Impact of Artificial Intelligence on the Labor Market: Analysis of Activities and Research in Uzbekistan

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Abstract- **This article discusses the use of artificial intelligence in international practice and its application in the service sector. In addition, the legislation of the Republic of Uzbekistan is considered, in particular, the development of artificial intelligence, methods of its application and development in production.**

Keywords: Artificial intelligence, digitalization, electronic clinic, technology, production.

1. INTRODUCTION

Uzbekistan is witnessing a transition to the era of digitalization, which is fundamentally changing the existing socio-economic model of the world. In this process, artificial intelligence technologies play a crucial role. The Decree of the President of the Republic of Uzbekistan dated February 2021, "On measures to create conditions for the accelerated introduction of artificial intelligence technologies", and the "Digital Uzbekistan-2030" Strategy determined the legal basis for the development of artificial intelligence technologies and established the main directions of development.

As part of the adopted resolution, the Program of Measures for the Study and Implementation of Artificial Intelligence Technologies was approved, and the Strategy for the Development of Artificial Intelligence was developed, which determines the basic directions and principles for the use of artificial intelligence in the short and long term.

2. ANALYSIS AND RESULTS

Uzbekistan is taking steps to expand digitalization in various areas, taking into account the experience of combating the pandemic. This includes the expansion of digitalization in the healthcare sector, the completion of the implementation of the "electronic polyclinic" and "telemedicine" systems in the regions. The digital transformation of the banking sector continues, including automated control systems and financial technologies.

For the digitalization of agriculture in Uzbekistan, it is planned to attract more than 600 million US dollars [2] . in order to introduce agricultural technologies and innovative solutions. In the period from 2020 to 2022, about 2.5 billion US dollars were attracted for the development of digital infrastructure [2] . As a result, three large new data centers were put into operation in the cities of Tashkent, Bukhara and Kokand in order to expand the fixed telecommunications network, modernize the mobile network and provide access to the Internet at a speed of at least 10 Mbps. However, the introduction of artificial intelligence technologies in Uzbekistan is limited by some aspects.

Firstly, significant capital investments are required for the implementation of artificial intelligence, so active government participation and funding are necessary for the successful implementation of these processes.

Secondly, public funding leads to the choice of such intelligent systems that can be used in large-scale production. However, the question of the allocation of financial resources by the state for the development of independent intelligent systems for small businesses and entrepreneurship remains open.
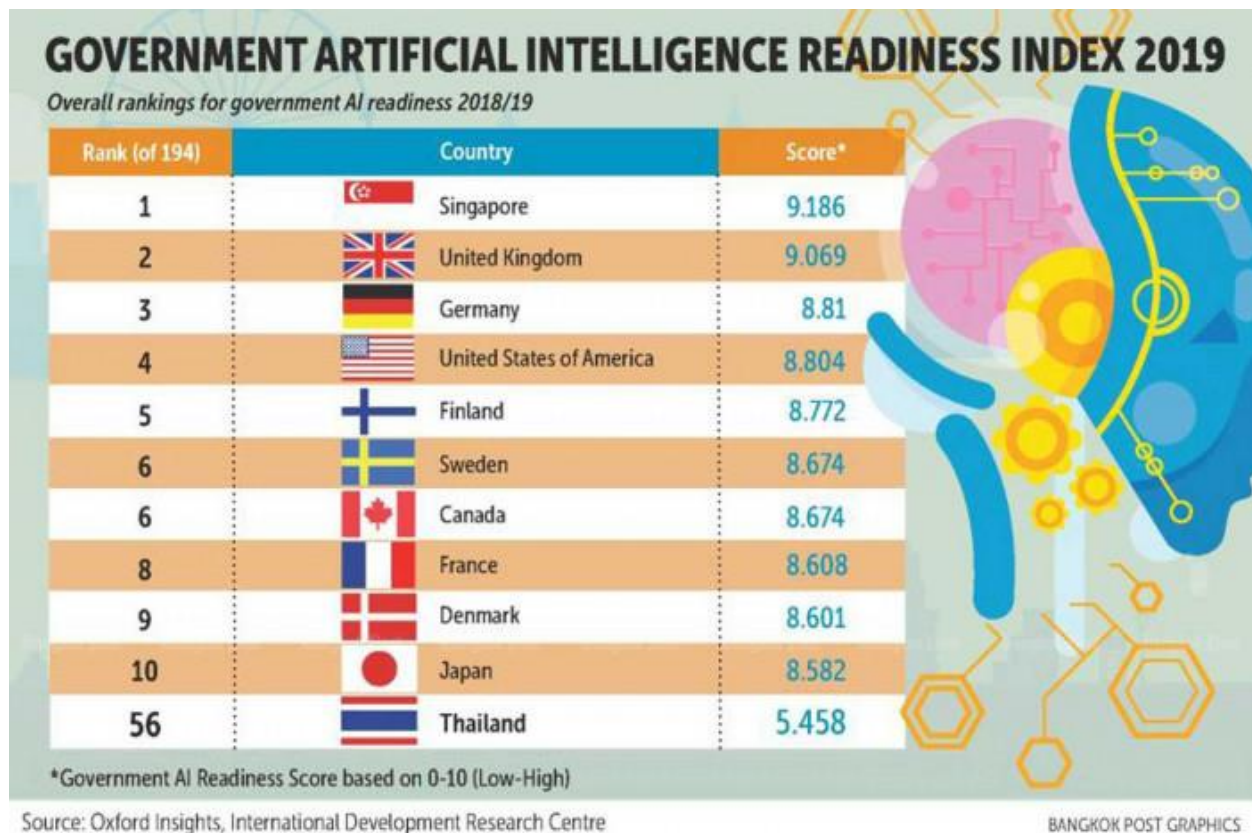
GOVERNMENT ARTIFICIAL INTELLIGENCE READINESS INDEX 2019
Overall rankings for government AI readiness 2018/19

