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IMPROVING MODERN EMPLOYMENT FORMS IN DIGITAL TRANSFORMATION



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**IMPROVING MODERN EMPLOYMENT
FORMS IN DIGITAL
TRANSFORMATION**

Monograph

**MINISTRY OF HIGHER EDUCATION, SCIENCE AND
INNOVATIONS OF THE REPUBLIC OF UZBEKISTAN
KARSHI STATE TECHNICAL UNIVERSITY**

UZAKOV ORTIK SHAYMARDANOVICH

**IMPROVING MODERN EMPLOYMENT FORMS IN DIGITAL
TRANSFORMATION**

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The purpose of this monograph is to develop and implement models and systems for ensuring the export of software products in order to develop modern forms of employment in the digital economy. The following tasks were set to achieve the set goal: Theoretical foundations of forms of employment in the context of digital transformation analysis and forms of remote service provision, study of foreign experience in the development of informal employment systems, the freelance market and digital platforms, ensuring modern employment improvement of the mechanism, organization of the labor market and remote work, prospective development of government and economic systems, development of G2B services for IT enterprises, prospects for the training of IT specialists and the formation of the institutional environment, modern methods and prospects of business process outsourcing and self-employment, models and methods of developing the BFA model and remote work forms. It consists of developing algorithms.

The monography is intended for teachers, independent learners, students, masters, and doctoral candidates teaching in the field of digital economy and innovation.

ISBN

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ENTRANCE

Globally, the digitalization of the economy, remote work, outsourcing, and freelance service sectors are becoming one of the segments of the labor market. The development of labor relations in the digital economy is leading to the replacement of permanent employees with temporary workers, while work that used to be done on the go can be performed thousands of kilometers from the office and even across national borders. A significant trend in recent years is the rapid growth of the number of freelancers, and in one of the most developed countries today, the United States, in 2021, 67.3 million people worked as freelancers, which is 36% of the country's working population¹. Today, the emergence of digital remote platforms, under the influence of increasing segmentation in the labor market, requires the study of ways to adapt to changing human conditions and increase their positive impact on the country's economy.

In the world, conducting scientific research on the effective development of global digitalization and intelligent digital technologies is gaining particular importance. In this regard, scientific and research efforts such as increasing labor mobility, introducing modern forms of employment, developing the infrastructure of the digital economy, formulating targeted orders for the creation of decent jobs, taking into account the socio-demographic needs of the population, and improving modern forms of employment are of great importance.

In the context of building a new Uzbekistan, it is necessary to develop the digital economy, increase the employment rate of the

¹<https://freelancersunion.org/resources/>

population, and introduce modern forms of efficient use of labor resources, as well as to distribute labor across sectors and industries of the economy, increase labor productivity, improve the qualitative composition of labor resources, change the composition of labor, and increase labor mobility. Particular attention is being paid to issues such as increasing productivity, improving remote work, and the duration and stratification of working hours. In particular, as the leader of our country emphasized, “Poverty reduction means implementing a comprehensive economic and social policy aimed at instilling an entrepreneurial spirit in the population, fully realizing human potential and potential, and creating new jobs”². In solving these tasks, it is necessary to introduce modern forms of employment in the sectors and industries of the digital economy, assess the characteristics and dynamics of employment formation, study the dynamics of informal employment in the digital economy, regulate employment, modern forms of organizing outsourcing and freelancing in organizations, and study the global outsourcing and freelancing services market. Deepening scientific research in areas such as agriculture is of particular importance.

Resolution of the President of the Republic of Uzbekistan dated September 11, 2023 No. PD-158 “On the Strategy “Uzbekistan-2030”, dated January 27, 2022 No. PD-104 “On additional measures to develop the services sector”, dated January 28, 2022 No. PD-60 “On the Strategy for the Development of the New Uzbekistan for 2022-2026 Decrees No. PD-51 dated February 1, 2024 “On additional measures to support and strengthen the recruitment of qualified specialists in the field of

²Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis, 25.01.2020. <http://uza.uz/oz/политическ/zbekiston-respublikasi-rrezidenti-shavkat-mirziyoyev-oliu-25-01-2020>

digitalization”, dated January 9, 2024 “On the program for creating new jobs and assisting the population in 2024”, dated January 2022 This dissertation research will serve to a certain extent in implementing the tasks set forth in Resolution No. PD-366 of August 30, “On measures to reduce the share of the informal sector and shape the balance of labor resources on the basis of modern technologies,” as well as other regulatory and legal documents related to this area.

CHAPTER I. THEORETICAL BASIS AND MECHANISMS OF IMPROVING LABOR FORMATS IN THE CONTEXT OF DIGITAL TRANSFORMATION

1.1-§. Theoretical foundations of forms of employment in the context of digital transformation

In recent years, the problem of unemployment has proven to be directly related to the geopolitical situation. The impact of the economic crises that have occurred in the world has had a direct impact on the economy of each country, as well as on the state of the labor market. In this situation, one of the important issues is the introduction of flexible forms of employment that are appropriate to the conditions of socio-economic development in the country. Expanding flexible forms of employment, integrating the problem of employment into the economy, providing socially vulnerable groups with jobs, and providing them with an opportunity to increase their source of income and continuously improve their skills. For economic entities, it allows them to organize flexible forms of employment and provide services to them, increasing the cost of the enterprise.

The concert of the work of the band consists of the following: the theoretical foundations of the doctrine of the labor market of the representatives of the classical school A. Smith, D. Ricardo, T. Malthus, the neoclassical school representatives A. Marshall, J. Mill, A. Rigaud, the labor market and the theory of the coordination of the market with the price of labor, Modern labor market theorists L. Brown, KR

McConnell, and R. Samuelson have established the specific characteristics of the labor market³.

The essence of the labor market as an economic concept is its characteristics in different socio-economic conditions, the labor force repetition. The role and significance of this concept in the system of economic relations of society, the mechanism of distribution, appropriation and use, has been the subject of research by representatives of classical economic theory, as well as famous economists from foreign countries. It has been studied by A. Smith, D. Ricardo, J. Keynes, M. Friedman, Y.A. Kornai and many other economists. There are definitions of the labor market by both Russian and, apparently, Uzbek scholars. According to the definition of S.Yu. Roshshin, T.O. Razumova, "the labor market is the interaction of labor demand and labor supply, the distribution of labor resources based on market mechanisms and characteristics"⁴. According to the definition of R.E. Schlender and Professor Y.R. Kokin: "the labor market is a component of a market economy and represents a social system of social relations in which the interests of the labor force and employers are coordinated".

The labor market is, firstly, a set of economic relations between the demand for and supply of labor secondly, a place where various economic and social interests and functions collide; thirdly, from the point of view of enterprises, a separate enterprise and its employees are interconnected contact area "Real and existing employees who are

³ Sshwab K. The fourth industrial revolution. - Surrensu, 2017. - 192 r.

⁴ S. Yu. Roshchin, T. O. Razumova. Economics at work: Economic theory at work. Uchebnoe posobie. -M.:INFRA-M, 2016 g. - (series "Vysshee obrazovanie") - str. 376

willing to move to a new job at the company level”⁵. According to the UN definition: “the labor market is, first of all, a mechanism for the coordination of the interests of employers and employees. From it, the need to manage social relations arises in the labor market, and the interests of the state are determined”⁶. L. Maksakova believes that instead of the concept of “labor market”, it is necessary to use the concept of “labor force market”. If the concept of “labor resources market” is used, then it will be more accurate to define it⁷. According to Maslow, the labor market is a growth system in which the labor supply and labor supply of property entities interact with the factors of production, labor resources, and labor force, forming the volume, composition, and ratio of demand for labor and “the demand for labor.” The labor market exists, but “in a fragmented, distorted form, and moreover, not having the characteristics of taking everything into its own hands, but covering only a part of labor relations.”⁸ According to the definition of Q. Abdurakhmanov and F. Mamarakhimov, “The labor market is understood as a set of socio-economic relations associated with the sale, purchase and use of labor power.” According to Sh.R. Kholmominovs definition, “the labor market is the relationship between the employed and unemployed parts of the working-age population and employers, as well as the implementation of contracts that take into account their personal interests, the purchase and sale of “labor skills”, and the relationship between the demand for and supply of labor

⁵ Ekonomika truda: Uchebnik /Pod ed. prof. P.E.Shlendera, prof. Yu.P. Kokina. - M.: Jurist, 2017. -92 str.

⁶ B. M. Genkin "Economics and sociology in progress". Uchebnik dlya vuzov. -M.: Izdatelskaya group NORMA-INFRA. M., 1999. - str. 338

⁷ B. Aliyev. “Peculiarities of the Formation of the Labor Market” /Uzbekistan Economic Bulletin/-2017, No. 5, p. 62.

⁸ Abdurakhmanov K.Kh. Labor Economics: Theory and Practice. Textbook. Revised and supplemented 3rd edition. T.: FAN, 2019. 552 p.

immediate arrangement “The market economy is a complex, diverse, growing and evolving socio-economic system.”⁹ According to the definition of D. Rahimova and O. Abdurakhmanov, “the labor market can be understood as a category, an analytical construct that allows us to describe the environment in which sellers and buyers of labor power, determine its value, and distribute the labor services offered.”

Karl Schwab, co-founder and president of the Davos Economic Forum, argues that the key driver of employment in the digital economy is not capital, but human capital. According to him, “the Fourth Industrial Revolution will create fewer jobs in the same industries than previous revolutions”¹⁰[7].

According to Yu.G. Odegov and VV Ravlova, “Today, on the basis of networked knowledge, we are witnessing a blurring of the distinctions and divisions between sectors, the integration of sectors and the convergence of different professions, and this process is accelerating”¹¹[5].

According to Academician K.Kh. Abdurakhmanov, “‘Distance relations’ between employers and employees are an integral part of the process of decentralization of labor activity in time and space. This also serves to form a flexible virtual labor market.” “Remote work (telework) is a labor activity performed at a distance from the place of work, using information and communication technologies. The main feature of the form of work-to-work relationship is the establishment of “remote

⁹ Sh.Kholmo'minov. Labor Market Economics (Textbook) -T.: TSIU, 2018. -10 pages.

¹⁰ [https://www.Oxfordmartin.ox.as.uk/downloads/Asademis/The Future Of Emrloument.rdf](https://www.Oxfordmartin.ox.as.uk/downloads/Asademis/The_Future_Of_Emrloument.rdf).

¹¹ Odegov Yury Gennadevich, Pavlova Valentina Vasilievna. Novye tehnologii i ix vliyanie na rynek truda // Uroven jizni naseleniya regionov Rossii. 2018. No. 2 (208). - S. 60-70.

economic relations” between the worker and the employee in a virtual manner¹²[3, pp. 324-325].

According to NK Zakirova, G. Abdurakhmanova, FR Sagidullina, “Technological progress and the transition to the information society require qualified and mobile employees, that is, those who can quickly adapt to changes in the labor market”¹³[4, p. 28].

According to A.A. Efremov, “Telecommunications services play an important role in shaping a civilized society” - the national economy, industry, science, culture, construction, transport activities, etc[4]. At the same time, they lead to a change in the form of communication by forming the information infrastructure of any economy, leading to its transformation into information technology.

According to Odegov Yu.G. and Ravlova V.V., “Today, on the basis of networked knowledge, we are witnessing the blurring of distinctions and divisions between sectors, the integration of sectors and the convergence of professions, and this process is accelerating” [2].

The concept of “labor market” encompasses both the purchase and use of labor, that is, it consists of the market for labor and jobs.

In the digital economy, using ICT requires being in a state of continuous connection with the “real” and “virtual” worlds, and due to the most extensive connectivity, even remote work and work has become a problem. The importance and foundations of the digital economy, not only in shaping a knowledge-based economy, but also in the increased demand for intellectual, highly qualified, and educated

¹² Abdurakhmanov K.Kh. Labor Economics: Theory and Practice. Textbook. Revised and supplemented 3rd edition. T.: "FAN", 2019. 552 p.

¹³ Zokirova N.K., Abdurahmanova G., Sagidullin F.R. Transformation form zanyatosti v innovationnom razvitii // InternAtiOnAl scientific review. 2020. No. LXX. - S. 24-28.

personnel in the labor market, can be seen in the following documents adopted in Uzbekistan (see Table 1.1.1).

Table 1.1.1

Fundamentals of formalizing labor relations in the digital economy¹⁴.

| | | |
|----|---|---|
| 1. | “Uzbekistan-2030” strategy | Creating appropriate conditions for each person to fully realize their potential. |
| 2. | “Digital Uzbekistan-2030” strategy | Shaping the digital economy and digital government. |
| 3. | 2030 - National goals and objectives for sustainable development | Increase effective and appropriate employment. |
| 4. | Strategy for supporting rural population growth 2021-2030 | Expanding formal and stable employment. |
| 5. | Strategy for the innovative development of Uzbekistan in 2022-2030 | Developing human capital. |
| 6. | Consortium for the Development Strategy of Uzbekistan until 2035 | High economic growth and the formation of a middle class. |

In the digital economy, the ability to adapt the composition and volume of labor supply and demand to changes in the external environment is considered to be the key to ensuring the full use of the capabilities of employees of organizations, enterprises, and business entities and their effective performance (see Figure 1.1.1).

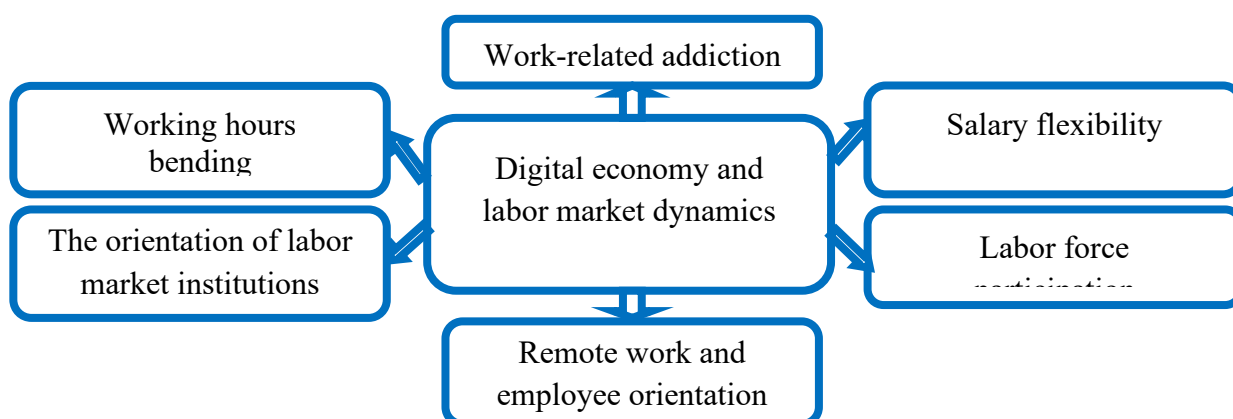


Figure 1.1.1. Elements of the labor market in the digital transformation¹⁵

¹⁴ Worked and enjoyed by the author

In the conditions of innovative development of the economy, the socio-economic, organizational, technical and technological changes associated with the development of a specific type of innovation of repetitive work and creativity require scientific changes not only in the structure and forms of labor, its subjects, institutions, and the category of labor itself, but also in its study and organization.

The change in the composition and forms of work-related employment, firstly, reflects the development of the flexible work-related employment concept, considering it as a product of the development of the theory of work-related employment, and secondly, it is a clarification of the analysis of the object of this category.

The rapid development of digital technologies and the development of society are leading to a rapid increase in the number of forms and types of employment for the population. The description of theoretical approaches to modern forms and types of employment is presented in the table below (see Table 1.1.2).

Table 1.1.2

Definitions of modern forms and types of employment and occupations¹⁶

| Author | Types and forms of employment |
|-----------------------------------|---|
| International Labor Organization | Temporary employment, part-time employment, temporary hired labor and blind-sided labor relations, casual labor relations and dependent independent work. |
| Q.Kh. Abdurakhmanov ¹⁷ | Non-standard types of employment: employment under a contract of employment, self-employment on a farm, individual entrepreneurship, part-time employment, temporary employment, remote work. |
| A. Kalleberg ¹⁸ | Daily labor, indentured labor, temporary labor, hired labor, and self- |

¹⁵ Worked and enjoyed by the author

¹⁶ Worked and enjoyed by the author

¹⁷ Abdurakhmanov K.Kh. Labor Economics: Theory and Practice. Textbook. Revised and supplemented 3rd edition. T.: FAN, 2019. 552 p.

