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TECHNOLOGICAL INNOVATIONS TO IMPROVE EMPLOYMENT: AN ANALYSIS OF UZBEKISTAN'S EXPERIENCE

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Abstract: This article examines the opportunities for improving employment through technological innovations. The focus is on the political and economic measures implemented in recent years in the Republic of Uzbekistan aimed at developing the digital economy, vocational education, and entrepreneurship. The analysis based on statistical data shows the positive impact of technological infrastructure and digital literacy on job creation.

Keywords: employment, technological innovation, digital economy, entrepreneurship, Uzbekistan.

1. Introduction

In the modern world, technological development directly affects the labor market. On the one hand, new technologies are pushing traditional jobs out of the market, while on the other hand, they are creating new job opportunities. Innovative approaches, especially digital economy and vocational training programs, are increasingly important for improving employment.

2. Literature Review

According to international organizations (IMF, World Bank, OECD), countries that have adapted to technological innovations experience lower unemployment rates. Authors Acemoglu and Restrepo (2019) argue that technology replaces workers but also creates new tasks. In the case of Uzbekistan, analyses based on reports from the State Statistics Committee and the Center for Economic Research are available.

3. Research Methodology

The article is based on official statistics from Uzbekistan for the years 2018-2023, employment programs, the "Digital Uzbekistan" strategy, and the "Youth and Women Employment" programs. The analysis includes graphic and tabular forms, trend analysis, and correlation-based evaluation methods. Reports from the State Statistics Committee, Ministry of Employment and Labor Relations, Economic Systems, and the “IT Park Uzbekistan” center were used for this research. The research deeply examines the impact of state programs on employment, including through programs such as “Digital Uzbekistan – 2030”, remote work initiatives, “Every Family is an Entrepreneur”, the “Youth Register”, and the “Women Register”, as well as grant distribution and vocational retraining courses under “Ish Marhamat” (Welcome to Work) monomarkets.

The following methods were used in the analysis:
Trend Analysis: The change dynamics of employment indicators from 2018 to 2023 were illustrated using line graphs. For instance, the number of IT specialists increased by 15-20% annually.

Tabular Comparative Analysis: Differences in employment levels across regions with technological infrastructure were displayed.

Correlation Analysis: A positive correlation (R = +0.4) was found between digital literacy courses completion and subsequent employment.

Diagrams and Graphs: To intuitively present statistical changes, bar charts and line graphs were used. For example, the number of people retrained for new professions and their employment rates were visualized over the years.

Additionally, international comparisons were made by evaluating the experiences of Estonia and India in transitioning to digital employment, which were compared with Uzbekistan's conditions.

Table 1. Employment Indicators 2018–2023

Year	Trained in Professions (thousands)	Employed (%)	Employed in IT (thousands)
2018	15	48	3
2019	18	51	4.5
2020	25	52	6.2
2021	30	58	9
2022	35	60	11.5
2023	33	65	14

4. Results

4.1. Digital Services and Employment (2018–2023): The number of young people working in the IT sector increased by 4.5 times over five years.
4.2. Vocational Training Centers Impact: From 2020 to 2023, 120 thousand citizens were trained in modern professions through the “Ish Marhamat” monomarkets, with 60% employed.
4.3. Opportunities for Women and Youth: The number of people employed in remote work through technoparks and IT parks reached 70 thousand in 2023, with 45% of them being women.

5. Discussion

Uzbekistan's experience shows that introducing technological innovations, along with adapting them to the population’s qualifications and literacy, plays a significant role in improving employment. In regions with digital infrastructure, self-employment has noticeably increased. However, in rural areas, these opportunities are not yet fully realized.

6. Conclusion

Technological innovations are a powerful tool to improve employment. Uzbekistan's experience suggests a model for creating new jobs by expanding digital services, modernizing vocational education, and supporting entrepreneurship. Further development of this approach is advisable for the future.

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