Rank (of 194)	Country	Score*
1	Singapore	9.186
2	United Kingdom	9.069
3	Germany	8.81
4	United States of America	8.804
5	Finland	8.772
6	Sweden	8.674
6	Canada	8.674
8	France	8.608
9	Denmark	8.601
10	Japan	8.582
56	Thailand	5.458

*Government AI Readiness Score based on 0-10 (Low-High)

Source: Oxford Insights, International Development Research Centre

BANGKOK POST GRAPHICS

Fig.1. Government AI Readiness Index in 2019

Uzbekistan ranks 95th with a score of 37.171 points (out of a possible 100) in the Index [3] , which compares the performance of different countries. A total of ten metrics are considered, such as Vision, Governance and Ethics, Digital Power, Adaptability, Size, Innovation Capacity, Human Capital, Infrastructure, Availability and Data Quality. For each of these indicators, Uzbekistan scored below average.

Analyzing the performance of the Index, we can conclude that Uzbekistan has significant potential to improve its position in the ranking. Issues that require special attention and improvement include Vision and Governance, where the country needs to develop a clear strategy and effective governance mechanisms for the development of the digital economy.

Digital Power Estimation is also an important aspect that needs to be improved. The development of infrastructure, including communication networks and Internet access, as well as ensuring the availability and quality of data, will play an important role in strengthening the country's digital capacity.

It should be noted that improving human capital, including the development of information technology skills and increasing the level of digital literacy, will be a key factor in increasing the competitiveness of Uzbekistan in the international arena.

It is worth paying attention to the country's innovative potential, creating a favorable environment for the development of start-ups and attracting investments in the field of digital technologies.

In general, the analysis of the Index allows you to see the weaknesses of Uzbekistan in the field of digitalization and artificial intelligence. However, recognizing these weaknesses and taking appropriate action will help the country reach its potential and achieve better results in the future.

The solution to these aspects is international cooperation. For example, cooperation with the Russian group Sber makes it possible to introduce SubTech and RegTech artificial intelligence technologies for monitoring commercial banks, analyzing the quality of banking services and remote Face -ID biometric identification" [5] .

Therefore, when developing artificial intelligence information systems for business, it is necessary to take into account that these technologies significantly increase the efficiency and competitiveness of any enterprise. For

example, a study by the French company Capgemini Consulting found that sales organizations using artificial intelligence technologies were able to increase sales of new products and services by more than 10% and achieve significant results in increasing the number of buyers, network promoters and total customers.

Various events are held in Uzbekistan aimed at the development and application of artificial intelligence [4] (AI) in various spheres of society. Below are some of the activities carried out:

1. Establishment of the National Coordination Center for the introduction of modern. Information and Communication Technologies: This center was established with the aim of developing AI and digital technologies in the country. The Center coordinates activities related to AI and supports initiatives in this area.
2. AI Research and Development: The Uzbek State University of Information Technologies (USUIT) and other universities in the country are conducting AI research and development. These works include the development of new algorithms, machine learning models and the application of AI in various industries.
3. Conferences and seminars: Uzbekistan hosts conferences and seminars on AI and its applications. For example, the "Conference on Machine Learning and Data Mining" and the "International Conference on Artificial Intelligence and Computer Science" provide platforms for sharing AI knowledge and experience.
4. Training and support programs for start-ups: Uzbekistan develops educational programs on AI and supports start-ups working in this area. This includes conducting specialized courses and programs aimed at educating students and professionals in the field of AI.

