-19 shock year (2020) and subsequent recovery.

The comparative case study component draws on documented programme outcomes from South Korea, India, Kazakhstan, and Georgia — countries selected on the basis of analytical comparability: each has implemented community-level digital employment platforms or cooperative employment mechanisms within the same temporal window [8, 9, 10, 13]. Programme outcome data were extracted from official government reports, ILO evaluations, and peer-reviewed assessments. Systematic comparison followed the framework of Yin (2018), structured along three analytical axes: (a) platform design and governance architecture; (b) quantitative employment outcomes; and (c) cooperation mechanism features.

Policy document analysis was conducted on Uzbekistan's legislative framework, including Cabinet of Ministers Resolution No. 267 on Digital Economy Development 2022–2026 and Ministry of Employment annual reports [3, 15]. Ethical considerations were addressed through exclusive reliance on publicly available secondary data; no primary human subject data collection was undertaken.

3. RESULTS

3.1 Employment Landscape in Uzbekistan's Mahallas

Uzbekistan's labour market exhibited modest improvement over the observation period, yet structural challenges persisted (Table 1). The overall unemployment rate declined from 9.3% in 2019 to 9.4% in 2023 — a trajectory that, while showing positive trend momentum, reveals the disruption caused by the COVID-19 pandemic, during which unemployment peaked at 10.0% in 2020 [1]. Youth unemployment (ages 15–24) declined marginally from 16.2% in 2019 to 15.9% in 2023, remaining approximately 1.7 times the adult rate and indicating persistent structural barriers to youth labour market integration [2].

Informal employment — defined as work lacking social protection coverage and formal contracts — comprised 51.4% of total employment in 2023, representing a gradual decline from 54.3% in 2019 but still at a level that substantially constrains fiscal capacity, human capital investment, and social security coverage across the economy [2, 13]. Labour outmigration, a significant household coping mechanism, increased from 2.1 million in 2019 to 2.7 million in 2023, reflecting both international wage differentials and insufficient domestic job creation [6]. At the mahalla level, officially registered unemployed individuals decreased from 187,300 in 2020 to 155,400 in 2023, partly attributable to improved economic conditions and expanded mahalla-based social support infrastructure [3, 14].

Table 1. Key Employment Indicators in Uzbekistan, 2019–2023.

Indicator	2019	2020	2021	2022	2023
Unemployment rate (%)	9.3	10.0	9.8	9.6	9.4
Youth unemployment rate (%, ages 15–24)	16.2	17.1	16.8	16.4	15.9
Informal employment share	54.3	55.1	53.8	52.6	51.4

Indicator	2019	2020	2021	2022	2023
(%)					
Labour migrants abroad (million)	2.1	1.8	2.0	2.4	2.7
Mahalla-registered unemployed (thousand)	142.5	187.3	173.6	168.2	155.4

Source: State Statistics Committee of Uzbekistan. (2024). Statistical Yearbook of Uzbekistan 2023. Tashkent: Goskomstat [1]; International Labour Organization. (2023). World Employment and Social Outlook 2023. Geneva: ILO [2]; Ministry of Employment and Labour Relations of Uzbekistan. (2023). Annual Report on Employment and Labour Market 2023. Tashkent [3].

3.2 Digital Platform Models: International and Domestic Experience

Comparative analysis of digital employment platforms operating at the community level reveals significant variation in coverage, design architecture, and employment outcomes (Table 2). South Korea's Village Employment Network (VEN), administered by the Korea Employment Information Service, achieved a 12.3% improvement in employment outcomes across 15,400 communities by 2021 through an integrated approach combining real-time job matching, skills certification, and cooperative enterprise registration [8]. India's MGNREGS Digital Portal extended the Mahatma Gandhi National Rural Employment Guarantee Scheme to over 250,000 villages, generating an 8.7% employment improvement primarily through guaranteed public works programmes augmented by digital beneficiary tracking [9].

Kazakhstan's EnbekNet reached 6,800 communities with a 7.1% employment improvement by 2022, emphasising public-private partnerships in job placement and vocational training referrals [10]. Georgia's Community Employment Hub achieved a 6.4% improvement across 3,150 communities by

2023 through EU-co-funded digital skills and micro-enterprise development programmes [13]. Uzbekistan's Mahalla.uz pilot programme — launched across 1,200 mahallas in 2022–2023 under the auspices of the Ministry of Employment — recorded a 5.2% improvement in employment outcomes [3]. The platform integrated job vacancy listings, vocational training referrals, and mahalla administrator dashboards, though coverage remained limited relative to the national total of 10,800 mahallas.

Table 2. Comparative Analysis of Digital Employment Platforms at the Community Level.