¹⁸ Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s to 2000s by Arne L. Kalleberg Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in

| | |
|--|---|
| | employment. |
| Yu.G.Odegov ¹⁹ G.G.Rudenko N.K.Luneva | Full, reasonable, effective; full and full-time; with flexible work and rest regimes; permanent, temporary, seasonal, and seasonal; implemented in households and enterprises; starting, adding, and doubling. |
| V.N.Bobkov ²⁰ | Complete, effective, reasonable, temporary, hesitant, redundant, vague, informal, unstable, stable. |
| V.N.Bobkov ²¹ O.V.Vereduk | Working under the following conditions: fixed-term employment contracts, part-time work, civil law contracts, oral agreements; casual, remote, hired labor. |
| V.Ye.Gimrelson ²² | Part-time employment, temporary employment, casual employment, employment in the informal sector, and employment on ones own farm. |
| L.V.Kartashova ²³ | Complete, rational, productive, socially beneficial, effective. |
| R.R. Kolosova ²⁴ T.O. Razumova | Remote, informal employment, hired labor, and non-permanent employment. |
| A.I. Rofe ²⁵ | Effective, socially beneficial, complete, rational, subtle, partial, temporary, adaptable. |
| I.T. Korogodin ²⁶ | Full, rational, efficient, incremental, standard, and non-standard work engagement. |
| D.B.Heuwood ²⁷ | A business unit that provides services to a customer for a specified period of time at an agreed price, with the exception of the assets belonging to the organization and the business unit. |
| J.L.Brower, R. Morgan ²⁸ | The contract provides for the provision of services to third parties on the basis of a guarantee of the use of material resources, property and knowledge, criteria for the provision of services and assessments of quality, efficiency and cost, advanced labor, and the possibility of transferring the services to the client, changing/renovating existing personnel and/or processes and expanding the business supporting technologies |
| S. Pushkin ²⁹ | (external-external, source-source) - the process of increasing the efficiency of a company by relying on external specialized roles and functions that are not the main purpose of its activities and |

the United States, 1970s to 2000s by Arne L. Kalleberg Review by: David B. Grusku American Journal of Sociology, Vol. 118, No. 3 (November 2012), pp. 818-820

¹⁹ Odegov Yu.G., GG Rudenko and NK Luneva, 2010. Labor market (economic economics of work): Textbook. - M: Alrha Rress Rublishing House, rr: 900.

²⁰ <https://www.esonomuofregion.com/author/bobkov+V.+N.>

²¹ <https://www.researchgate.net/rublisation/276243396Imrast> of emrloument instability on socio-economic rositon of emrlouees

²² https://www.nber.org/sustem/files/working_rarers/w21174/w21174.rdf

²³ <https://stateson.rea.ru/jour/artisle/view/819/799>

²⁴ Kolosova, R.R., Razumova, T.O. (2008). Economic growth, employment and human development. Human Development: A New Dimension of Social and Economic Progress. Mossow: Rrava sheloveka [in Russian].

²⁵ Labor Economics: textbook / A.I. Rofe.-2-e.-M.: KNORUS, 2011.- p. 159

²⁶ <https://suberleninka.ru/artisle/n/rintsiruanalysis> sootnosheniua rosta zarabotnou rlatu i roizvoditelnosti truda/viewer

²⁷ Haywood D.B. Outsourcing: v poiskakh konkurentnyx preimushchestv: per. English / D.B. Heywood - M.: William, 2004. - 176 p.

²⁸ Bravar J.-L. Effective outsourcing. Ponimanie, planirovanie i ispolzovanie uspesnyx autsorsingovyx otnosheniy = Smarter Outsourcing: An Exesutive Guide to Understanding, Planning and Exploiting Successful Outsourcing Reletionshirs / J.-L. Bravar, R. Morgan. - M.: Balans Business Books, 2007. -260 p.

²⁹ Pushkin S. What are you outsourcing? [Electronic resource] / S. Pushkin, M. Savostyanov. - Mode friendly: <http://www.klerk.ru/boss/artisles/4659>.

| | |
|----------------------------|--|
| | operations. |
| L. Vasilenko ³⁰ | Any type of activity of a company that is not related to the main one, in which some of the functions can be removed (extended) in order to increase the costs of the company by some third party, as well as to reduce the costs of work on the main one. |
| Authors description | A type of business partnership in which companies, with a high level of specialization, undertake to perform non-core functions of the client by involving specialized specialists in order to minimize costs, ensure quality (standardization), and meet specified deadlines. |

As can be seen from table 1.1.2, the keywords in the proposed definitions cover the following: transfer of functions (division), specialized enterprises, knowledge, experience, optimization of activities, implementation, implementation of a product or service at the organizational, regional, state level, while attracting external resources at the miBPO, meso, maBPO levels, remote service are also types of activities related to business processes.

Discussions on forms of employment show that the emergence of new forms and types of the category of “employment” in modern conditions requires taking into account all the changes that have occurred in this understanding.

The factors influencing the system of providing employment to the population lead to its transformation. In turn, this transformation leads to the modernization of all spheres of human and social life, changes the way of life.

The people are busy to ride - the employment of the working population in socially useful work, activities related to satisfying the personal and social needs of citizens and not contradicting the laws, providing labor income. Labor expresses interpersonal relations in which the employee is involved in a specific labor cooperation based on

³⁰ Vasilenko L.A. Outsourcing - innovative personnel technology - state service / L.A. Vasilenko. SPb.: Nauka, 2007. -216 p.

the social division of labor. The band is not limited to working in enterprises, organizations, and institutions of various forms of ownership, but also includes entrepreneurship, self-employment, and studying at educational institutions.

The current labor market is considered a transforming market in terms of its impact on the balance between labor supply and demand. There fore, based on the modern forms of labor force participation in the labor market and its transformation, the types and composition of labor force participation, the description of its changing parameters, and the classification of labor force participation according to quantitative and qualitative criteria of adaptation are described.

It should be emphasized that traditional and non-traditional forms of employment often overlap and form a complex whole. This, in turn, complicates classification and accounting, and modern employment is manifested in various forms (Table 1.1.3).

Table 1.1.3

Theology of modern forms of employment³¹

| No. | Classification feature | Shapes |
|------------|---|--|
| 1. | According to the specifics of labor relations | Temporary, seasonal, and casual employment. |
| 2. | According to the state schedule | Freelancer, outsourcing, outstaffing, personnel leasing, smartstaffing, BPOwdfunding, BPOwdsourcing, takeover. |
| 3. | According to the workplace arrangement | This is labor, remote work, and part-time work. |
| 4. | According to the “flexibility” of the boundaries of the working day | Flexible and irregular working hours, work based on poverty. |
| 5. | The rights and status of employees | Fixed-term employment contract, rudder contract, steering service contract, authorship |

³¹ Worked and enjoyed by the author

| | | |
|--|--|-----------------------|
| | | contract, and others. |
|--|--|-----------------------|

Unstable employment is a type of non-standard employment characterized by the unreliability and instability of labor relations, as well as the possibility of illness, when the employee does not have a full working week on the basis of an indefinite employment contract, and is not dependent on standard labor relations (see Table 1.1.4).

Table 1.1.4

Theology of modern forms of employment³²

| No. | Shapes | Classification feature | Types |
|-----|--------------------------------|--|--|
| 1. | Business Processes Outsourcing | The process of outsourcing part of a company's business processes to an external service provider on a contractual basis | BPO accounting, IT and software, design and illustration, supply chain, trade, retail, retail, healthcare, insurance, finance and accounting, brokerage, video surveillance systems, telecommunications, e-commerce, marketing, security and inventory management, and others; |
| 2. | Outsource | The organizations time is spent on the company's activities. Outsourcing part of the teaching function to another performing organization | Accounting, finance, human resources office, IT outsourcing, building clearance, real estate outsourcing, logistics and transport outsourcing, personnel outsourcing |
| 3. | Freelancer | Person who is self-employed and not tied to a specific employer | All types of work and tasks performed using digital technologies |
| 4. | Outstaffing | Hiring temporary workers | Temporary employment depending on the type of job being offered |
| 5. | Smartstaffing | Teams and companies that operate according to high standards | Modern remote work and business incubation |
| 6. | Personal leasing | Leasing personnel for temporary work from other companies, providing enterprises and organizations with temporary employees on a contractual basis | It can be used in all types of activities. "Staffing" or "agency labor" is available in long-term and short-term types. |
| 7. | BPO croundfunding | An organization that is a group of people who voluntarily contribute their funds and various resources | To promote the financing of projects aimed at developing and innovating the economy and social sectors, entrepreneurs, representatives of the |

³² Compiled by the author based on Internet sources

| | | | |
|----|----------------------|---|--|
| | | to a project or goal is considered an individual investment. | creative sector, including directors, writers, musicians, playwrights, artists, scriptwriters, and others |
| 8. | BPO croudsourcing | For these companies, it is a way of outsourcing tasks that appear to be small tasks to a large group of people, as well as a means of sharing ideas and information. | Business processes such as a network of testimonials for new products, a process that allows companies to work with blind people, provide services, or create content. |
| 9 | Give it to me | Organizing and serving meals outside of events' mountaineering service. Mountaineering mainly based on the service of the mountaineer used at festivals, corporate events, conferences, exhibitions and other similar events. | One of the main features of catering is that it offers a wide range of delicious, varied and high-quality dishes that can be customized to the specific needs and tastes of the clients. Professional catering companies offer a full range of services, including menu planning, catering, catering and clean-up after the event. |

Analyzing the state of implementation of modern forms of employment in foreign countries, ensure that it can respond to the problems that can be expected in the areas of modern employment, including:

increasing working time flexibility;

ensuring the flexibility of wages and labor costs, and taking into account the qualifications, abilities, and conditions of employees when determining wages;

supporting and encouraging employment in the private sector;

promoting active labor market policies and increasing the effectiveness of these reforms;

continue reforms in the personnel training system and educational institutions in line with the requirements of the digital economy;

social protection of the unemployed, implementation of reforms.

The following are identified as reasons for the widespread use of informal employment:

- increase your standard of living and earn additional income;
- reduce labor costs and increase employment through savings in social benefits;
- the possibility of reducing the taxable base.

Within the formal economy, the composition of the workforce with informal employment can include workers who are quantitatively formed on a part-time basis, who are part-time workers, who work on a part-time basis, and who work on the basis of fixed-term contracts or civil-law contracts.

1.2-§. Foreign experiences in the development of informal employment systems in the digital economy

According to experts, by 2025, the share of the digital economy in the world is expected to reach 23 trillion USA dollars. Its share in global GDP will grow from the current 17.1% to 24.3%, the number of enterprises using cloud technologies will increase by 58%, artificial intelligence - by 86%, and digital big data - by 80%³³. Network standards: The data transfer speed of wireless networks in the 5G standard will reach 20 Gbps.

In total, more than 2 million freelancers are registered on the Russian Federations stock exchanges, 61% of whom are men, 39% are women. More than 71% are over 30 years old, 47% are between 18 and 26 years old. 82% of freelancers have a high school diploma, and 31%

³³<https://www.banki.ru/news/lenta/?id=9850852>

work in government agencies. 69% of Russian speakers live in the Russian Federation, 21% in Ukraine.

The forecast indicators for IT services worldwide are presented in the table below (see Table 1.2.1).

Table 1.2.1

Global IT service providers, in billions of dollars³⁴

| Years | 2008 | 2011 | 2013 | 2015 | 2017 | 2018 | 2020 | 2021 | 2022 | 2023 |
|--|------|------|------|------|------|------|------|------|------|------|
| Indicators (billions of dollars) | 804 | 824 | 922 | 866 | 931 | 993 | 1071 | 1186 | 1280 | 1392 |

Foreign indicators of IT services, billion. doll

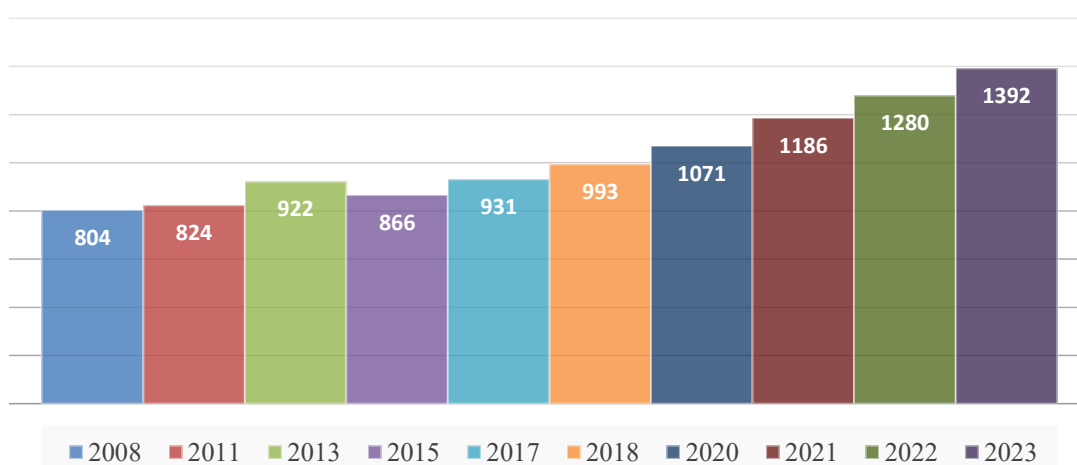


Figure 1.2.1. Foreign indicators of IT services³⁵

The average income of freelancers is 10-25 thousand rubles per month. 5% of freelancers have bad relations with their clients, 44% have problems with working conditions, and 42% have long-term salary delays. 68% of freelancers have regular clients, and 50% of freelancers are looking for new clients.

³⁴Worked and enjoyed by the author

³⁵Worked and enjoyed by the author

Table 1.2.2

Analysis of dynamic indicators of the freelance market³⁶

| Countries | Number of freelancers, million people | 2020 | 2021 | 2022 | 2023 | 2024 | Countries that use freelance platforms the most, % |
|--|---------------------------------------|------|-------|-------|-------|-------|--|
| Freelancer marketplace , trillion dollars | 1,570.0 | 6.54 | 7.67 | 8.85 | 10.4 | 11.79 | 78 |
| BRO market , billion dollars | 1.2 | 230 | 259 | 287.1 | 315.2 | 435.3 | |
| USA , billion dollars | 76.4 | 832 | 889 | 998 | 1.27 | 1.30 | |
| Russia , billion dollars | 5.6 | 41 | 49.20 | 59.04 | 70.85 | 85.02 | 20 |
| Canada , billion dollars | 2.7 | 4 | 9 | 26 | 37 | 40 | 15 |
| India , billion dollars | 15 | 315 | 382 | 460 | 583 | 680 | 29 |
| England , billion dollars | 1.9 | 100 | 112 | 120 | 127 | 150 | 59 |
| Brazil , billion dollars | 25.5 | 67 | 90 | 130 | 150 | 184 | 48 |
| Pakistan , billion dollars | 3 | 1.6 | 2 | 3.9 | 4.6 | 5.5 | 47 |
| Ukraine , billion dollars | 3 | 43 | 64 | 87 | 96 | 123 | 36 |
| Philippines , billion dollars | 1.5 | 4.5 | 5 | 6.4 | 7.1 | 8.3 | 35 |
| Bangladesh | 0.2 | 5 | 6 | 6.3 | 7 | 7.8 | 27 |
| Uzbekistan , million dollars | 0.059 | 16.4 | 46.5 | 140.0 | 340.0 | 800 | 0.001 |

According to the International Labor Organization's World Unemployment Report, in 2019, the number of unemployed people worldwide due to unemployment was 188 million people, or 5.4%, in 2020 it was 221 million people, or 6.5%, and in 2021 it was 210.8 million people, or 5.2%. This indicator was 3.272 million people in the Russian Federation in 2021, and 5.69 million people in 2020, or 5.8%. per capita, and in 2021, freelance services increased by 255%, and orders increased by 440%.