In connection with the priority goals of the development strategy of New Uzbekistan for the period 2022-2026, digital economy technologies are being actively introduced in the country, including artificial intelligence, which is one of the key factors in economic development and contributes to an increase in production by about 2.5 times.

In this regard, an Advisory Council was established under the Ministry of Innovative Development to develop proposals for the national strategy of Uzbekistan in the field of artificial intelligence.

Within the framework of the council, working groups will be created that bring together researchers and companies to conduct practical experiments and quickly introduce artificial intelligence into the country's economy. The work of the council will be carried out on a voluntary basis with the participation of the private sector, academic and expert circles, the media and public organizations.

Digital technologies play a crucial role in improving the work of public authorities due to the fact that the development of the "electronic government" system will allow citizens to save time and money when obtaining the necessary documents, as well as increase the openness and transparency of the work of public authorities. At the same time, an important role in the development of the "e-government" system is assigned to a Unified Portal of Interactive Public Services.

Unified Portal of Interactive Public Services (my.gov.uz) provides more than 370 types of services online. At the same time, a single portal mobile application has been developed, which provides 165 e-government services. To date, the number of registered users on the single portal is 4 million people, and the number of services rendered through it is about 10.2 million. The most important thing is that the citizens of Uzbekistan, thanks to the digitalization of public services, have saved 40 billion sums. At the same time, all electronic public services are connected to a single billing system, which allows citizens to make payments for services in the field of housing, transport, real estate, healthcare, education, etc.

The most important result of providing these digital services is the creation of trust between the citizen and the authorities, where everyone has the right to be heard and feel part of this society. However, all of the above is just the beginning of a long journey in digital development. We still need to continue working in this direction, creating new opportunities and conditions for the development of our society.

Developing the field of information technology in the country, we have repeatedly returned to the same idea — to become a regional IT hub and turn into a competitive global player in the field of ICT. In reality, this is a very difficult task, but it can be done. To this end, in recent years, active work has been carried out to attract large foreign IT companies and experts in this field, a number of measures are being implemented to improve the attractive image of Uzbekistan in the international arena.

In February 2022, the IT Park announced the launch of IT-Visa and TashRush programmes aimed at providing assistance to relocators, including visa support, organising meetings with public and private companies, assistance in finding employment in large IT companies, etc.

To date, the number of IT specialists who arrived in the country as part of the relocation program has exceeded the mark of 6 thousand people. The number of foreign companies that have opened or expanded their business in Uzbekistan is more than 60, including companies such as EPAM Systems, iTechArt, Wargaming, IThub,

Geointellect and Prow.

In addition to attracting foreign IT-companies to Uzbekistan, IT-park also opens its foreign representative offices, thereby expanding its networks around the world. Currently, IT-Park has its foreign representative offices in the USA, Germany and Latvia.[6]

The main mission of the representative office of the IT Park is to create favorable conditions for the export of domestic goods and services, perform tasks for their popularization, conduct advertising campaigns, search for orders, assist in concluding contracts between foreign customers and residents of the IT park. In addition, the IT park acts as a guarantor for both parties – for the customer on the quality of work and for the contractor on payment for the work performed. For this purpose, insurance and surety systems have been introduced that comply with international standards.

Uzbekistan achieved good results in the international ratings for assessing the development of information and communication technologies. In these ratings, along with the place occupied, an index is indicated that takes into account several indicators assessing the state of development of this sphere in the country.

The Mobile Communication Index is compiled by the Global System for Mobile Communications (or GSMA Association), the index measures indicators in more than 170 countries in comparison with the key factors contributing to the introduction of mobile Internet. Compared to 2020, Uzbekistan has improved its performance on this index from 46.99 to 50.9 in 2021 and ranks 127th among 170 countries.

The E-Government Development Index (EGDI) is compiled by the Department of Economic and Social Affairs of the UN Secretariat based on the indicators of three sub-indices: the development of online public services, telecommunications infrastructure and human capital development. According to the indicators of this index, Uzbekistan improved its indicators to 0.73 in 2022, compared with 0.67 in 2020, and ranks 69th in the ranking among 193 states.[6]

Digital Skills Gap Index 2021 (DSGI), compiled by the American multinational publishing company Wiley, evaluates 134 economies based on 30 indicators in 6 areas. In the latest ranking of the DSGI-2021 index, Uzbekistan ranks 76th out of 134 countries with an index of 4.6 (max. 10.0).

