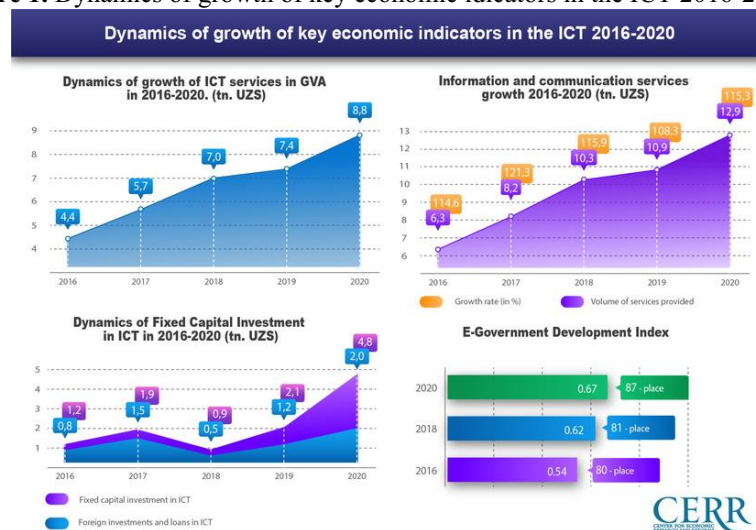


Service Delivery Index-PSDI), the Index of Digital Citizen Engagement Index DCEI, as well as the Index of political and technical capabilities (GovTech Enablers Index GTEI) [2].

Among the most significant projects in the field of e—government is the Unified Portal of Interactive Public Services (my.gov.uz) which was developed taking into account the interests of citizens and business users and with multi-channel access. Citizens and businesses can register, submit documents and make payments on the online tax portal, and electronic invoicing is fully implemented. In 2020, serious work was carried out as part of the development of the UPIPS system. So, according to the results of last year, 9.8 million applications were submitted. The total number of UPIPS users exceeded 380 thousand, and 185 thousand people connected to the system only during the reporting period. Currently, about 218 public services are provided in the UPIPS system [3].

Picture 1. Dynamics of growth of key economic indicators in the ICT 2016-2020. [4]



Thus, in 2018, the Digital Trust Fund was established to support the Development of the Digital Economy in order to attract and consolidate investors' funds for the implementation of projects in the field on the terms of public-private partnership, including those related to the introduction of block chain technology.

In 2019, an IT park appeared in Uzbekistan. Its main tasks are education, support and development of startups, participation in the development of relevant legislation, creation of its own infrastructure. Educational centers have been created in various cities of the country, an IT campus with business centers, office and residential premises is being built. According to the data received from the Statistics Agency, the economic indicators of IT Park residents are increasing from year to year. In 2022, the volume of investments in fixed assets amounted to 130.4 billion soums. These indicators reached 231.2 billion soums in the first qū lvarter of 2023, an increase of 1.7 times, and by the second quarter of the year there is a slight decrease, and the volume of investments reached 148.2 billion soums. In total, in the first half of 2023, the total amount of investments reached 379.4 billion soums, which means that the semi-annual figures are almost 3 times more than in 2022 [5]. The presence of women in the IT sector of Uzbekistan has significantly increased. So, in recent years, projects aimed at supporting women and women's initiatives have been implemented, such as: Tumaris.Tech, IT club for women "GAP", Skills4Girls, Digital Internship Program.

In November 2019, the program "One Million Programmers" (One Million Uzbek Coders) was launched in Uzbekistan. This is an analogue of the One Million Arab Coders program (it has been operating in the UAE since 2017). The program is implemented with the support of the Ministry of IT and Communications Development of Uzbekistan in cooperation with the Dubai Future Foundation. Its participants are trained in the following specialties: Data Analysis, Android Programming, Full-Stack Development and Frontend Development.