Country	Platform / Initiative	Communities Covered	Employment Improvement (%)	Year
South Korea	Village Employment Network (VEN)	15,400	+12.3	2021
India	MGNREGS Digital Portal	250,000+	+8.7	2022
Kazakhstan	EnbekNet	6,800	+7.1	2022
Georgia	Community Employment Hub	3,150	+6.4	2023
Uzbekistan (pilot)	Mahalla.uz Pilot Programme	1,200	+5.2	2023

Source: Kim, S. & Park, J. (2021). Village Employment Networks in South Korea: Impact Assessment. Seoul: KEIS [8]; Ministry of Rural Development, India. (2022). MGNREGS Annual Report 2021–22. New Delhi: Government of India [9]; Ministry of Employment and Labour Relations of Uzbekistan. (2023). Annual Report on Employment and Labour Market 2023. Tashkent [3]; ILO.

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4. DISCUSSION

The findings reveal a consistent pattern across both domestic and comparative evidence: digital platform integration generates measurable positive employment outcomes at the community level, yet the magnitude of effect is strongly conditioned by the institutional and cooperative architecture within which platforms are embedded. The gap between Uzbekistan's 5.2% employment improvement and South Korea's 12.3% gain is not primarily technological in origin; rather, it reflects four structural factors identified across the case studies.

First, mahalla administrative capacity remains limited relative to the coordination demands of digital employment systems. Unlike South Korea's village employment officers — dedicated full-time staff with verified digital competency — mahalla administrators in Uzbekistan simultaneously manage diverse social welfare, community safety, and administrative functions with minimal ICT training or dedicated staffing [8, 14]. Second, cooperative linkages between mahallas, local enterprises, and vocational education institutions remain underdeveloped. The VEN model's effectiveness derived substantially from formalised tri-sector partnerships that transformed platforms from passive information tools into active labour market intermediaries [8]. Third, digital literacy constraints among economically inactive mahalla residents — particularly women and older cohorts — limit demand-side platform utilisation despite improving connectivity infrastructure [7, 12]. Fourth, platform governance frameworks in Uzbekistan remain primarily state-centric, limiting the participatory co-design dynamics that appear to enhance platform relevance and uptake in international cases [7, 15].

These findings align with Karimov's (2023) observation that digital employment platforms in Central Asia face a 'capacity-connectivity paradox': mobile internet penetration reached 72.4% in Uzbekistan in 2023, yet the

institutional and human capital conditions necessary to translate connectivity into employment outcomes remain underdeveloped [10]. Khasanov (2021) similarly argues that mahalla social capital — while substantial — is insufficiently leveraged in formal economic coordination, a gap that well-designed cooperative mechanisms could bridge [14]. Ergashev and Hamidov (2022) provide supporting evidence from agricultural cooperative development, demonstrating that collective organisation increases per-capita income by 23–31% relative to individual smallholders when combined with market access support [12].

The cooperative mechanism dimension warrants specific attention. Evidence from India's MGNREGS and Kazakhstan's EnbekNet indicates that the most effective community employment platforms are not purely market-based job-matching tools, but hybrid instruments combining market mechanisms with state guarantee functions and civil society participation [9, 13]. For Uzbekistan, this implies that Mahalla.uz should evolve from an information portal toward a cooperative facilitation platform — one enabling mahalla members to collectively identify priority economic activities, form producer cooperatives, access microcredit, and engage with regional supply chains. The EBRD (2023) notes that cooperative enterprise models in transitioning economies demonstrate higher resilience to external shocks when governance is locally anchored, a finding directly relevant to the mahalla institutional context [11].

5. CONCLUSION

This study has demonstrated that digital platforms and cooperation mechanisms hold substantial, though as yet partially realised, potential for enhancing employment among mahalla residents in Uzbekistan. The central empirical finding — that a 5.2% employment improvement is achievable at the pilot stage of Mahalla.uz implementation — is encouraging, while international evidence indicates that with appropriate institutional development, gains of 12% or more are feasible within comparable community governance frameworks.

Three policy priorities emerge from the analysis. First, mahalla digital capacity must be systematically developed through dedicated training programmes targeting both administrators and residents, with particular emphasis on gender-inclusive participation given documented female exclusion from digital employment channels. Second, the Mahalla.uz platform architecture should be expanded to support cooperative enterprise functions — including cooperative registration, collective procurement, micro-enterprise financing, and supply chain integration — moving beyond its current job-listing orientation. Third, platform governance frameworks should adopt participatory co-design models, engaging mahalla residents as active contributors to platform functionality rather than passive beneficiaries of centrally designed systems.

Future research should examine longitudinal employment outcomes across a broader and geographically stratified sample of mahallas, the differential impact of platform features on specific demographic groups (particularly youth and women), and the long-term fiscal sustainability of mahalla-based digital employment programmes. The mahalla system's distinctive institutional characteristics — high social trust, geographic density, and established governance legitimacy — constitute an underutilised asset in Uzbekistan's broader labour market development agenda that well-designed digital and cooperative mechanisms can effectively mobilise.

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