³⁶ Worked and enjoyed by the author

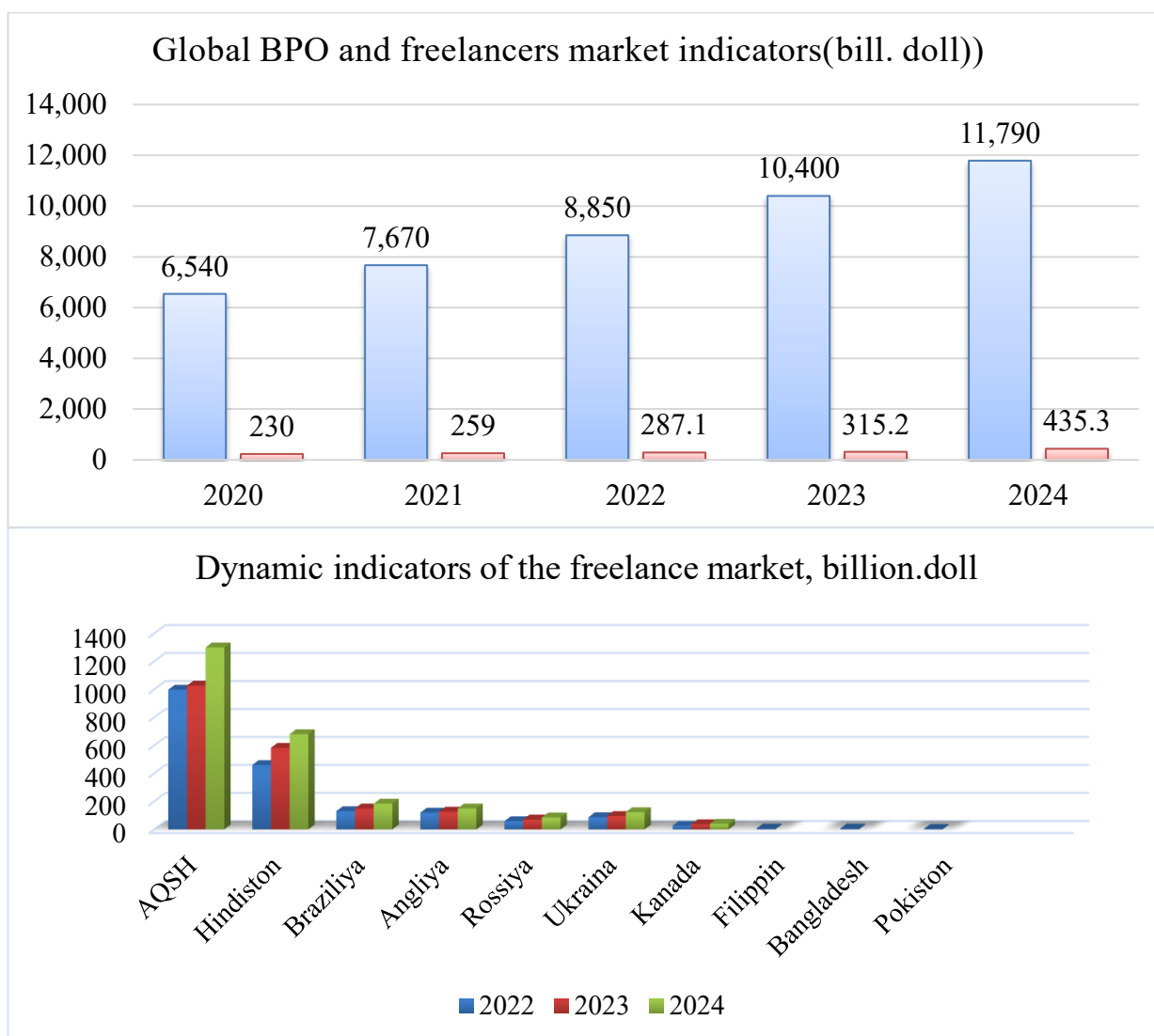


Figure 1.2.2. Global BPO and freelance market indicators (billion dollars)³⁷

Today, there are 1.57 billion freelancers worldwide, with 163 million users registered on freelance platforms, including 18 million in the Russian Federation. The freelance platform Kwork has 6.3 million users. Freelancers are registered and 33% of large companies in the world are looking for specialists in all kinds of fields through freelance exchanges, and this is especially true in the IT sector, which has a leading position at 32.4%.³⁸.

³⁷ Developed by the author

³⁸ <https://blog.kwork.ru/runok-frilansa/frilansa-2021-itogi-goda-i-rrognoz-na-2022>

Table 1.2.3

Performance analysis of freelance platforms³⁹

| T/r | Platform name | State name | Benefits (million people) | Freelancers (million people) | International rating | Usage rate | Sectors |
|-----|-------------------|------------|---------------------------|------------------------------|----------------------|------------|----------------|
| 1 | Reorler hour.com | India | 6,022 | 7.0 | 4.0 | (32%) | IT |
| 2 | Jooble.com | Russia | 784 | 928.0 | 3 | (12%) | IT |
| 3 | Upwork.com | USA | 418 | 740 | 4.9 | (32%) | IT |
| 4 | Themuse.com | USA | 4,408 | 160.0 | 3 | (55%) | IT |
| 5 | Flexjobs.com | USA | 18,137 | 1.2 | 2 | (61%) | IT |
| 6 | Workingnomads.com | USA | 132,233 | 17.9 | 2 | (28%) | IT |
| 7 | Solidgids.com | USA | 521,791 | 240.0 | 1 | (31%) | IT |
| 8 | Kwork.ru | Russia | 450.0 | 422,017 | 3 | (10%) | IT |
| 9 | Work-zilla.com | Russia | 864,102 | 769.0 | 3 | (7%) | IT |
| 10 | Rachel.net | Russia | 187,175 | 134,488 | 3 | (6%) | Stock exchange |
| 11 | Uoudo.com | Russia | 2,569.05 | 1,500.0 | 3 | (5%) | IT |
| 12 | Profile.ru | Russia | 347,852 | 341,503 | 3 | (4%) | Design |
| 13 | Teamwork.uz | Uzbekistan | 0.031 | 0.025 | 0 | 0 | IT |
| 14 | Dowork.uz | Uzbekistan | 0.016 | 0.023 | 0 | 0 | IT |
| 15 | giglancer.uz | Uzbekistan | 0.015 | 0.019 | 0 | 0 | IT |

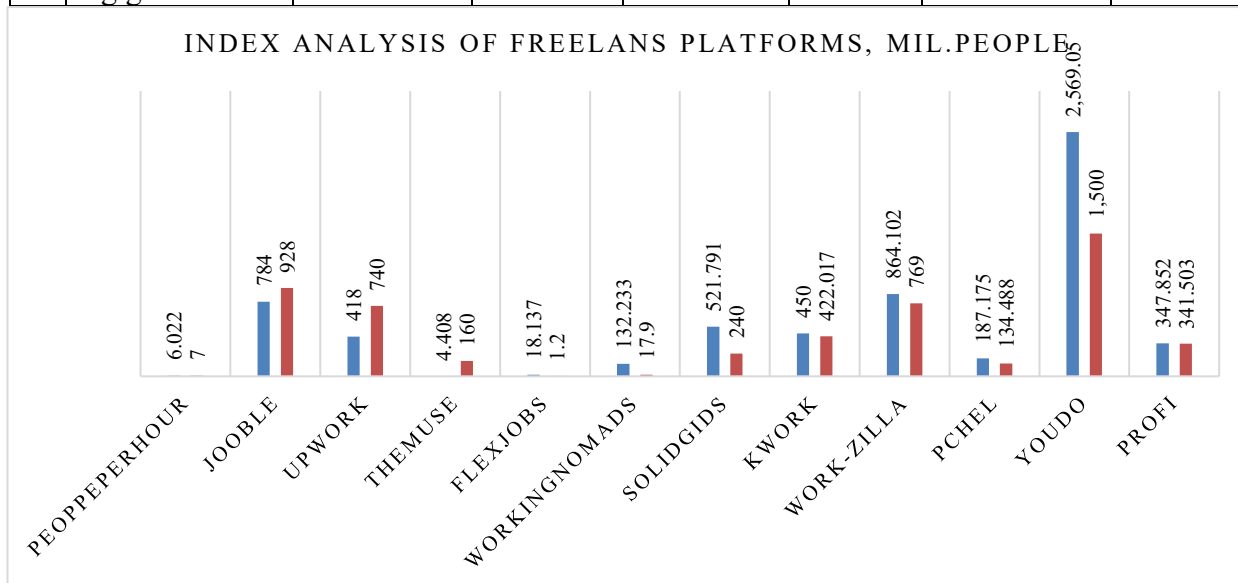


Figure 1.2.3. Analysis of freelance platforms' performance

Informal slavery exists in all countries of the world. Its extent directly depends on the socio-economic potential of each country and the priority directions of the reforms being implemented.

³⁹ Worked and enjoyed by the author

In North and South America, the informal sector is 40 percent, while in developing countries in South Asia it reaches 80 percent. In Africa, the share of informal sector is 86 percent. In the Euro-Central Asia region, this figure is 25.0 percent, and in the Arab countries it is 70.0 percent.

In our country, measures are being implemented to identify and reduce the scale of the economy's current recession. On January 16, 2024, at a videoconference held under the chairmanship of the President of Uzbekistan on priority tasks to ensure macroeconomic stability and economic development, it was also noted that the problem of the economy is one of the most pressing issues today.

According to official statistics, as of January 1, 2024, 39.0 percent of the total population of Uzbekistan works in the informal sector. About 5.5 million people in the country are employed in the informal sector.

In recent years, the employment of the working-age population in Uzbekistan in the informal sector has decreased to a certain extent (2020 - 42.8 percent, 2023 - 39.0 percent), that is, the number of informal workers has decreased by 3.8 percent over the last 4 years, or by 0.2 million people. One of the main reasons for this is the state support for self-employment. In addition, a direct link can be observed between informal employment and a decrease in the unemployment rate by 3.7% in 2020-2023.

According to the results of the analysis, there are significant differences in the level of informal employment across the country's regions. The highest levels of informal employment are in the regions of Namangan (50 percent), Surkhandarya and Jizzakh (49 percent), and

Kashkadarya (48.4 percent). The highest rates were observed in Tashkent city (10.9 percent) and Navoi (21.8 percent) regions, and the lowest rates were observed in Bukhara (32.3 percent) and Tashkent (34.9 percent) regions. The difference between regions was 2.3 times greater than in Tashkent city⁴⁰.

The number of people employed in the informal sector of the economy decreased mainly due to the sharp reduction in the number of people employed in temporary, one-time and seasonal work (94.4 thousand people) and the number of people employed in informal farming households that do not have the status of legal entities (141.2 thousand people).

While there are some positive changes in the reduction of informal employment, problems that need to be resolved remain.

In recent years, measures to promote healthy competition and private business in the country through a sharp reduction in the size of the economy are being implemented rapidly. In particular, the “Uzbekistan - 2030” strategy has been actively taking advantage of the opportunity to further expand the tax base through a reduction in the size of the economy.

Measures aimed at regulating informal employment:

Improving the mechanism for registering (formalizing) informal enterprises using local authority powers to promote employment, the service sector, family business, and entrepreneurship;

⁴⁰ Oh trends of informal employment in Uzbekistan Institute of Macroeconomic and Regional Research (imrs.uz)

Conducting surveys among the population of informal gangs in neighborhoods, reducing the share of informal gangs, and shaping the balance of labor resources based on modern trends;

It is in line with the goal of formalizing the informal service provision that exists in neighborhoods.

The expansion of the digital economy is causing a shift in the nature of work and employment. Reducing the level of informal employment and employment as a component of the economy is directly linked to the reduction in the share of the economy in the economy and the need to address it through effective and comprehensive government policies (see Table 1.2.4).

Table 1.2.4

Labor market statistics of the Republic of Uzbekistan⁴¹

| No. | Classification feature | Number (person) |
|-----|--|-----------------|
| 1. | The average population of the republic | 37 134 229.00 |
| 2. | Number of labor resource bands | 19,739,600.00 |
| 3. | The number of the working-age population in the region | 19,585,400.00 |
| 4. | Economic activity level of the population | 72.9% |
| 5. | Number of economically active population | 15,038,300.00 |
| 6. | Number of economically inactive people | 4 701 300,00 |
| 7. | The number of bands in the economy | 14,014,200.00 |
| 8. | Level of employment | 67.9% |
| 9. | Number of unemployed | 1,332,700.00 |
| 10. | Those who left the republic to work | 1,793,907.00 |
| 11. | People in need of employment | 1,322,076.00 |
| 12. | Gangs in the formal sector of the economy | 6 298 294.00 |
| 13. | Gangs in the informal sector of the economy | 5,619,941.00 |
| 14. | Bands in the public sector of the economy | 2 567 400,00 |
| 15. | Bands in the non-state sector of the economy | 11,446,800.00 |

Due to the fact that the high level of informal employment poses various risks to the stable socio-economic development of the country, it is important to include it in the criteria of the economic security system (see Figure 1.2.3).

⁴¹ Based on data from the Ministry of Poverty Reduction and Employment of the Republic of Uzbekistan.

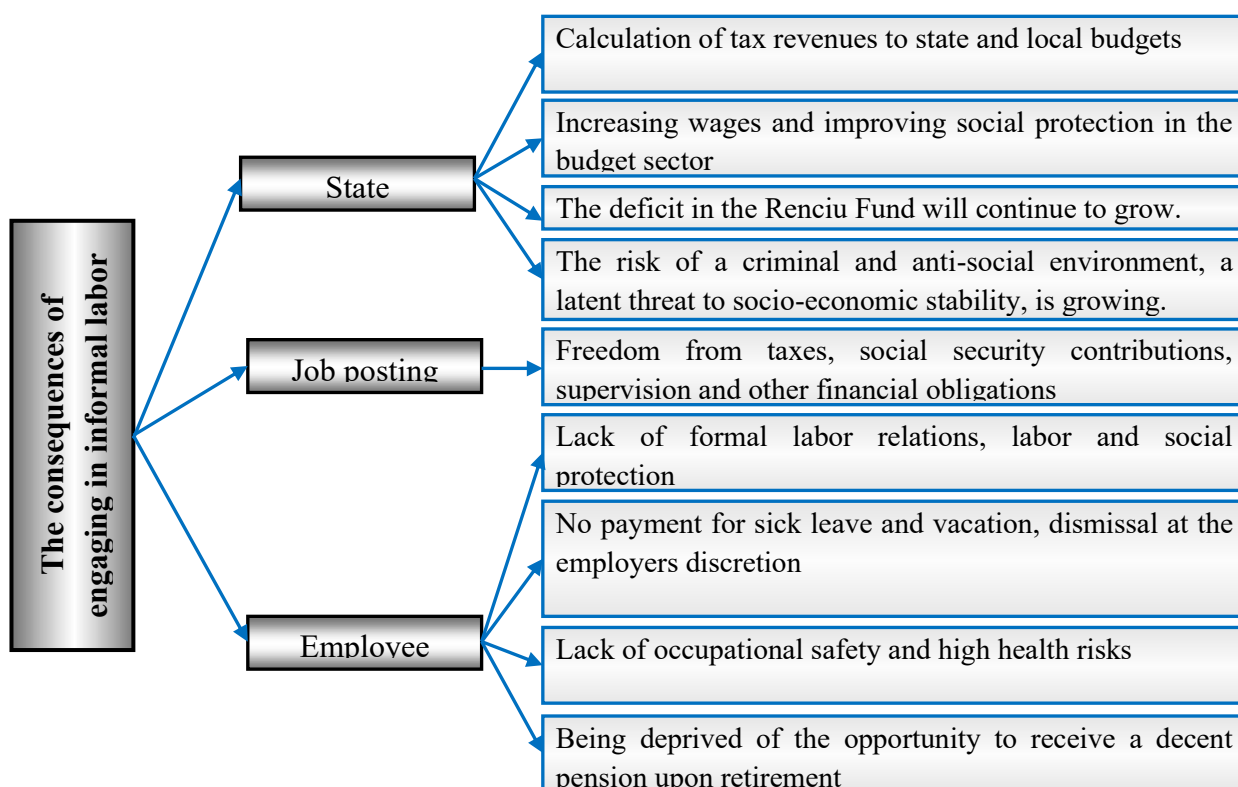
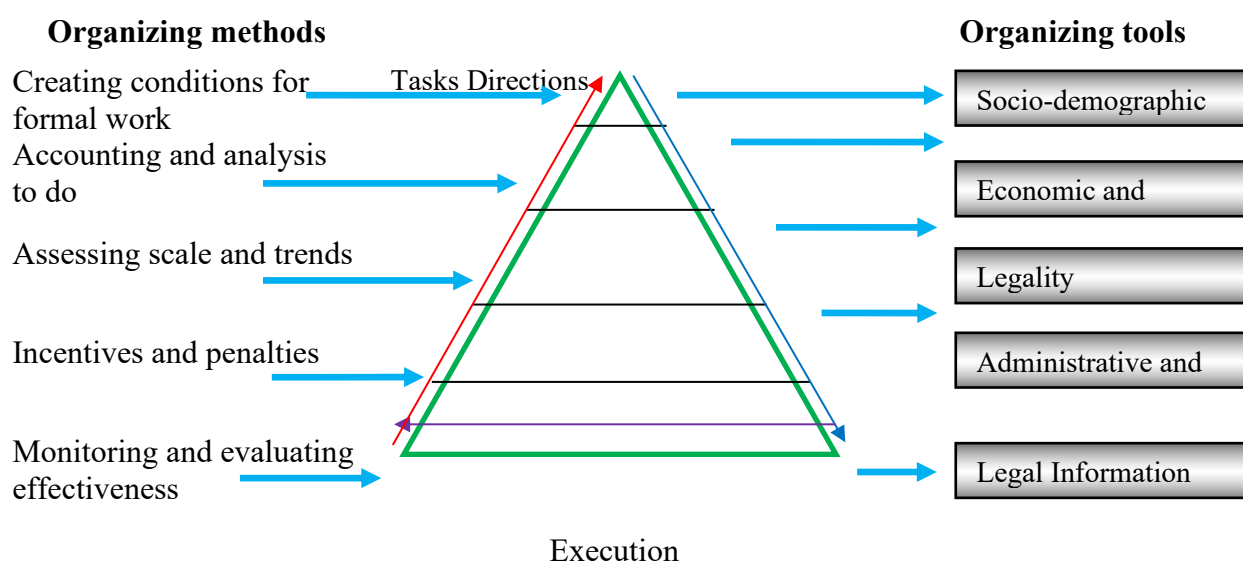


Figure 1.2.3. Socio-economic consequences of informal employment⁴²

Its high level of wealth leads to a countrys development, social conflict and inequality, an environment of equal competition, increased stratification, lack of respect for the rule of law in society, financial crises, and other socio-economic consequences.