According to the results of the Oxford Insights' Government AI Readiness Index in 2022, Uzbekistan improved its position by 14 positions and took 79th place out of 181 countries.

Another significant result is an improvement in the Inclusive Internet Index by The Economist Journal, in which Uzbekistan ranks 61st out of 100 countries (69.1).

In recent years, the digital economy has been growing at an unprecedented pace, which is largely due to the continuous development of digital technologies and the increasing use of these technologies by enterprises and individuals. This growth is driven by a number of factors, including the development of new digital infrastructure, the availability of digital devices and services, as well as the growing popularity of online activities.

However, for the further development of digitalization, it is necessary to continue the introduction of advanced information technologies in many sectors of the economy, further expansion of digital infrastructure and development of the national market of digital technologies and services, as well as improvement of legislation for IT business in accordance with international standards.

Business process outsourcing (BPO) plays an important role in the development of digital services. In order to attract foreign outsourcing companies to Uzbekistan, a major project is being implemented to create remote BPO centres. It is planned to increase the number of such centres to 100 within five years. In addition, a loan of $50 million was allocated from the funds of the World Bank for the project "Inclusive Digitalization in Uzbekistan" to create and equip remote BPO centres.[6]

In the course of cooperation between the United States and Uzbekistan in 2022, an agreement was signed on the establishment of an Uzbek-American business process outsourcing corporation. The new corporation will outsource business processes in the field of insurance, factoring, quality control and multimedia. Within 3 years, the corporation will create 1,100 jobs and export $110 million per year.

Active work is underway to improve the image of the Uzbek IT sector in the international arena. To this end, it is planned to conduct PR campaigns in foreign countries and organize annual events Uzbekistan – New IT-destination in the USA. At the same time, the IT-park of Uzbekistan is the main business card for Uzbek programmers.

The implementation of these measures will contribute to improving the competitiveness of the IT industry and increasing the volume of exports of IT services. The Ministry of Digital Technologies of Uzbekistan has set a goal to increase the export of information technology services to $1 billion by 2028.

In addition, for the development of the space industry, Presidential Decree No.429 of November 23, 2022 "On

additional measures for the further development of the space industry" was adopted, which provides for the development of high-speed Internet access via communication satellites, space navigation, remote sensing of the Earth, geographic information systems, etc.

Uzbekistan is striving to become part of the global digital economy. Measures taken at the government level aimed at making Uzbekistan an attractive place for investors and entrepreneurs in the field of ICT contribute to the achievement of this goal.

The country has made tremendous progress in creating the infrastructure necessary for the growth of the digital economy. In particular, broadband Internet access has been significantly expanded, mobile payments and e-commerce solutions have been provided. In addition, efforts were made to reduce bureaucratic barriers and encourage investment in startups, as well as to improve the skills of specialists [6].

3. CONCLUSIONS

In conclusion, it should be emphasized that the use of artificial intelligence technologies significantly affects the competitiveness of the country and ensures the security of society in the near future. Therefore, the Government of Uzbekistan, which has determined the policy of introducing artificial intelligence in various sectors of the economy, needs to use long-term strategic planning methods to overcome the negative consequences of automation and digitalization of production processes. In addition, it is necessary to take into account the factor of employment of the population as available jobs in production.

The measures being implemented create a solid foundation for Uzbekistan to become an innovative regional centre of the digital economy. By creating favourable conditions for supporting technological enterprises and providing access to capital, Uzbekistan can further strengthen its position in the rapidly changing global digital landscape.

REFERENCES

[1]. ABREKOV MM, VLASOV AV SPATIAL ECONOMY // SPATIAL ECONOMY Founders: Institute for Economic Research, Far Eastern Branch of the Russian Academy of Sciences. - 2022. - T. 18. - No. 4. - p. 36-67.

[2]. Bazarov O. Sh. et al. Formation and development of the market economy in the post-Soviet economic space // Market economy under risk and uncertainty. - 2020. - p. 239-316.

[3]. The Future of Jobs (2020, World Economic Forum (WEF))

[4]. Rustambekov I., Gulyamov S. Artificial intelligence is a modern requirement in the development of society and the state // Gulyamov Said Saidahrarovich . – 2021. – no. 1.

[5]. Shermukhamedov O. A., Mukhitdinova M. Kh. ON THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE BANKING SPHERE // Russia: trends and development prospects. – 2021. – no. 16-2. - p. 526-527.

[6]. https://www.eupoliticalreport.eu/uzbekistan-in-the-process-of-digitalization/#:~:text=In%20the%20latest%20ranking%20of,place%20out%20of%20181%20countries.