A new stage of development in the sphere was the signing by the President of the Decree "On the approval of the Strategy "Digital Uzbekistan-2030" and measures for its effective implementation" dated October 5, 2020 [6]. The implementation of the document is aimed at digitalization of regions and industries. A separate roadmap has been created for each direction. The strategy provides for the transfer of all government payments to electronic form, as well as the introduction of more than 400 information systems and electronic services. The purpose of the adoption of the document is a successful transition to the digital economy, taking into account modern realities. After all, today the share of the digital economy in Uzbekistan's GDP is 2.2%. At the same time, the average optimal indicator is 7-8%, for example, in the UK it is 12.4%, South Korea – 8%, China – 6.9%, India – 5.6%, at the same time in Russia – 2.8%, Kazakhstan – 3.9%. In accordance with the draft Concept for the development of the Electronic Government system of the Republic of Uzbekistan, it is planned to increase the share of ICT services in GDP to 5.0% by 2025, and by 2030 – up to 10% [7].

Table 1. Indicators of digital economic development of the Republic of Uzbekistan [8].

No.	Indicators	2016	2017	2018	2019	2020	2021	2022
1	Permanent population (at the beginning of the year, thousand units)	31575,3	32120,5	32656,7	33255,5	33905,2	34558,9	35271,3
2	The ratio of the number of	68,2	68,7	69,2	67,4	68,1	66,0	67,0

	the employed population to the number of the population of working age (percentage)							
3	Growth rates of the gross domestic product (at the beginning of the year, in %)	107,2	105,9	104,4	105,5	106,0	102,0	107,4
4	Growth rates of GDP per capita (at the beginning of the year, in %)	105,4	104,1	102,7	103,7	104,0	100,1	105,3
5	Total income of the population (billion soums)	197962,4	300842,7	365735,6	236893,1	414968,7	519181,4	634797,0
6	Growth rate of total income per capita compared to last year (in percent)	114,9	117,7	124,8	119,3	111,3	122,7	119,8
7	The amount of gross added value created in the fields of information economy and ecommerce (at the beginning of the year, billion soums)	3876,3	4967,7	6377,8	7 732,1	8 491,9	10 777,0	17 066,5
8	The share of gross added value created in the information economy and ecommerce sectors in GDP (at the beginning of the year, in % of GDP)	1,9	2,1	2,3	2,0	1,7	1,9	2,5
9	Number of enterprises and organizations operating in the field of "Information and communication" by type of economic activity (at the beginning of the year, in units)	6 370	6 427	6 403	6 975	7 901	9 517	10 587
10	The number of subscribers connected to the Internet (at the beginning of the year, per 100 inhabitants)	26,6	30,2	34,5	40,4	48,8	58,4	65,8
11	Share of enterprises and organizations connected to the Internet (at the beginning of the year, growth rate, in percent)	21,6	25,9	27,2	27,5	26,2	21,1	17,5
12	Length of optical fiber communication lines (at the beginning of the year, thousand km)	20	22,1	24,5	26,6	36,6	68,6	118,0
13	Availability of personal computers (except servers) in enterprises and organizations (at the beginning of the year, units)	734569	800767	853825	929900	1012726	1014686	1106143
14	Number of computers connected to the Internet in enterprises and organizations (at the beginning of the year, unit)	223907	271357	310459	358003	413417	441913	538933
15	The number of computers connected to the local network in enterprises and organizations (at the beginning of the year, unit)	287362	325466	364378	401494	416870	376538	421560
16	Share of enterprises and organizations with a local network (at the beginning of the year, in percent)	4,5	5,2	5,3	5,8	5,3	3,8	3,0
17	Share of enterprises and organizations with personal computers (at the beginning of the year, in percent)	44,2	50	50	55,2	57,7	57,0	46,3
18	The number of subscriber radio stations connected to the mobile communication	66,0	66,8	69,5	66,6	71,0	75,9	83,1

	system (at the beginning of the year, per 100 inhabitants)							
19	The number of broadband Internet subscribers (at the beginning of the year, thousand units)	466,3	511,5	498,5	622,2	725,4	1080,0	1 457,5
20	The number of subscribers connected to the Internet through mobile communication (at the beginning of the year, thousand units)	7 793,7	9 022,9	10 258,8	12 668,6	15651,2 17	946,5 20	991,8
21	turnover (at the beginning of the year, billion soums)	-	6,0	12,1	40,9	275,3	1 002,5	5 978,7