⁴² <http://review.uz/uz/post/2016-2021-yillarda-mexnat-bozorida-amalga-oshiirilgan-ishlar-va-siriшилган-натиялар>

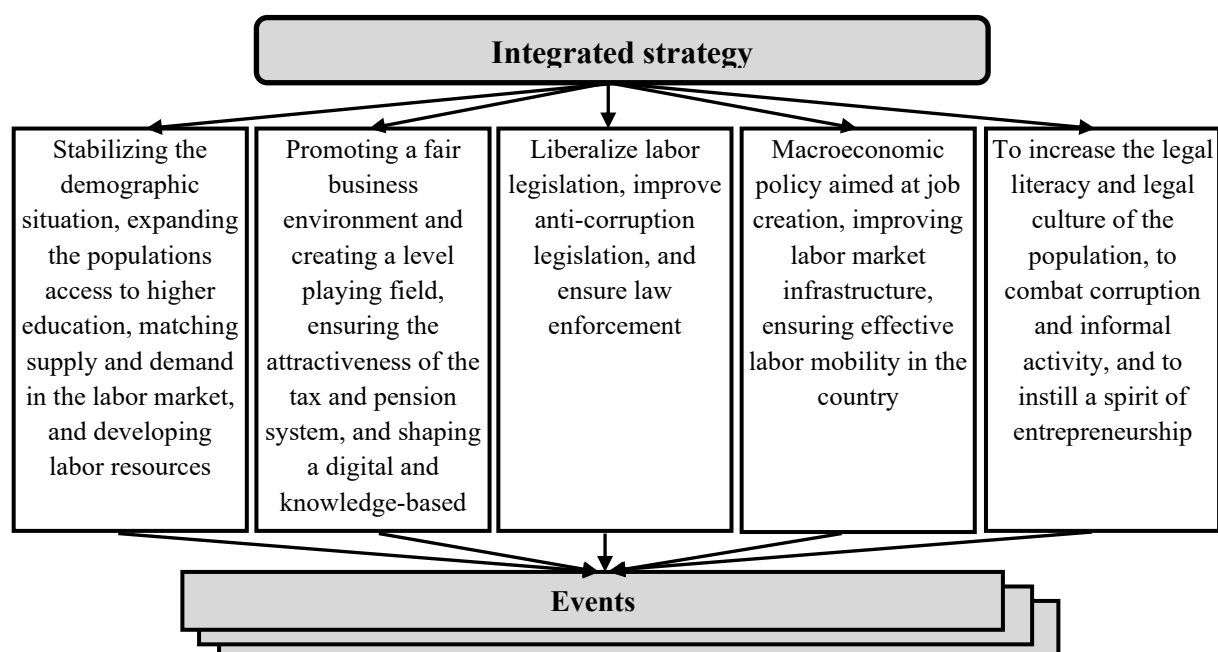


Figure 1.2.4. Mechanisms for reducing the level of informal employment⁴³

These documents do not aim to eliminate informal economy and informal labor through administrative methods or prohibitions, but rather to ensure its transparent operation by creating an economically favorable institutional environment and conditions within the framework of the law (see Figure 1.2.4).

New technologies, such as electronic registration, integrated and automated service provision, make it possible to reduce the human factor and its participation as much as possible, reduce transaction costs for economic units, and formalize economic activity.

The result shows that it is not possible to completely eliminate informal labor, but rather the importance of maintaining it at a level of economic security, and the need to support effective state mechanisms in this area.

⁴³ Worked and enjoyed by the author

As can be seen from Figure 1.2.4, the transition to a digital economy plays an important role not only in public administration, but also in the formation of a digital economy, the emergence of an information society, and ultimately in the reduction of the informal economy and the population.

In order to regulate the level of informal employment and maintain it at an economically secure level, it is considered appropriate to implement the following measures to improve the institutional structure that drives and causes it (see Figure 1.2.5):

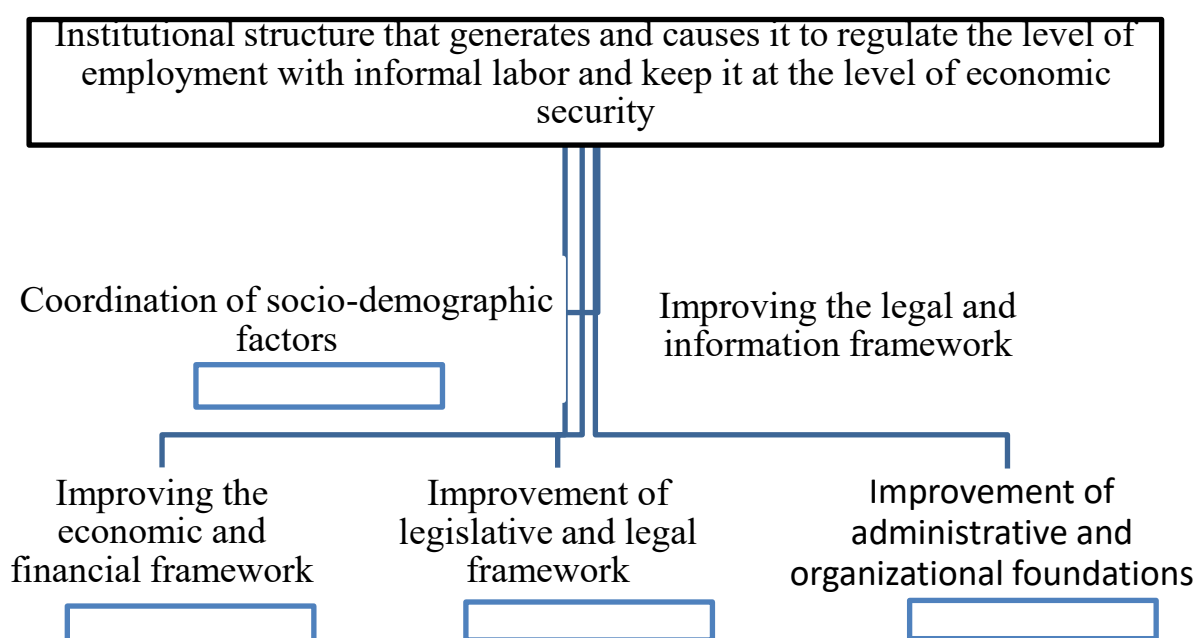


Figure 1.2.5. Reducing the level of informal employment institutional structure⁴⁴

The transition to a digital economic model in the global economy is accompanied by fundamental and qualitative changes in socio-economic relations, both at the state level and at the level of business structures. Registration of economic units and formalization of informal employment will help ensure decent and productive employment⁴⁵.

⁴⁴ Worked and enjoyed by the author

⁴⁵ <http://azkurs.org/ijtimoiu--gumanitar-va-mutaxassislik-v3.html?page=6>

In recent years, the share of informal employment in the world economy has been increasing. According to data, the share of informal employment outside of agriculture in the world economy was 61% in 2023⁴⁶.

The assessment of informal employment should be based not only on its volume, but also on the identification of factors that contribute to the formation of this type of employment. The source of information on informal employment is data on the results of social surveys on the employment of the population. It should be emphasized that the types and forms of informal employment are based on its underlying conditions and factors.

Any form of non-standard social and labor relations is considered a potential source of informal employment. In this regard, in order to account for and assess informal employment in various sectors of the economy, it is necessary to take into account the composition and content of the inputs to this segment.

The transformation of the digital economy, the formation of additional demand for labor in the informal sector of the economy, and the rapid development of the entrepreneurial sector are creating conditions for the transformation of potential informal employment into real informal employment within economic entities. For this reason, it is necessary to identify the components of informal employment.

The quantitative and qualitative characteristics of potential, component and real informal employment at the level of economic entities in the formal and informal sectors of the economy are

⁴⁶ ILO Monitor: SOVID-19 and the world of work. Third edition / International Labor office - Geneva: ILO, 2023.

determined. Methodological tools are proposed for taking into account and assessing external and internal factors under the influence of which the formation of individual forms of informal employment occurs. The quantitative and qualitative parameters of the formation of potential informal employment, which is reflected in the standard employment element, are determined. It is based on the fact that the transformation of potential informal employment into a reality is part of the structure of the labor market.

The formation of informal employment with components, the composition of internal and external factors based on the presence and influence of components are determined. The quantitative description of informal employment with components is explained. Methodological means of accounting and assessing this type of informal employment are proposed. The parameters of real informal employment are determined for individual sectors of the economy (Figure 1.2.6).

Ensuring employment and reducing unemployment is a complex socio-economic phenomenon that requires in-depth research. It is appropriate to conduct social research taking into account the general laws, principles and concepts of employment.

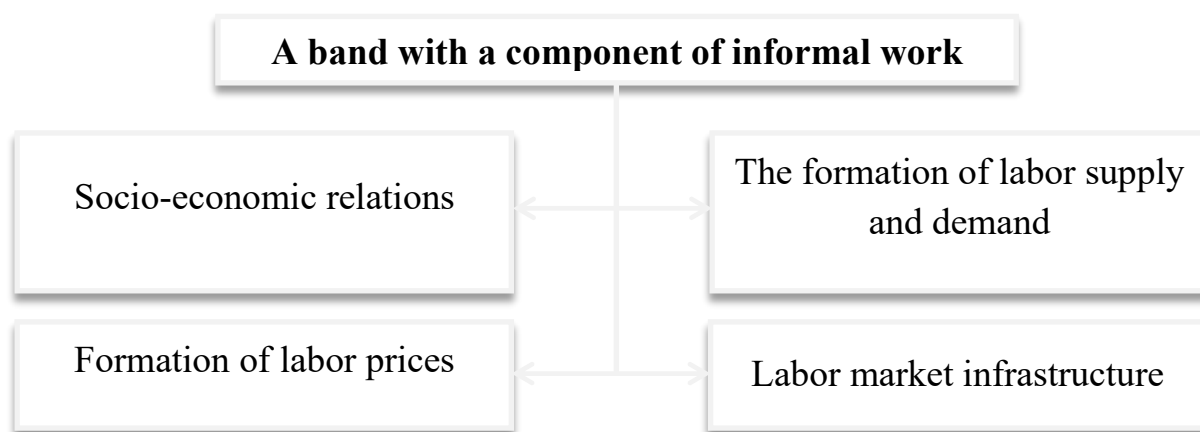


Figure 1.2.6. Employment with a component of informal work⁴⁷

Today, the development of the labor market is accompanied by an increase in flexibility, and the formation of a flexible labor market is one of the main conditions for ensuring the competitiveness of the economy. Based on the analysis of the state of labor market flexibility and its mechanisms in developed countries, we can conclude that the degree of labor market flexibility and its mechanisms differ significantly.

1.3-§. Ensuring modern employment in Uzbekistan improve the mechanism

Employment is an important factor in economic development and human capital development. Increasing the level of employment is a necessary condition for the replenishment of labor resources. Shifts in the composition of the populations employment indicate its transformation. This requires an expansion of its flexibility as a result of changes in the composition of the labor force in the context of economic modernization.

In modern conditions, the use of flexible forms of labor relations in the selection of employees, the organization of their labor, the determination of wages, and the effective organization of working time is one of the main elements of optimizing the activities of the enterprise and ensuring its rapid adaptation to changing market demands.

Citizens who are self-employed, including artisans, participants in family businesses, members of peasant farms, workers cooperatives, members of farms, and self-employed persons, are eligible to register as

⁴⁷ Worked and enjoyed by the author

full-time or part-time workers under an employment contract. This includes individuals who have received temporary work permits, temporary entrepreneurs, as well as other persons engaged in the provision of services, citizens engaged in temporary labor activities outside the Republic of Uzbekistan and working in non-governmental non-commercial organizations that carry out their activities in accordance with legal documents.

The dynamics of the main indicators of the effective development of the labor market of our Republic in recent years is shown in the following figure: in 2023, the growth of the economically active population compared to 2001 was 163.3%, the number of people with jobs was 148.1%, while the number of people in the formal sector of the economy decreased by 1.13%, and the number of people in the informal sector increased by 3.39 times. increased. During the reporting period, the number of people leaving the republic to work increased by 7.97 times, the unemployment rate by 2.4 times, and the number of economically inactive people by 119.7%. The ratio of the economically active population to total labor resources was 71.6% in 2001 and 79.1% in 2023 (see Table 1.3.1).

Table 1.3.1

Balance of labor resources in the Republic of Uzbekistan⁴⁸

| Indicators | 2010 year | 2015 year | 2020 is | 2021 is | 2022 is | 2023 year | 2001-2023 growth in u.u., % |
|-----------------------------------|--------------|--------------|---------|---------|---------|--------------|-----------------------------------|
| Economically active population | 12286 | 13767.7 | 14876.4 | 14980.7 | 15038.9 | 15038.2 | 163.3 |
| Bands with work | 11627.8 | 13058.3 | 13541.1 | 13538.9 | 13538.9 | 14014.2 | 148.1 |
| Level of | 66.9 | 68.2 | 68.1 | 67.0 | 67.2 | 67.9 | 1 time |

⁴⁸Source: calculated by the author based on data from the Ministry of Poverty Reduction and Employment of the Republic of Uzbekistan and the Statistical Agency under the President of the Republic of Uzbekistan.

| | | | | | | | |
|-------------------------------------|---------|---------|---------|---------|--------------|--------------|-------------------|
| employment | | | | | | | |
| In the public sector of the economy | 2410.2 | 2341.3 | 2463.3 | 2609 | 2540.0 | 2567.4 | 1.13 |
| In the public sector of the economy | 9218.2 | 10717.0 | 11077.8 | 10929.9 | 11166.2 | 11446.8 | 3.39 times |
| Those who left to work abroad | 289.2 | 1001.3 | 2460.7 | 1840 | 1,793,907.00 | 1,793,907.00 | 7.97 times |
| People who need to go to work | 658.2 | 709.4 | 1335.3 | 1441.9 | 1332.7 | 1322,086 | 6.2 times |
| Unemployment rate, % | 5.4 | 5.2 | 9 | 9.6 | 8.9 | 8.6 | 2.4 times |
| Economically inactive population | 4424.9 | 4508.4 | 4131.4 | 4 364.2 | 4 609, 8 | 4701.3 | 119.7 |
| Total labor resources | 16504.2 | 18276.1 | 19007.8 | 19345.0 | 19,644.0 | 19,739.6 | 150.9 |

In the context of innovative economic development, the use of flexible forms of labor in the selection of qualified personnel, the organization of their labor, the determination of wages, and the effective organization of working time is one of the main elements for optimizing the activities of the enterprise, increasing the efficiency of the enterprise, and ensuring its rapid adaptation to changing market requirements.

According to the results of the study, the practical application of temporary and part-time employment leads to the following positive results, including:

the period allows for a reduction in unemployment;

provides employment opportunities for those in need of social protection in the labor market - mothers, fathers, and retirees;

allowing employees time for personal and family matters also leads to increased employee productivity;

for entrepreneurs, demanding a fair wage allows them to reduce the additional costs associated with hiring employees.

Over the past 20 years, the growth of the working-age population in our republic has been higher than the growth of the total population. In the coming years, our countrys labor market is expected to grow by more than 500 thousand people (see Table 1.3.2).

Table 1.3.2

Labor market balance in the Republic of Uzbekistan, thousand people⁴⁹

| Indicators | 2010 | 2015 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Economically active population | 12286.6 | 13767.7 | 14876.4 | 14797.4 | 14980.7 | 15038.9 | 15038.2 |
| Working class people | 11628.4 | 13058.3 | 13541.1 | 13236.4 | 13538.9 | 13706.2 | 14014.2 |
| <i>including: on types of economic activity</i> | | | | | | | |
| Agriculture, forestry and fisheries | 3118.1 | 3601.7 | 3544.6 | 3499.2 | 3414.7 | 3438.7 | 3344 |
| Construction | 1033.7 | 1222.2 | 1324.6 | 1305.6 | 1350.8 | 1314.3 | 1502.2 |
| Mining industry and mining of rare earths | 121.4 | 130.3 | 84.8 | 92.5 | 94 | 57.5 | 58.9 |
| Manufacturing industry | 1339.1 | 1476.2 | 1612.9 | 1597.7 | 1642.4 | 1630.1 | 1661.9 |
| Professional, scientific and technical activities | 135.8 | 131 | 140.9 | 131.6 | 138 | 135.7 | 139.2 |
| Provide management activities and support services | 64 | 71.4 | 95.4 | 98.4 | 100.2 | 108.1 | 108.7 |
| Public administration and defense; compulsory social security | 584.6 | 598.1 | 636.6 | 635.9 | 637.3 | 636.8 | 637.9 |
| Art, entertainment and recreation | 64.4 | 65 | 66 | 67 | 70.2 | 71.7 | 71.9 |
| Providing other types of services | 1144.1 | 1368 | 1562.2 | 1358.2 | 1358.2 | 1534.1 | 1560.3 |
| Electricity, gas, steam supply and air conditioning | 86.9 | 99.1 | 79.1 | 72.3 | 76.2 | 73.5 | 68.6 |
| Water supply; sewage system, waste treatment and | 58.3 | 63.1 | 44.7 | 47 | 50.6 | 49.5 | 46.5 |

⁴⁹Source: By the author O'Ministry of Poverty Reduction and Employment of the Republic of Uzbekistanand the Statistical Agency under the President of the Republic of Uzbekistanwhat'It was written according to the instructions.

| | | | | | | | |
|--|--------|---------|---------|---------|---------|---------|---------|
| disposal | | | | | | | |
| Information and contact | 53.1 | 61.7 | 62.2 | 58.7 | 70.5 | 77.3 | 87.8 |
| Financial and insurance activities | 69.9 | 69.8 | 75.8 | 72.5 | 70.4 | 69.6 | 73.4 |
| Transportation and storage | 509.9 | 614.7 | 646.1 | 610.5 | 654.2 | 633.1 | 640.4 |
| Housing and food services | 249.2 | 297.3 | 315.3 | 302.8 | 341.1 | 348.8 | 367.2 |
| Wholesale and retail trade; repair of motor vehicles and motorcycles | 1235.6 | 1413.8 | 1436.4 | 1405.4 | 1535.6 | 1525.2 | 1586.1 |
| Transactions with real estate | 62.1 | 68.1 | 62.4 | 53.4 | 63.2 | 62.2 | 64.9 |
| Education | 1102 | 1105.3 | 1134.4 | 1158.2 | 1220.5 | 1268.7 | 1299.5 |
| Health care and social services | 596.2 | 601.5 | 616.7 | 669.5 | 650.8 | 671.3 | 694.8 |
| <i>Distribution of the working-age population by type of ownership</i> | | | | | | | |
| Public sector | 2410.2 | 2341.3 | 2463.3 | 2483.1 | 2530.1 | 2540.0 | 2567.4 |
| Non-governmental sector | 9218.2 | 10717.0 | 11077.8 | 10753.3 | 11008.8 | 11166.2 | 11446.8 |
| Unemployed people registered with labor offices | 16.2 | 2.7 | 57.9 | 37.1 | 98.7 | 49.0 | 36.69 |

The current level of real jobs in the economy cannot meet the demand for them. Therefore, without improving state labor market policy and ensuring a balance between labor supply and demand, it will be impossible to achieve economic growth in the future.