In January 2022, the "New Uzbekistan Development Strategy for 2022-2026" appeared. In the next five years, Uzbekistan will continue to move towards digitalization of public services, the activities of law enforcement agencies, healthcare organizations, the banking sector and agriculture. It is proposed to create a digital traffic management system, improve e-government. By 2026, 100% of public services should become electronic. In addition, among the planned measures are the introduction of the Mobile ID system, the development of the projects "Digital Passport of Citizens" and "Digital Authority". In 2022, Uzbekistan became the first country in the Central Asian region to use the digital capabilities of the International Road Transport (TIR) system and establish digital routes to neighboring countries. In April 2022, the portal of collective appeals *Mening fikrim* ("My opinion") was launched in the country. The authorities should respond to the appeal, which was approved by from 1 thousand to 10 thousand citizens. The minimum number of appeals depends on the authority to which the wishes of the population are addressed. On July 15, 2022, the mobile version of OneID appeared. In the application, you can store passport data or ID card, driver's license, vehicle registration certificate, marriage certificate, birth certificate, higher education diploma, general education certificate, coronavirus vaccination certificate, cadastral passport. Testing of the solution will last until December 1, 2023. At this time, government agencies, banks and other organizations will accept a digital version of the document from OneID Mobile instead of a paper document. In August 2022, an Electronic Government data center was opened near Tashkent. It is Tier III certified. There are 580 Huawei servers installed in the data center, the total capacity is 20 petabytes. On January 1, 2023, a single platform of the portal of the government of Uzbekistan should be launched, to which the official websites and resources of all government agencies will gradually be transferred. A digital office for civil servants will appear on the platform with the following features: electronic document management, messenger, calendar, e-mail and video conferencing.

The digital economy is a new type of economic relations that is already present in all sectors of the world market and is actively developing. The digital economy may soon become a leading segment, a driver of growth and development of the economic system as a whole. This is due to the fact that the digital economy has some advantages over material commodity-money exchanges, such as the speed of delivery of goods or almost instantaneous provision of services. Another advantage of the digital economy is the lower cost of production and execution of transactions. One of the key advantages of the digital economy is that electronic goods are practically inexhaustible and exist in virtual form, while material goods are almost always limited in quantity and it is much more difficult to access them.

Digitalization of the economy also opens up new opportunities and prospects. The use of digital technologies allows small businesses to reduce costs, increase the efficiency and competitiveness of the enterprise, produce new types of products, occupying certain niches in the market of digital goods and services. In addition, the use of digital technologies leads to increased competition not only from domestic but also foreign market participants.

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Ўзбекистон Республикаси иқтисодиётини рақамли трансформация қилиш босқичлари

Аннотация. Мақолада Ўзбекистон Республикаси иқтисодиётини рақамлаштириш ривожлантириш ҳақида сўз боради. Республикада рақамлаштиришга босқичма-босқич ўтиш таҳлили берилган. Мақола муаллифларнинг таъкидлашича, илғор ишлаб чиқариш технологиялари (ИИЧТ), нейротехнологиялар ва сунъий интеллектни ривожлантириш бутун давлат иқтисодиётини ривожлантиришнинг муҳим қисмидир, чунки миллий иқтисодиётни рақамлаштириш асосий давлат вазибаларидан ҳисобланади. Ривожланишнинг рақамли моделига босқичма-босқич ўтиш миллий маҳсулотларнинг халқаро бозорларда рақобатбардошлигини оширади, шунингдек, миллий хавфсизликни яхшилашга ёрдам беради.

Калит сўзлар: иқтисодиётни рақамлаштириш, сунъий интеллект, нейротехнологиялар, рақамли модел.