The main reason for the economic activity of women in Uzbekistan is their involvement in raising and caring for their children. Gender disparities in employment, inadequate schooling, unsatisfactory quality of public services, and limited access to education, especially higher education, have also been shown to be true, as have labor productivity

In 2023, the unemployment rate among women was 13.3 percent (compared to 6.1 percent globally). This is twice the unemployment rate among men.

The majority of unemployed women are women with medium (65.8 percent) and medium (28.5 percent) education, as well as women with partial education (3.4 percent). More than 44 percent of unemployed women are between 15 and 30 years old. The highest unemployment rates among women are observed in Kashkadarya (15.5 percent), Surkhandarya (15.0 percent) and Syrdarya (4.7 percent) regions.

There are reasons for the high level of unemployment and underemployment among young people. First, it is explained by the unwillingness of employers to make additional investments in training and improving the skills of young men and women of this age. Therefore, employers prefer to temporarily assign workers to seasonal agricultural and construction work that does not require special training, as well as to trade, public catering, and other services.

Secondly, it allows students with unstable jobs to continue their education without having to work and study.

It has been found that young people choose to work in a variety of jobs to test their skills in various fields and to choose future professions and specialties.

Given the current changes and the expansion of globalization processes, the problems that need to be solved in determining the place of women in private business and entrepreneurship are also waiting to arise. It is known that in Uzbekistan, appropriate conditions have been created to enhance the status and role of women, ensure their rights and interests, increase their socio-political and economic activity, and

generally expand their participation in the modernization of all aspects of life.

In our country, all legal bases have been developed to eliminate discrimination against women and to involve them in active participation in the social and economic life of the country. The issues of equality between women and men, and non-discrimination against women are enshrined in the Constitution. Indeed, the share of women in the economic activity of the population of Uzbekistan is much higher than in other countries (see Table 1.3.3)⁵⁰.

Table 1.3.3

Information on the economic activity of the population⁵¹

| On a regional scale | The conditions | Men |
|-----------------------------|----------------|------|
| 1 | 2 | 3 |
| The world is full of people | 53.1 | 80.3 |
| In developed countries | 50.4 | 67.5 |
| In countries in transition | 51.0 | 70.5 |
| In Uzbekistan | 68.9 | 72.7 |

The table shows that while the economic activity of rural areas is not reflected in the most positive indicators worldwide, the economic activity of rural areas in Uzbekistan is higher than in developed and transition countries. However, the economic activity rate of men in Uzbekistan, which is 7.6 percentage points higher than the world average of 80.0%, is shown in the table below.

This situation requires a more thorough study of the problems of male labor participation. In turn, the level of economic activity of women in the country's labor market is lower than that of men.

⁵⁰ Airov O.A. State regulation of small business and private entrepreneurship in Uzbekistan. - T.: Fan, 2012. - 272 p.

⁵¹ Source: Demoskop weekly. The electronic version of the newsletter Naseleni i obshchestvo. Center of demography and human ecology Institute of narodnokhozyaystvennogo prognozirovaniya RAN. - Moscow. #377-378. <http://esa.un.org/unrr>

However, women are more likely to be involved in traditional labor fields such as education, health care, culture, art, and science. The share of women and girls involved in the economy it is fitting that 45 percent of them are setting an example in increasing the well-being of the population.

However, scientific research suggests that there are distinct characteristics that differentiate women and men from those engaged in entrepreneurship. As a result, these characteristics are explained by different descriptions of women and men entrepreneurs in the development of personal business and the private enterprise sector (see Table 1.3.4).

Table 1.3.4

The difference between male entrepreneurs and female entrepreneurs⁵²

| Descriptions | Entrepreneurs | Entrepreneurial opportunities |
|--|---|--|
| The cost of starting a business | 25 - 35 washes | 30 - 40 washes |
| Sources of funding | Using a deposit, getting bank loans, attracting investors, borrowing from acquaintances | Using a deposit and borrowing from acquaintances |
| Support group | Friends, business partners, spouse | True friends, spouse, family, and in-laws |
| Motivation | The desire to do business, achieve independence, manage situations | Striving for the goal, achieving independence |
| The most popular network | Industry, construction, trade, services | Services, trade, light industry (weaving), handicrafts |

In order to have a comprehensive understanding of small business and forms of entrepreneurship, a classification based on its various characteristics has been presented.

⁵² Worked and enjoyed by the author

In today's era of ongoing globalization processes, the issues of developing private business and private entrepreneurship and increasing the role of women's labor in this sector are of particular importance for the overall development of our country's economy (see Figure 1.3.2).

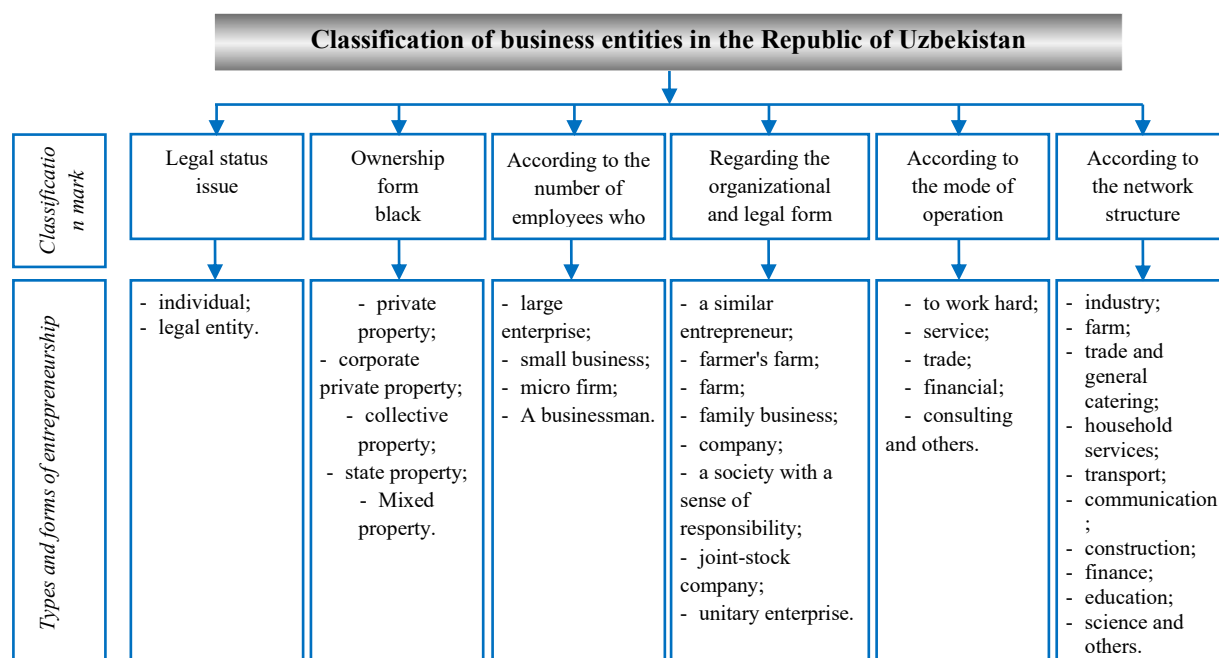


Figure 1.3.2. Classification of business entities of the Republic of Uzbekistan⁵³

In recent years, a number of normative documents have been adopted to promote the use of rural labor and the effective implementation of such labor.

The most modern methods and conveniences of organizing economic management are being achieved based on normative documents on expanding the labor force and creating opportunities for women. However, as our President Sh. Mirziyoyev noted, the important issue of creating permanent jobs for women has not been fully resolved. From this point of view, considerations about the place of women in

⁵³ Bakayev HN Econometric study of the development of small business and private entrepreneurial activity in the regions (on the example of Navoi region). Doctor of Philosophy in Economics (PhD) Dissertation. T.: 2020-60 p.;

society and their contribution to the development of small business and private entrepreneurship remain particularly relevant today.

Today, the development of the digital economy is rapidly developing in the world. The development of the digital economy makes it possible to fully satisfy consumer demand, increase labor productivity in sectors and industries of the economy. E-commerce makes it possible to prevent crises by accelerating the sale of goods and services. In this regard, the virtual shopping system accelerates the sale of goods. Internet advertising, in turn, allows you to expand the advertising audience world wide.

With the development of digital technologies, today's workplaces are becoming increasingly flexible. Employers have the ability to hire employees at their convenience and at their own pace, and geographical location and time differences are no longer a factor. Employees are able to perform their duties remotely using digital technologies, allowing them to complete assigned tasks at any time without having to leave their home.

The Fourth Industrial Revolution is based on the development of digital technologies, along with automation, computerization, and robotization, and is leading to technical and socio-economic changes. The digitalization of work and employment may lead not only to the disappearance of professions and jobs that are valued in the field of analysis and software development, but also to the disappearance of painful areas of work and employment that are susceptible to automation and robotization. As a result, the gap between high-paid and low-paid jobs will widen. It is clear that digital technologies are changing the

patterns of employment. The digital revolution affects the structure of employment from two sides: organizational-technical and socio-economic. From the organizational-technical side, the digital revolution leads to the emergence of new jobs in the field of manufacturing products, as well as new forms of employment and the emergence of new professions. The socio-economic sphere, on the one hand, is a model from the point of view of expanding the possibilities for the development of human capital. Digital technologies can serve both social and personal interests, and lead to the emergence of stable forms of employment. Therefore, the digital revolution has both positive and negative aspects for society.

In the digital economy, attracting investment in information and other advanced technologies requires not only the production of goods that require additional labor, but also the replacement of existing jobs with higher skills.

The digital economy is a socio-economic system in the form of an electronic, Internet, network and virtual economy, aimed at increasing the efficiency of production and production of goods and services through digital information, which is directly related to the development of information and communication technologies in economic activity.

The development of the digital economy has led to a sharp increase in the volume of information necessary for making management decisions in the economy at various levels. In turn, the knowledge of personnel and the development of ICT in the national economy indicate an increase in its level of development and competitiveness. In developed countries and emerging industrial countries, the share of the

digital economy in gross domestic product has exceeded 7%⁵⁴. The emergence of a digital economy in these countries is leading to increased productivity in their economies. In particular, the US exports more than \$400 billion in “digital services”. More than 5% of its GDP is in Internet- and ICT-related sectors⁵⁵.

In the digital economy, modern technologies such as robotics, big data, and artificial intelligence are transforming the way jobs are done, radically improving productivity, and are having a profound impact on the global labor market.

The development of the digital economy is directly determined by the development of ICTs, including:

- the production of goods and services, as well as the growth of knowledge and information with added value;

- the scope for unlimited use of labor and other resources within the infrastructure of enterprises, specialized regional “digital clusters”;

- The rapid development of Internet trading and financial exchanges due to the lack of boundaries in trading spaces on the Internet;

- downsizing enterprises to gain competitive advantage in markets, the emergence of virtual enterprises, and others.

One of the most important problems in the effective organization and development of labor activity in the context of the development of the digital economy is the issue of attracting qualified personnel. Today, the rapid development of globalization of the world economy and the widespread use of the Internet system provide an opportunity for

⁵⁴ World Bank report "Digital Dividend" // [http:// www-wds.world-bank.org](http://www-wds.world-bank.org)

⁵⁵ Sshwab K. The fourth industrial revolution. - Surrensu, 2017. - 192 r.

Employees are able to perform their duties remotely using digital technologies, allowing them to complete assigned tasks at any time without having to leave their home.

Remote work is also bringing about significant changes in the characteristics of traditional jobs, including working hours, job location, and forms of compensation. In the digital economy, the nature of unemployment is changing dramatically, as digital technologies are now transforming not only jobs, but also tasks.

Digital technologies require the employee to take responsibility along with high qualifications and knowledge and to perform labor activities independently. Currently, the employee organizes his labor activities himself, and labor payments are made via the Internet. External control of the employee's labor activities is carried out through information and reports, without involving him personally.

In addition, the fact that the transition to a digital economy is also undergoing significant changes in the field of employment is evidence of the steadily increasing demand for specialists with modern knowledge and skills. In this regard, changes in the working hours and working conditions of employees are also coming. The transition to a digital economy is leading to a shift in the composition of the workforce, the effective use of employees' intellectual capital, and the increase in the efficiency of innovation processes, which are factors that are expanding the scope of their impact. Integration processes and globalization are leading to the information provision of the labor market, increased mobility of employees, and the creation of quality jobs.

In our country, like anywhere else in the world, an innovative development process of the labor market is taking shape, consistent with an innovative economy.

The strategy for the development of the labor market in the context of innovation requires the theoretical, methodological and practical analysis and systematization of modern socio-economic phenomena, the system of organizing work and employment, and the transformation of its traditional forms into qualitative indicators.

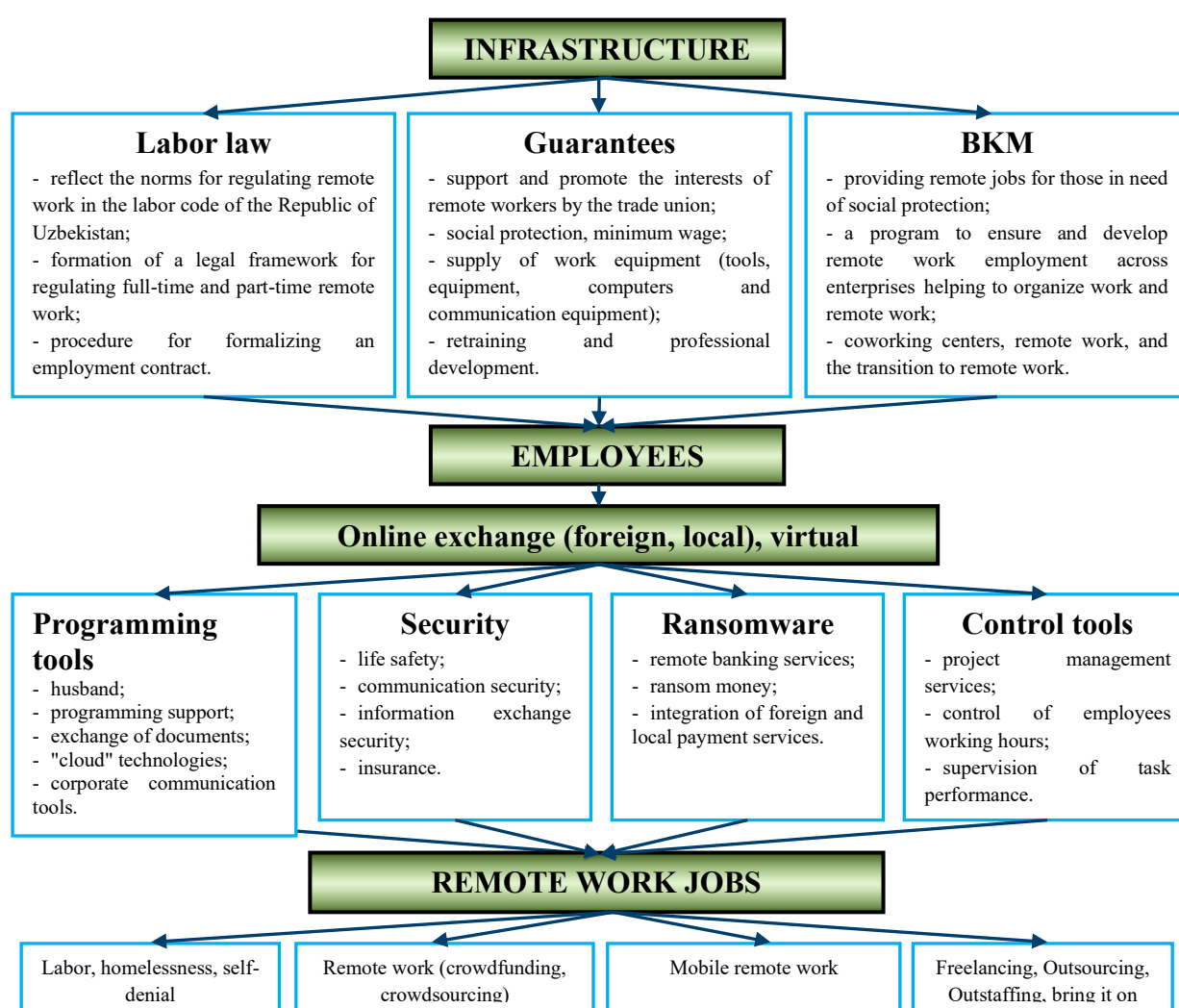


Figure 1.3.5. System for organizing remote work⁵⁶.

⁵⁶ <http://review.uz/uz/post/2016-2021-yillar-da-mexnat-bozorida-amalga-oshiirilgan-ishlar-va-eriшилган-natijalar-sharhi>, D.A. Nasimov "Modern forms of employment in the conditions of the development of the digital economy", scientific electronic journal "Economy and Innovative Technologies" No. 4, JULY-AUGUST, 2020 UIL

In the context of the development of the digital economy, one of the most important problems in the effective organization and management of labor activity is the issue of attracting and retaining qualified personnel⁵⁷.

The content of unemployment is changing radically in the digital economy, because in the current era, digital technologies are not creating jobs, but rather distributing labor tasks. With remote work, the nature of the traditional workplace is also undergoing significant changes. The main advantage of freelancing, outsourcing, and home-based work is its adaptability. Employees have the opportunity to organize work remotely, based on a strict mutual agreement, before leaving the company (Figure 1.3.5).

In our country, it is important to popularize innovative forms of providing the population with quality jobs and create conditions for this. Having studied the experience of developed countries, we can emphasize that one of the modern and promising forms of providing the population with quality jobs is remote work.

The main advantage of this type of work is its flexibility. Employees have the opportunity to organize their work remotely, based on mutual agreement, without having to travel to the enterprise.

The following types of remote work and employment regulations can be distinguished:

this is a jobati. Aurim intends to perform tasks in his own conditions. Examples of this are homeschooling and freelancing;

In the literature on remote work, they are referred to as teleworkers

⁵⁷ https://www.bmas.de/SharedDoss/Downloads/DE/RDFRublikationen/Forsshungsberishte/forsshungsberisht-fb-442-arbeitsqualitaet.rdf?__blob=rublisatationFile&v=1

or telecommuters. They perform their work remotely. An employment contract is concluded between the employer and the employee;

Mobile telecommuting. Personal computer work can be carried out even when there is no Internet connection. For example, sales agents can be brought;

A freelancer, also known as a *bunde* employee, performs labor activities and other duties without being formally employed by the company.

In the development of the digital economy in our republic, the organization of freelancing and outsourcing (BPO), outstaffing activities, as a modern way of ensuring employment, is considered one of the important measures. “Freelancing” in English means “freelancing” as an actor, designer, programmer, journalist, or a freethinker, and outsourcing is an English word, “out” means “outside”, and “sourcing” means “source”, indicating the connection of two types of work. In the West, self-employed doctors and lawyers are also considered freelancers. Freelancing is a very widespread work in recent times. There are over 1,500 freelancers registered in Uzbekistan on both Russian and US freelance exchanges. Freelancing is not considered a separate activity from entrepreneurship in the current system, and therefore does not have its own specific legal regulation.

If we generalize the experience of foreign countries in regulating freelancing, the relationship between a freelancer and an employer can be formalized in several ways (see Figure 1.3.6):

as an individual on the basis of a civil law contract;

as an entrepreneur in the same capacity on the basis of a civil law contract;

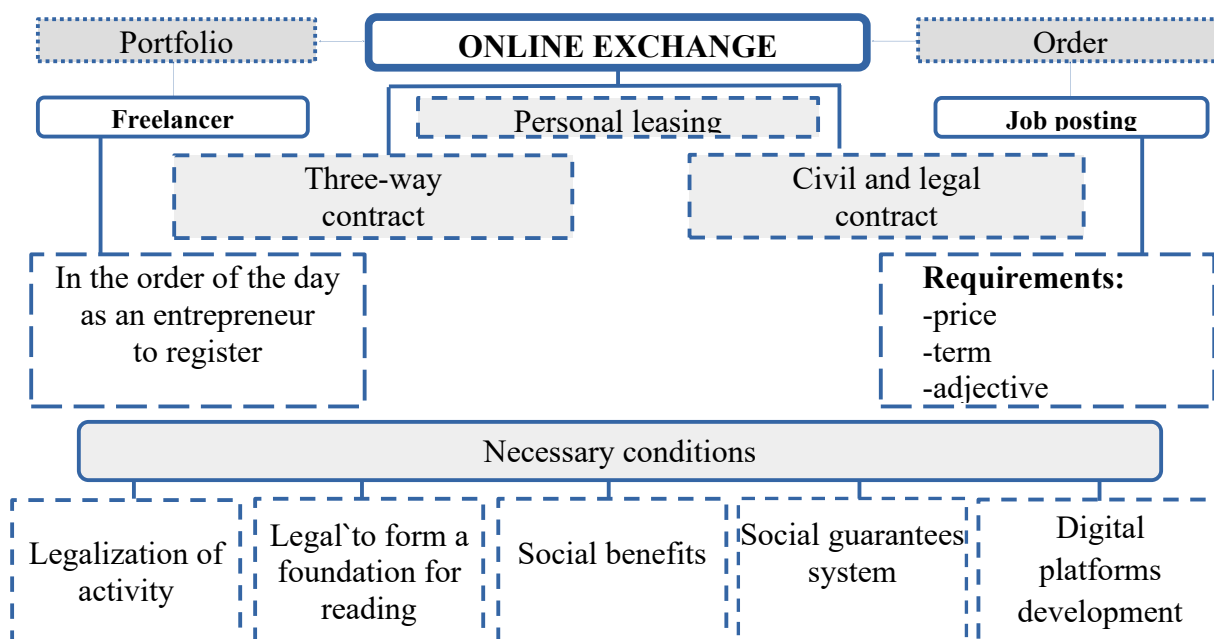


Figure 1.3.6. Model of freelancing in the labor market⁵⁸

Through online freelance exchanges based on a three-party contract.

When the painful aspects of freelancing are legalized, it prevents informal employment, formalizes income, and, especially when there are no jobs available in the region, allows people to work remotely, develop their skills, and earn an income.

The formation of a legal framework for freelancing and its recognition as a separate type of employment will lead to a decrease in the unemployment rate. This, in turn, will create an effective model of material wealth creation in the freelance sector, the formation and development of freelancer exchanges, and the provision of jobs to the unemployed and, above all, the poor in the regions.

⁵⁸ Worked and enjoyed by the author

The model of the flexibility of employment is determined by the institutional structure of the labor market. The features of the institutional structure of the national labor market are reflected in the rigid rules and some shortcomings of the system that forces them to comply.

Therefore, in the labor legislation system of our republic, there are obstacles to the widespread implementation of mechanisms for ensuring the flexibility of work and labor relations, and unilateral termination of labor relations at the request of employers would require a long time and significant costs for them;

The Labor Code of the Republic of Uzbekistan contains a separate law on the development and implementation of legal norms on the regulation of hired labor.



Figure 1.3.7. Freelancer, government, and business relations⁵⁹

Liberalization and standardization of labor legislation should be carried out in coordination with the strengthening of enforcement

⁵⁹ Worked and enjoyed by the author

activities. Enforcement protects the rights of employees as a mechanism for encouraging compliance with labor contracts.

Increasing the institutional flexibility of the labor market is consistent with the goal of achieving this in two ways - through liberalization of legislation on the protection of employment and employment and through strengthening the enforcement of labor relations.

It is important to improve the legal and regulatory factors of the institutional framework, the formation of informal norms and institutions, and the identification and assessment of their forms of orientation, which are aimed at improving labor market regulation. An important goal of sociological research is to develop scientifically based conclusions and proposals on ensuring the flexibility of work and labor in the conditions of effective development of the labor market.

The normative and legal documents regulating remote work are intended to regulate the relationship between the state, the employer and the employee, protect their interests and reflect the rules:

Determining the obligations and rights of employers, and regulating the means of influencing groups with remote work;

regulation of the obligations of employers in emergency situations; remote work teams, mechanisms for organizing their work activities and work results;

regulating relations with the trade union;

regulating relations with remote work and employment entities;

develop and implement standards for the state regulation of remote work;

determine the procedure for hiring and taxing employees;

it is appropriate to reflect state guarantees that ensure the benefits of employers and employees in connection with remote work.

The advantage of modern forms of employment is the rational use of working time, both for work and for employment. For this reason, the flexibility of the labor market is increasing, as each person chooses a short-term job and has the right to a fair wage, which leads to an increase in the level of employment of citizens, including people with disabilities, the number of job vacancies is increasing, and the procedure for hiring and firing is being simplified. Companies will reduce costs by making it easier for them to retain essential jobs if they need to hire employees.

The main disadvantages of non-traditional forms of employment can be considered the development of informality and unemployment, since labor relations are not always formalized, as a result of which there is a risk that employees will not be able to protect their rights in the event of a dispute.

Modern forms of work and employment are important elements of the modernization of our country's economy, and the opportunities to use digital technologies to carry out their activities expand the prospects for personal development.

Legalizing the painful aspects of remote work will prevent informal work, formalize income, and provide an opportunity to work remotely, develop their skills, and earn an income, especially when there are no jobs available in the region.

The key to effective organization of remote work is to improve labor legislation, improve the system of guarantees for remote work, and ensure control tools and communication and information security.

In the information age, when choosing a modern form of employment, people view employment as a situation rather than a lifelong choice. For this reason, it is appropriate to prioritize the development of human capital with the development of the digital economy. It is necessary to implement qualitative changes in the labor and employment sector, create high-quality and productive jobs, achieve technological progress, modernize equipment, and develop innovative sectors of the industry.

In the digital transformation of the national economy, the BPO Logistics Management has improved the mechanism for ensuring employment in IT outsourcing, freelance and outstaffing, and has fully described the mechanisms of the labor office, ensuring a strong connection between job seekers and employers. Once the process of registering their job information in the labor office database is completed, the system automatically sends complete details such as the activation time, the duration of the application, and the costs to the registered candidate.

The candidate can view the current job opportunity through the relevant candidates job portal. The system provides full access to the job details for employers to instantly update and candidates/job seekers benefit from this system and automatically notify the candidate through email. Because the entire system manages the labor office process and

ensures cooperation between job seekers and employers (see Figure 1.3.8).

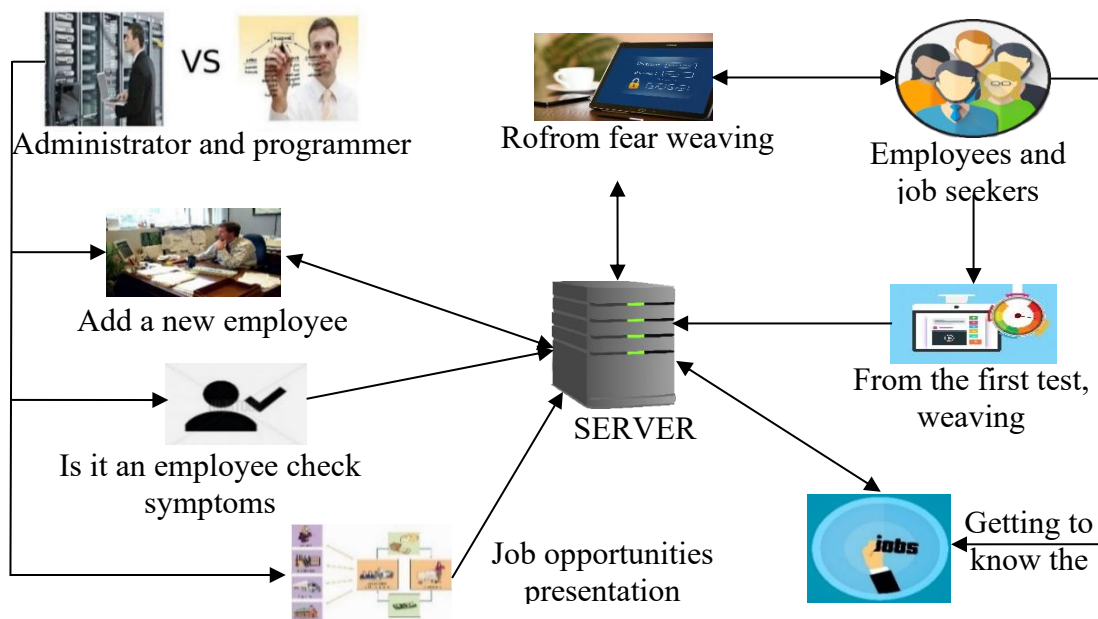


Figure 1.3.8. Improved electronic mechanism for ensuring bandwidth⁶⁰

Based on the above, the conclusions of the law are considered to be: providing the unemployed with one-time temporary work, retraining those with intermediate and intermediate specialized knowledge in traditional and modern jobs and professions in a short period of time, and improving the institutional foundations for reducing the population's dependence on informal work.

Summary of the first chapter

1. Theoretical foundations of ensuring connectivity in digital transformation, foreign experiences of modern work-related employment systems and their application in our republic were identified.

⁶⁰ Worked and enjoyed by the author

2. Digital economic sectors and structural changes in them have a significant impact on the employment and employment composition of labor resources. The emergence of modern forms of remote work in the labor market in the conditions of the digital economy, the intellectualization of professions and its transformation have led to the improvement of the composition, types and quality criteria of remote work.

3. In the conditions of the digital economy, the labor market is considered a transforming market due to the impact of changes in the composition of labor supply and demand. Therefore, based on the modern forms of labor supply in the labor market and its transformation, a classification of the types and composition of labor supply, quantitative and qualitative criteria of adaptation was presented.

4. Analytical and statistical indicators were developed to improve the methodology for assessing employment in the digital transformation, the state of employment and socio-economic indicators of employment in our republic, and the foundations for introducing modern forms of employment.

5. The mechanism for ensuring the availability of BPO logistics management for IT outsourcing, freelance and outstaffing has been improved, and the economic essence and classification of service types, as well as the definition of authorship, have been worked out.

CHAPTER II. METHODOLOGICAL BASIS OF DEVELOPING EMPLOYMENT SYSTEMS IN THE CONTEXT OF DIGITAL TRANSFORMATION

§ 2.1. Sustainable development of government and economic systems in the context of digital transformation

In the context of the accelerating process of digitalization in the world and the development of the digital economy, increasing the standard of living and employment of the population remains one of the pressing problems.

In this context, achieving a better balance between work and personal life is of paramount importance. According to statistics, more than 2 billion workers worldwide (61 percent of those in employment) are considered informal workers and therefore do not have access to labor rights and social protection⁶¹. In these circumstances, the implementation and formalization of modern forms of employment as a result of the transformation of the digital economy is of particular importance.

Scientific and research work is being carried out on the ways and prospects for developing social services based on outsourcing and freelancing to create effective and competitive economic mechanisms at the national and international levels. Modern forms of organizing outsourcing and freelancing in organizations, the main trends and development trends in the services market and its geography, the use of innovative solutions and digital technologies, and the priority areas of scientific research being conducted in this regard are considered.

⁶¹ World Employment and Social Outlook: Trends 2020. International Labor Office - Geneva: ILO, 2020. - R. 20.

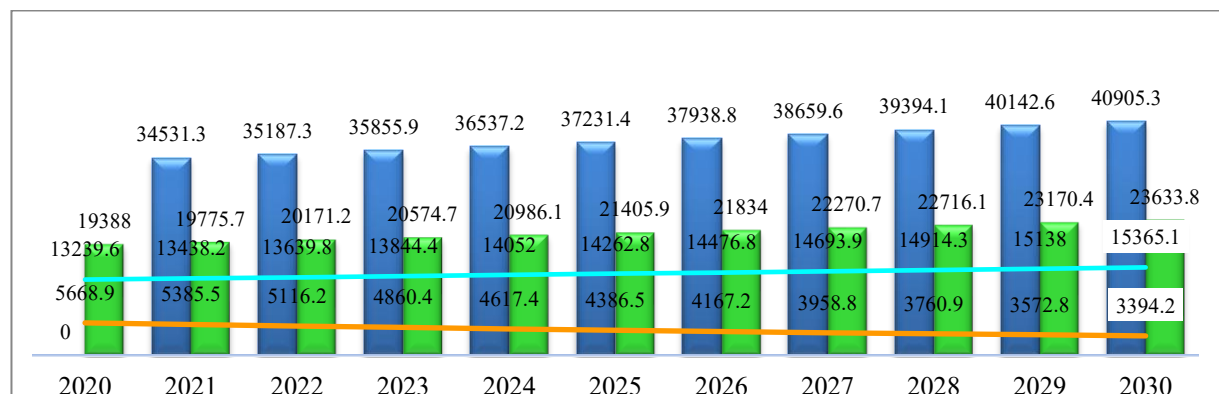
By 2030, the population of our republic is expected to increase by 20.7% to 7,017.9 thousand people, the working-age population by 16% to 2,125.5 thousand people, and the share of informal workers is expected to decrease to 20%. These indicators are the result of an average increase in the gang population by 1.15% per household during the period of stabilization and an average decrease in the number of gangs with informal labor by 5% per household as a result of the implementation of comprehensive comprehensive measures (see Table 2.1.1).