Этапы цифровой трансформации экономики республики узбекистан

Резюме. В статье рассматриваются вопросы развития цифровизации экономики Республики Узбекистан. Дан анализ поэтапного перехода к цифровизации в республике. Авторы статьи отмечают, что разработка передовых производственных

технологий (ППТ), нейротехнологий и искусственного интеллекта являются важной составной частью развития экономики государства в целом, так как цифровизация национальной экономики является одной из ключевых государственных задач. Постепенный переход к цифровой модели развития позволит повысить конкурентоспособность национальной продукции на международных рынках, а также будет способствовать повышению национальной безопасности.

Ключевые слова: цифровизация экономики, искусственный интеллект, нейротехнологии, цифровая модель.

Stages of digital transformation of the economy of the republic of uzbekistan

Summary. The article deals with the development of digitalization of the economy of the Republic of Uzbekistan. The analysis of the gradual transition to digitalization in the republic is given. The authors of the article note that the development of advanced production technologies (PPT), neurotechnologies and artificial intelligence are an important part of the development of the economy of the state as a whole, since the digitalization of the national economy is one of the key state tasks. The gradual transition to a digital model of development will increase the competitiveness of national products on international markets, and will also contribute to improving national security.

Keywords: digitalization of the economy, artificial intelligence, neurotechnology digital model.

ÓNDIRIS KÁRXANALARINDA FINANSLIQ TURAQLILIQTI TÁMIYINLEW JOLLARI

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Kárxana iskerligindegi eń zárúrli kórsetkishlerden biri bul finanslıq turaqlılıq kórsetkishi bolıp tabıladı. Eger kárxanada dáramatlar qárejetlerden artatuǵın bolsa, finanslıq turaqlılıqqa jetiwi múmkin boladı. Eger kárxana qarjılardı erkin basqara alsa, olardan nátiyjeli paydalansa, turaqlı islep shıǵarıw hám satıwdıń jetiliskeń cikillı aylanıw úzliksizligi támiyinlese, bunday kárxanadı finanslıq turaqlı dewimiz múmkin.

Kárxana finanslıq jaǵdayın qısqa hám uzaq múddetke bahalaw múmkin. Qısqa múddetli aralıqta kárxanadıń tólewge uqıplıǵına uzaq múddetli úyreniwde bolsa onıń finanslıq turaqlılıǵına kóbirek áhmiyet qaratıladı. Firma hám kompaniyalar finanslıq tárepten turaqlı rawajlanbas eken, onıń bankrotlıqqa ushraw múmkinshiligi joqarı boladı. Usınıń sebebinen, finanslıq turaqlılıqtı makro hám mikro kólemde izertlew mudamı ekonomistlerdiń turaqlı itibarında bolıp kelgen. Finanslıq analizi kárxanalarda, firma hám kompaniyalarda úyreniwge, qısqa, orta hám uzaq udayı tákirar bahalaw ámeliyatın jolǵa qoyıwǵa, onı ósiriwdiń anıq ilajların belgilewge áhmiyet qaratıladı. Finanslıq turaqlılıqtı bahalaw bir qansha kórsetkishler sistemasınan paydalanıladı. Olarga tómendegilerdi kirgiziw múmkin: firma hám kompaniyalardıń tólew qábileti; kárxana óz qarjılarınıń ǵárezlilik koefficiyenti; aktivlerdiń ǵárezlilik koefficiyenti; procentlerdi qaplaw koefficiyenti. Kárxanada finanslıq resursların tuwrı qalıplestiriw, olardıń bólistiriliwi, paydalanıw natıyjeliligi finanslıq turaqlılıqtı támiyinlewdiń zárúrli faktorları esaplanadı. Yaǵnıy, finanslıq turaqlılıq kárxana finanslıq resursların qaysı dárejede sheberlik penen basqarıp atırǵanlıǵın ańlatadı.