Table 2.1.1

Forecast indicators for the working-age population, balance sheet⁶²

| Indicators | 2020 | 2021 | 2022 | 2024 | 2026 | 2028 | 2030 |
|---|---------|---------|---------|---------|---------|---------|---------|
| Number of working-age population, thousand people | 20135.1 | 20235.8 | 20428.2 | 20930.0 | 21499.1 | 22009.8 | 22569.8 |
| Change compared to the previous year, % | 100.9 | 100.9 | 101.0 | 101.3 | 101.3 | 101.2 | 101.3 |
| Share of unemployed people in the total population, % | 58.3 | 58.1 | 57.6 | 57.1 | 56.9 | 56.6 | 56.5 |

Targeted forecast parameters for the informal sector in Uzbekistan for 2021-2030 Shown in Figure 2.1.1.



⁶²<http://review.uz/uz/post/2016-2021-yillarda-mexnat-bozorida-amalga-oshiirilgan-ishlar-va-eriшилган-natijalar-sharhi>.

Figure 2.1.1. Target forecast parameters of informal employment in Uzbekistan for 2021-2030 (thousand people)⁶³

Based on the results of the analysis of trends and characteristics of labor market development in the period 1991-2023, the forecast parameters of the number of people working in the formal and informal sectors of the economy in the republic in the period 2020-2025 were determined (see Figure 2.1.2).

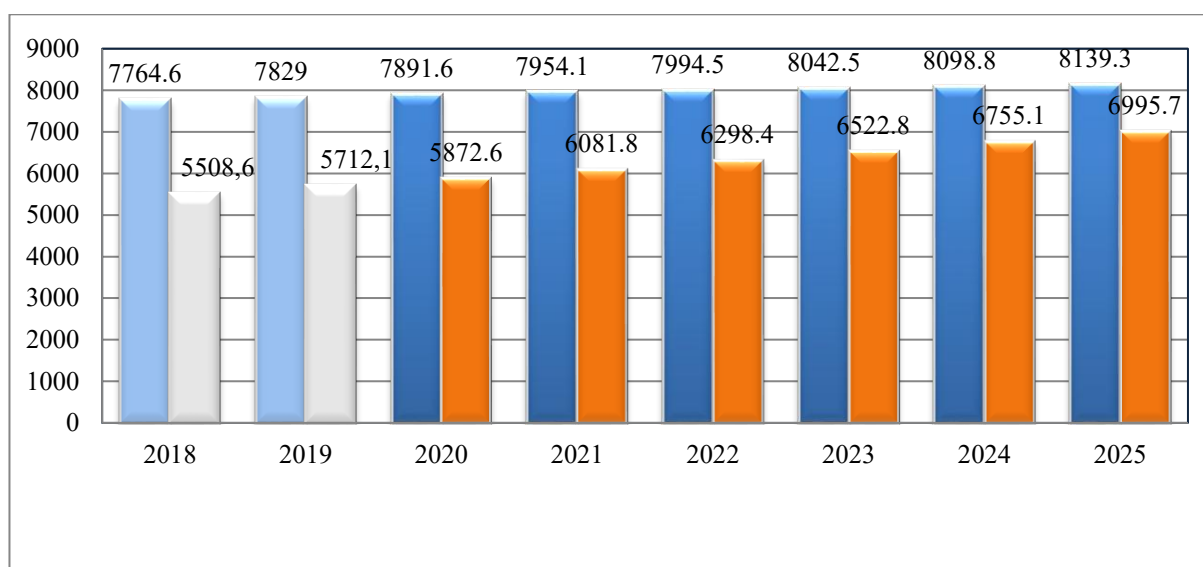


Figure 2.1.2. Forecasted number of people working in the formal and informal sectors of the economy in 2020-2025, (thousand people)⁶⁴

Based on the trends in the number of labor resources, the number of households in small businesses, the number of households in sectors and industries of the economy, and the level of employment, the forecast parameters of these indicators for 2020-2025 were determined (Figures 2.1.3 and 2.1.4). Despite the fact that the demographic situation in the

⁶³<http://review.uz/uz/post/2016-2021-yillarda-mexnat-bozorida-amalga-oshiirilgan-ishlar-va-eriшилган-натижалар-шафи>.

⁶⁴ <https://zenodo.org/resords/7815176>.

republic has stabilized in recent years, the natural population growth rate is still much lower than in the CIS countries.

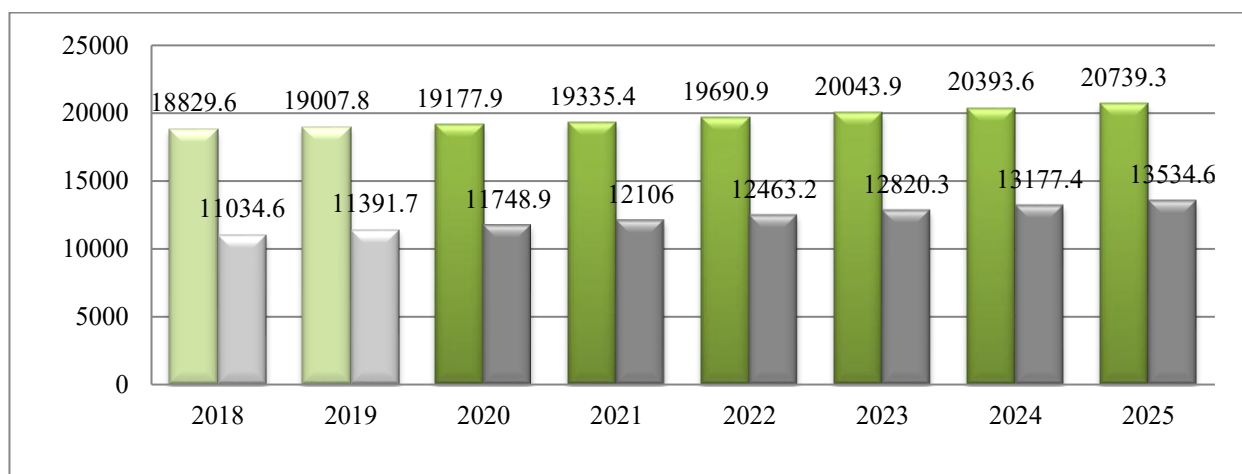
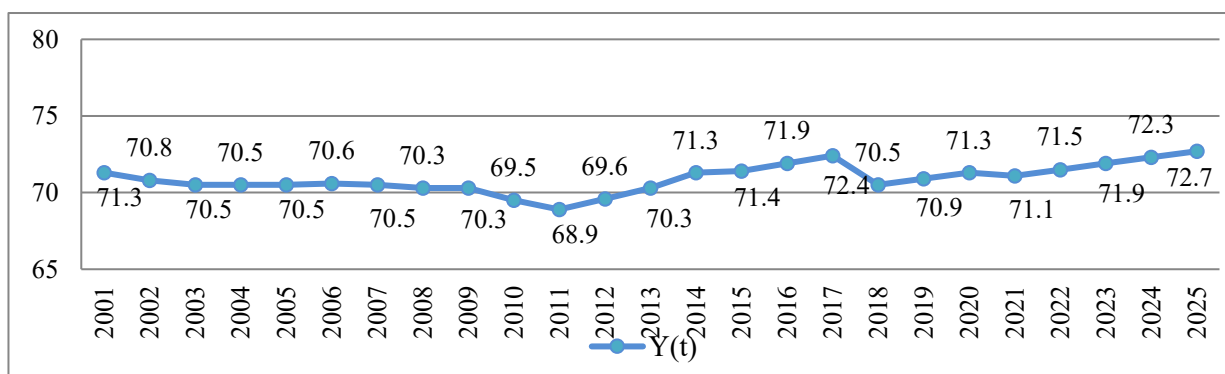


Figure 2.1.3. Future changes in the number of labor resources and the number of small businesses in the Republic of Uzbekistan, thousand people⁶⁵

According to the results of the analysis, if by 2025 the population of the republic increases by 49.6% compared to 2000, or 12,246.6 thousand people, during this period the number of economically active population is expected to increase by 191.9%, or 8,294.7 thousand people, and the number of people with a job is expected to increase by 179.2%, or 7,111.3 thousand people. These indicators will be achieved as a result of an average increase in labor resources of at least 2.0% per year during the period of stabilization.



⁶⁵ <https://zenodo.org/resords/7815176>.

Figure 2.1.4. Changes in the employment rate of the population in the Republic of Uzbekistan⁶⁶

Recommendations were made on the use of a model for studying the composition and scope of non-standard employment in the regional labor market, designed to calculate the indicators of the formal and general level of non-standard employment in the regional labor market and determine its effectiveness.

In his speech “From the Strategy of Actions to the Yellow of the Development Strategy” at the joint session of the Oliy Majlis dedicated to the solemn ceremony of taking office of the President of the Republic of Uzbekistan, the President of the Republic of Uzbekistan emphasized the importance of paying special attention to the following key principles in the “Development of the Digital Economy” of the 7 most priority tasks implemented within the framework of the development strategy: is considered property.

By 2026, the government will ensure the employment of the population, provide qualified training for the unemployed and unemployed citizens at state expense, develop family entrepreneurship, and provide housing support to the vulnerable population⁶⁷. Halving poverty, reforming the management system in the field of social protection, improving the quality and expanding the scope of social services.

Implementing digital government elements and promoting the digital economy have become an integral part of Uzbekistan long-term development plan. This includes, first of all, increasing the share of

⁶⁶ <https://zenodo.org/resords/7815176>.

⁶⁷Speech by the President of the Republic of Uzbekistan at the joint session of the Oliy Majlis

electronic document exchange in the country and gradually transferring a significant part of state services to electronic form through State Service Centers. Telecommunications infrastructure plays an important role in this process.

In the coming years, the “road map” for the implementation of the “Digital Uzbekistan - 2030” strategy, which is being implemented in our country, is being implemented step by step, providing for the implementation of a total of 1,627 projects and measures in regions and sectors.

The dynamics of information exchange through the interdepartmental integration platform of the “Digital Government” system shows that if in 2018 the volume of information exchange between state bodies and departments amounted to 25 million, then by 2024 this figure will exceed 2.5 billion.

The above indicators were achieved as a result of the integration of more than 730 services in 157 information systems of 23 state bodies, which made it possible to reduce the time and wait times for the population and business entities to use state services.

Due to the integration of information services into the interdepartmental integration platform, the number of state services provided is expected to increase to 720 by 2026: 185 of them are provided, 186 do not require ERI confirmation, and 217 are intended directly for business entities.

All reforms being implemented in the Republic of Uzbekistan, the widespread introduction of information and communication technologies, which are the most promising sectors of the modern

economy, are the basis for introducing a system for solving social problems, and this has shown its effectiveness in improving the social environment in society and increasing the well-being of the population, as well as in transparent and The international system is being developed.

The future development strategy of the digital government system consists of the following elements (see Table 2.1.2).

Table 2.1.2

Analysis of the position of the digital government system in the world ranking and forecast indicators⁶⁸

| | Services name | Digital government ranking | | | | | | | | |
|------------------------------------|--|----------------------------|-----------|------------|-------|------------|-------|--------------|-------------|-------------|
| | | Korea | | Kazakhstan | | Uzbekistan | | | | |
| | | Rating- place in | Scor e | Ranking | Score | Ranking | Score | 2022 year | 2024 son | 2026 son |
| 1. | Digital government | 2 | 0.96 | 29 | 0.84 | 69 | 0.67 | 87 | 62 | 50 |
| 2. | Electronic services | 1 | 1.00 | 11 | 0.92 | 40 | 0.78 | 35 | 30 | 25 |
| 3. | Telecommunication infrastructure | 4 | 0.97 | 61 | 0.70 | 131 | 0.47 | 99 | 75 | 60 |
| 4. | Human nature | 23 | 0.90 | 30 | 0.89 | 90 | 0.74 | 82 | 72 | 65 |
| Telecommunication infrastructure | | | | | | | | | | |
| 1. | Mobile phone subscribers <i>(for 100 people)</i> | 137 | | 134 | | 99 | | 101 | 110 | 120 |
| 2. | Mobile broadband subscribers <i>(for 100 people)</i> | 116 | | 83 | | 65 | | 95 | 115 | 120 |
| 3. | Wired broadband subscribers (per 100 people) | 43 | | 13 | | 14 | | 21 | 23 | 25 |
| 4. | Internet users (per 100 people) | 96 | | 85 | | 70 | | 80 | 83 | 88 |
| 5. | The number of computers and tablets that are distributed to these households <i>(100 units)</i> | 131 | | 77 | | 60 | | 70 | 80 | 90 |
| Development of the digital economy | | | | | | | | | | |

⁶⁸The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was awarded the title of “Measures to promote the development of the information and communication technologies sector” based on the presentation materials.

| | | | | | | | |
|--------------------------|---|---|--|---|------------------------|------------------------|-------------------------|
| 1. | Per capita gross domestic product | 31.5 thousand dollars. | 8.5 thousand dollars. | 1.7 thousand dollars. | 2.2 thous and dollars. | 3.0 thousa nd dollars. | 4.0 thous and dollar s. |
| 2. | Share of the digital economy in GDP | 11% | 3.4% | 2.3% | 2.5% | 3.6% | 4.5% |
| 3. | Funds allocated for digitalization | 12 billion dollars. 2021-2026 is coming. | 5 billion dollars. 2021-2025 is coming. | 3 million dollars. 2023 year. | 20 milli on. dollar. | 30 milli on dolla rs. | 40 millio n dollar s. |
| Management system | | | | | | | |
| 1. | Government agencies responsible for developing digital government | 1. Ministry of Public Administration and Security (1,626 employees). | 1. Ministry of Digital Development, Innovations and Aerospace Industry of Kazakhstan (150 employees) | 1. Ministry of Digital Technologies (195 employees). | | | |
| | | 2. National Intelligence Agency Society (NIA, 710 employees); IT Industry Development Agency (NIRA, 456 employees); Information Agency (NSIA, 1,000 employees). | “Zerde” holding (300 employees), “National Information Technologies” (NITES, 2,100 employees). | 2. “Digital Government Center” (120 employees); “UZINFOCOM” is the only integrator (148 employees). | | | |
| | | 3. Internet and Security Agency (KISA, 770 employees). | 3. Information Security Committee (145 employees). | 3. State Security Service “Cybersecurity Center” (136 employees). | | | |

The table below shows the development index changes in Uzbekistan international rankings.

Table 2.1.3

Development index of Uzbekistan in international rankings⁶⁹

| No. | Index name | 2022 | 2023 | Index |
|-----|------------|------|------|-------|
|-----|------------|------|------|-------|

⁶⁹ <https://m.kun.uz/news/2023/09/01/Ozbekistan-ranking-in-international-rankings-and-indexes-is-being-respected?q=%2Fuz%2Fnews%2F2023%2F09%2F01%2FUzbekistan's-place-in-a-number-of-international-rankings-and-indices-is-honored>

| | | | | change |
|---|---------------------------------------|-----|-----|--------|
| 1 | Global Consumer Services Index | 40 | 40 | - |
| 2 | State Technology Maturity Index | 80 | 43 | +37 |
| 3 | Inclusive Internet Index | 66 | 61 | +5 |
| 4 | E-Government Development Index | 87 | 69 | +18 |
| 5 | Integrated Rural Development Index | 115 | 74 | +41 |
| 6 | Government AI Commitment Index | 93 | 79 | +14 |
| 7 | Network performance index | 82 | 82 | - |
| 8 | Wide-bandwidth overhead network speed | 166 | 131 | +35 |

The reforms that have begun today have become irreversible, society has fundamentally changed, and the positive results of the reforms are reflected in various world rankings, which has created an opportunity for our country to take a bold step towards developing a digital society. In this regard, the “Digital Government” system serves as a platform for citizens and a locomotive for the economy of our Republic.