Finanslıq turaqlılıqtı támiyinlew boyınsha tómendegi zárúrli áhmiyet qaratıw kerek: dáslepki kapitaldıń qalıplestiriliwine, islep shıǵarıwdıń dúziliwine, dáramat hám qárejetler parqında unamlı juwmaqqa, aylanba qarjılar menen támiyinlengenligine, finanslıq támiyinlew dárejesine, jumıs hám bazardaǵı aktivliginiń qorǵalǵanlıǵına hám t.b. táreplerge. Finanslıq turaqlılıq tolıq hám salıstırmalı kórsetkishlerde bahalanadı. Finanslıq kórsetkishleri - aktivler, islep shıǵarıw rezervleri hám olardı finanslıq támiyinlew dárekleriniń arnawlı bir udayı tákirarlanıwshı jaǵdayın bildiredi. Kárxana aktivleri hám islep shıǵarıw rezervlerin finanslıq támiyinlew dáreklerine álbette birinshi nábette óz qarjıları deregi (ustav kapitalı, rezerv kapitalı, qosılǵan kapital, bólistirilmege payda, maqsetli túsimlerden ibarat), uzaq hám qısqa tákirarlanıwshı alınǵan bank kreditleri hám qarızları kiredi.

Aktivlerdi finanslıq támiyinlewde kóbirek uzaq múddetli kreditler hám qarızlar ústinlik qılsa, islep shıǵarıw rezervlerin toplaw hám finanslıq támiyinlewde qısqa múddetli kreditler hám qarızlardan keń paydalanıladı.

Finanslıq turaqlılıqtıń tolıq kórsetkishlerin anıqlawda, aktivler hám rezervlerdi finanslıq támiyinlewde tómendegi kórsetkishler sistemasınan paydalanıladı: aktivler (uzaq múddetli); islep shıǵarıw rezervleri; óz qarjıları deregi; uzaq múddetli minnetlemeler (kreditler hám qarızlar); qısqa múddetli minnetlemeler (kreditler hám qarızlar).

Kárxanalar finanslıq jaǵdayın diagnozlaw anıq ilajların kóriw tiykarınan makro kólemdegi turaqlılıqtı támiyinlewdiń de zárúrli faktori esaplanadı. Usınıń sebebinen, júzege kelgen jaǵdayda itibardı, birinshi nábette kárxanalardı támiyinlewge qaratıw kerek. Kárxanadıń finanslıq jaǵdayı xojalıq subyektiniń finanslıq resurslar menen támiyinleniw dárejesin, olardıń maqsetli jaylastırılıwı hám nátiyjeli paydalanıw dárejesin, basqa huqıqiy hám fizikalıq shaxslar menen bolatuǵın finanslıq munasábetlerdi, tólewge uqıplılıq hám finanslıq turaqlılıq jaǵdayın xarakteristikawdı ańlatadı. Finanslıq turaqlılıq salıstırmalı ańlatpaları aktivlerdi (uzaq múddetli) hám rezervlerdi finanslıq támiyinlewdiń, finanslıq bekkemlik hám ǵárezliliktiń, óz hám qarız qarjılarınıń qosılıwında unamlı nátiyjediń saqlanıwın xarakterleydi. Kárxana finanslıq turaqlılıǵın támiyinlewdiń eń zárúrli faktori bul onıń iskerlik juwmaǵında unamlı juwmaqtıń ekonomikanıń altın qaǵıydasına tiykarlangan rejiminiń saqlanıwı bolıp tabıladı.

Bul tártiptiń ulıwma qaǵıydasın tómendegi baylanıslarda berip ótiw múmkin:

$SF1/SF0 > ST1/ST0 > XK1/XK0 > A1/A0 > 1$ yaki

$SF1/SF0 * 100 > ST1/ST0 * 100 > XK1/XK0 * 100 > A1/A0 * 100 > 100$

Bul jerde: SF1/ SF0 - sap paydanıń ósiwi; ST1/ ST0 - satıwdan túsimniń ósiwi; XK1/XK0 - menshikli kapitaldıń ósiwi; A1/A0 - aktivlerdiń ósiwi.

Nátiyjelilik, dáramatlıqtıń barlıq kórsetkishleri de finanslıq turaqlılıqtı mudamı támiyinley almaydı, eger olar arasındıǵı joqarıdaǵı koefficientler saqlanbasa. Usınıń sebebinen, finanslıq turaqlılıqtıń tolıq ańlatpaların úyreniwde