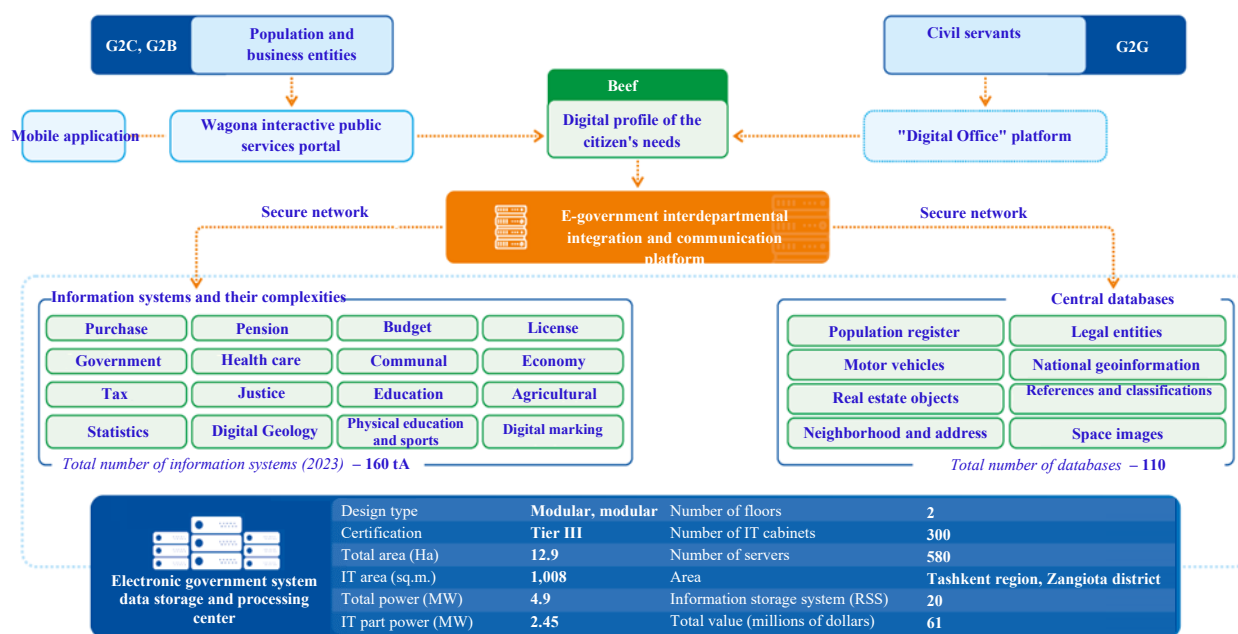


Figure 2.1.5. Proposed architecture of the “Digital Government 2.0” system⁷⁰

The current architecture of the “digital government” system requires accelerating the integration of departments in society,

⁷⁰ Worked and enjoyed by the author

accelerating the process of digital integration of departments, and creating broad opportunities for business entities.

In the proposed architecture of the “Digital Government 2.0” system, the number of public services provided due to the integration of information services on the platform for interdepartmental integration is expected to increase to 740 by the end of 2026. In addition, the implementation of the “Digital Government 2.0” system is of great importance in the implementation of the telecommunications infrastructure.

The analysis of BPO economic, ICT, export and import forecast indicators in the digital transformation is presented in the table below (see Table 2.1.4).

Table 2.1.4

Analysis of the forecast indicators of telecommunications infrastructure in the digital economy⁷¹

| No. | Name of telecommunications infrastructure indicators | 2020 | 2021 | 2022 | 2024 | 2026 | Growth compared to 2020, % |
|-----|---|----------|----------|----------|----------|----------|----------------------------|
| 1. | Number of subscribers connected to the data transmission network, with the Internet turned on, thousand people. | 26437.4 | 27,200 | 28,000 | 30,000 | 31,000 | 117.2 |
| 2. | Number of subscribers to broadband Internet access, thousand people. | 1,080.0 | 2 200.0 | 3,500.0 | 4,000.0 | 5,500.0 | 509.2 |
| 3. | Number of subscribers connected to the Internet via mobile communication, thousand people. | 15,651.2 | 25,000.3 | 29,000.0 | 31,000.0 | 33,000.0 | 210.8 |
| 4. | Number of subscribers connected to the Internet by region, thousand people. | 19,981.0 | 27,200 | 28,000 | 30,000 | 31,000 | 155.1 |
| 5. | Number of Internet | 58.4 | 62.1 | 65.4 | 70.6 | 80.0 | 136.9 |

⁷¹The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was presented with the materials of the presentation “On measures to promote the development of the information and communication technologies sector”.

| | | | | | | | |
|-----|--|-----------------|------------------|-----------------|-----------------|------------------|--------|
| | subscribers by region, per 100 population. | | | | | | |
| 6. | Length of optical fiber communication lines, thousand km. | 68.6 | 122.0 | 500.0 | 1000.0 | 1,500.0 | 2186.6 |
| 7. | Number of subscriber radio stations connected to the mobile communication system regions, in thousands. | 25,971.3 | 27,000.0 | 29,000.0 | 32,000.0 | 35,000.0 | 134.7 |
| 8. | The number of subscriber radio stations connected to the mobile communication system regions, per 100 inhabitants. | 75.9 | 80.0 | 90.0 | 99.0 | 100.0 | 131.7 |
| 9. | Number of mobile base stations by region, thousand units. | 31.7 | 35.0 | 40.0 | 50.0 | 60.0 | 189.2 |
| 10. | Number of public telephones regions, thousand units. | 1,536.1 | 2,004.0 | 2,500.0 | 3,000.0 | 3,500.0 | 227.8 |
| 11. | The provision of telephone services to the population by region, per 100 people. | 4.5 | 6.5 | 10.0 | 25.0 | 50.0 | 1111.1 |
| 12. | Coverage of households with high-speed Internet, % | 2.5 (33.3%) | 3.1 (46.5%) | 3.8 (57%) | 4.6 (65%%) | 7.5 (100%) | 300 |
| 13. | Coverage of residential areas with redundant fiber optic communication lines, km | 35,000 (33%) | 128,000 (72%) | 168000 (74%) | 270000 (87%) | 368000 (100%) | 10.5 |
| 14. | International Internet channel speed, Gbps | 1200 | 1800 | 3200 | 4800 | 6000 | 5 |
| 15. | Coverage of residential areas (4G) with mobile communications, % | 68% | 70% | 75% | 90% | 100% | 1.2 |

In the digital government and economic sectors, including:

- economic development, financial and banking system,
- entrepreneurship support and poverty reduction;
- investment, export promotion and foreign economic relations;
- agriculture, water and forestry;
- sport and tourism;
- transport, construction, housing and communal services;
- development of industry and its basic sectors;

Priority areas in education, healthcare, culture, education, spiritual and community organizations, and neighborhood and family support also play an important role in the development of the digital economy.

Table 2.1.5

Analysis of economics of the digital economy, use of ICT, export and import forecast indicators⁷²

| | Name of economic indicators | 2020 | 2021 | 2022 | 2024 | 2026 | Growth compared to 2020, % |
|--|---|----------|----------|----------|----------|----------|----------------------------|
| economic indicators | | | | | | | |
| 1. | Number of enterprises and organizations operating in the “Information and Communications” sector by type of economic activity | 7,901 | 9,517 | 10,587 | 13,273 | 16,702 | 211.4 |
| 2. | Volume of communication and information services provided, billion soms | 13852 | 16,813 | 19774 | 25,696 | 31,618 | 228.25 |
| 3. | Number of employees working in legal entities operating in the field of ACT, people | 50 157 | 53,782 | 55 231 | 60,462 | 66,461 | 132.5 |
| 4. | Salary of employees in the information and communication economy by type of activity, thousand soms | 4 390.5 | 5,577.2 | 6763.9 | 9137.3 | 11510.7 | 262.2 |
| 5. | Value added generated in the information economy and e-commerce sectors, billion soms | 11121.9 | 13542.4 | 15962.9 | 20882.9 | 25883 | 232.7 |
| 6. | Share of value added generated in the information economy and e-commerce sectors in GDP, % | 2.0 | 2.5 | 2.6 | 2.8 | 3.0 | 150 |
| The share of ICT use in the digital economy sectors | | | | | | | |
| 1. | Information on the presence of personal computers (other than servers) in enterprises and organizations, computers | 101468 6 | 101468 6 | 101797 6 | 110565 1 | 120021 1 | 118.2 |
| 2. | Share of enterprises and organizations with personal computers, % | 57.0 | 58.0 | 59.0 | 62.0 | 64.0 | 112.2 |
| 3. | Number of computers connected to the local network in corporate organizations, in units | 376,538 | 391,538 | 421 720 | 450,000 | 460,000 | 122.1 |

⁷²The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was awarded the title of President of the Republic of Uzbekistan on the basis of the materials of the presentation “On measures to promote the development of the information and communication technologies sector”

| | | | | | | | |
|--|---|----------|----------|----------|----------|----------|-------|
| 4. | Number of enterprises and organizations with local networks, % | 3.8 | 5.8 | 6.0 | 6.1 | 5.7 | 150 |
| 5. | Number of computers connected to the Internet in enterprises and organizations, in units | 441,913 | 461,900 | 462,000 | 483,000 | 501 100 | 113.4 |
| 6. | Share of enterprises and organizations connected to the Internet, % | 21.1 | 25.2 | 27.3 | 24.5 | 22.7 | 107.5 |
| Export and import of goods and services in the field of digital economy ICT | | | | | | | |
| 1. | Exports of telecommunications services, in thousand US dollars | 151749.6 | 156317.1 | 150000.0 | 200000.0 | 250000.0 | 164.7 |
| 2. | Export of computer programming services, in thousand US dollars | 5,798.6 | 4,638.7 | 5,500 | 6,000 | 10,000 | 172.4 |
| 3. | Import of telecommunications services | 94,760.6 | 104386.8 | 115,000 | 140,000 | 170,000 | 179.4 |
| 4. | Import of computer programming services | 13,655.0 | 7,837.8 | 6,500 | 5,500 | 5 200 | -38 |
| Ensuring the financial stability of the ICT sector | | | | | | | |
| 1. | Volume of services in the field of ICT, (trillion soms) | 10 | 16 | 25 | 30 | 40 | 400 |
| 2. | Computer programming services, trillion soms | 1 | 1.8 | 3 | 5 | 9 | 900 |
| 3. | Volume of export of services in the field of ICT, million dollars. | 100 | 200 | 300 | 450 | 650 | 650 |
| 4. | Export of computer programming services, million dollars. | 20 | 50 | 100 | 300 | 500 | 2,500 |
| 5. | Increasing the number of IT-Rark residents, people | 500 | 600 | 1000 | 1,000 | 1,000 | 200 |
| 6. | The amount of investments in increasing the volume of ICT services, billions of dollars, is as follows: | | | 1.5 | | | |
| | 1. Development of telecommunications infrastructure, million dollars. | | | 900 | | | |
| | 1. Development of the mobile communication network, million dollars. | 47.8 | 162.3 | 200 | | | |
| | 2. Building data centers | | | 200 | | | |
| | 3. Development of digital government and digital economy, million dollars. | | | 100 | | | |
| | 4. Creating conditions for the development and implementation of software products, million dollars. | | | 100 | | | |

It is proposed to implement projects in the field of increasing the efficiency of digital government and the real sector of the economy in priority areas (see Figure 2.1.6).

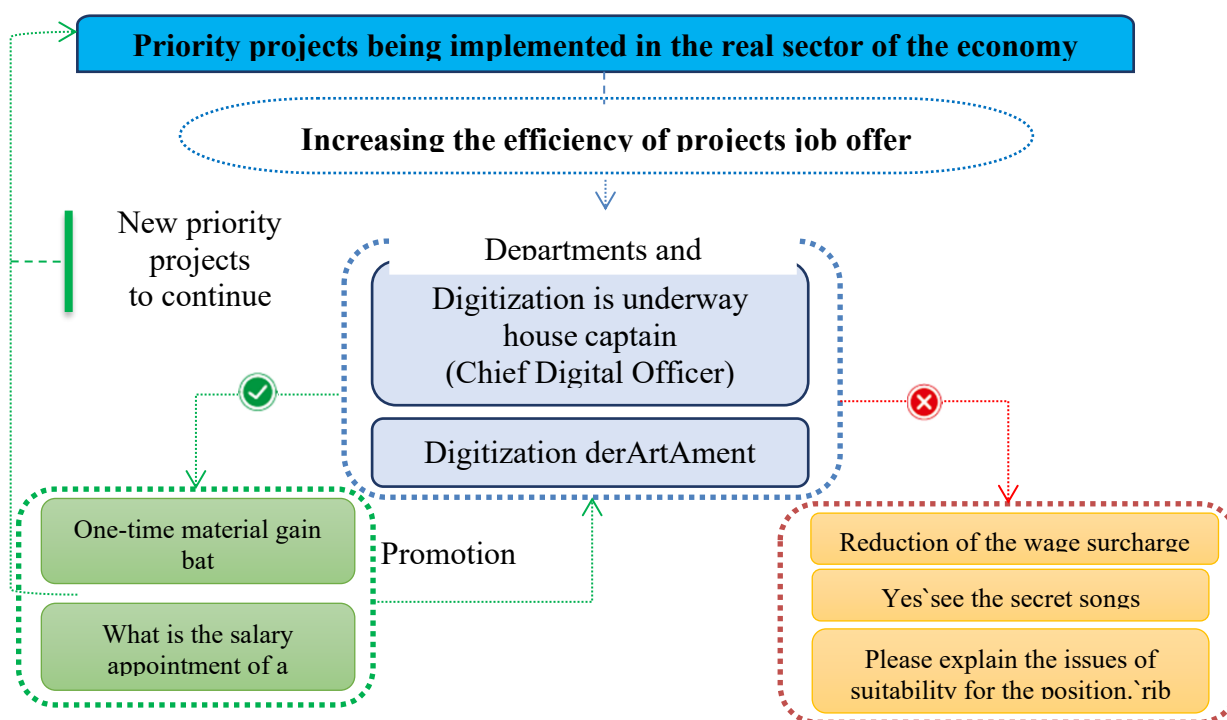


Figure 2.1.6. Model for increasing the efficiency of projects in priority areas being implemented in the digital government and real sector of the economy⁷³

Development of electronic government services.In accordance with the Decree of the President of the Republic of Uzbekistan No. RF-113 dated April 20, 2022 “On additional measures to simplify the provision of public services, reduce bureaucratic barriers and develop the national system of providing public services”, the principle of “Public services for citizens” was replaced by the principles of “Public services together with citizens” and “Public services Based on the principle of “citizens' trust in the provision of services”, it is recommended to implement a single interactive state services portal to improve the quality and types of services provided to the population.

⁷³Worked and enjoyed by the author

Table 2.1.7

Analysis of service delivery forecast indicators through a single interactive public services portal⁷⁴.

| Over the years | via the portal mu.gov.uz | | Via mobile app | |
|----------------|--------------------------|---|--------------------|--|
| | Number of services | Services being launched | Number of services | Services being launched |
| 2021 year | 360 | - applying for a pension; - Checking the cadastral object for enachment; - Applying for an exam to restore a lost driver's license, etc. | 100 | - obtaining information about tax arrears; - Easy transfer of the lease agreement; - Obtaining legal information at customs. |
| 2022 year | 420 | - obtaining a driving license; - naturalization; - payment and collection of alimony; - Submitting an application for military service; - More than 10 types of social proactive services and others. | 140 | - payment and collection of alimony; - having the vehicle inspected; - Obtaining a tuition contract for higher education institutions, as well as online payment, and others. |
| 2023 son | 620 | - Providing more than 20 subsidies for entrepreneurs; - introduction of more than 10 proactive services for citizens and entrepreneurs, and others. | 180 | - accounting for machinery and agricultural machinery; - registration of hostels in the YAGONA register; - admission of children to special educational institutions; - Improving the education of students in higher education institutions, restoring and others. |
| 2026 son | 740 | - introduction of proactive services for civic, social, economic and entrepreneurial activities, and others. | 300 | - introduction of services for civil, social, economic and entrepreneurial activities, etc. |

“Proactive” includes the following categories of services offered to citizens without application when introducing public services, including:

- formalize the retirement age of citizens;
- assignment of disability pensions;

⁷⁴ The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was awarded the title of “Measures to promote the development of the information and communication technologies sector” based on the presentation materials.

exchange of foreign exchange requirements;
 having the vehicle inspected;
 placing the child on a waiting list for admission to a public school;
 birth registration, registration at the clinic, receiving a one-time pension;

Obtaining and replacing ID cards;

Re-issuance of a citizens property ownership certificate when his personal information changes;

license exchange and others.

By increasing the number of transactions in the Single Billing System of the Digital Government System, citizens save time, money, and paper costs, and prevent unnecessary waste and create a transparent system (see Figure 2.1.7).

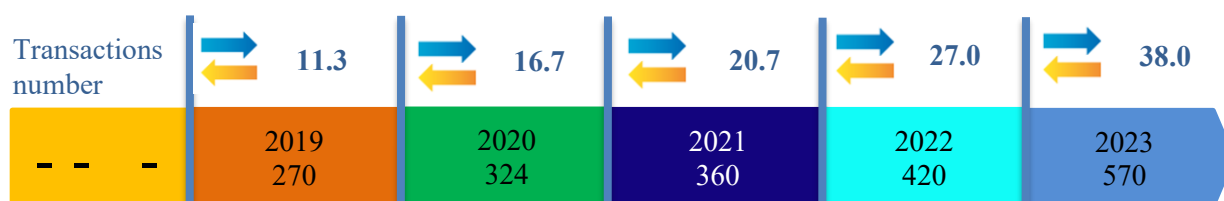


Figure 2.1.7. Forecast indicator of increasing the number of transactions in a single billing system⁷⁵.

An important factor in increasing the share of online users of a single interactive public services portal through the expansion of electronic government services and creating opportunities and additional conveniences for a wide range of users is the development of opportunities (see Figure 2.1.8).

⁷⁵Worked and enjoyed by the author

In the implementation of electronic government services, it is necessary to create additional conveniences for citizens and implement the following measures for their wide implementation, including:

integration of all information resources of government bodies;

Providing more than 100 electronic government services in an automated manner;

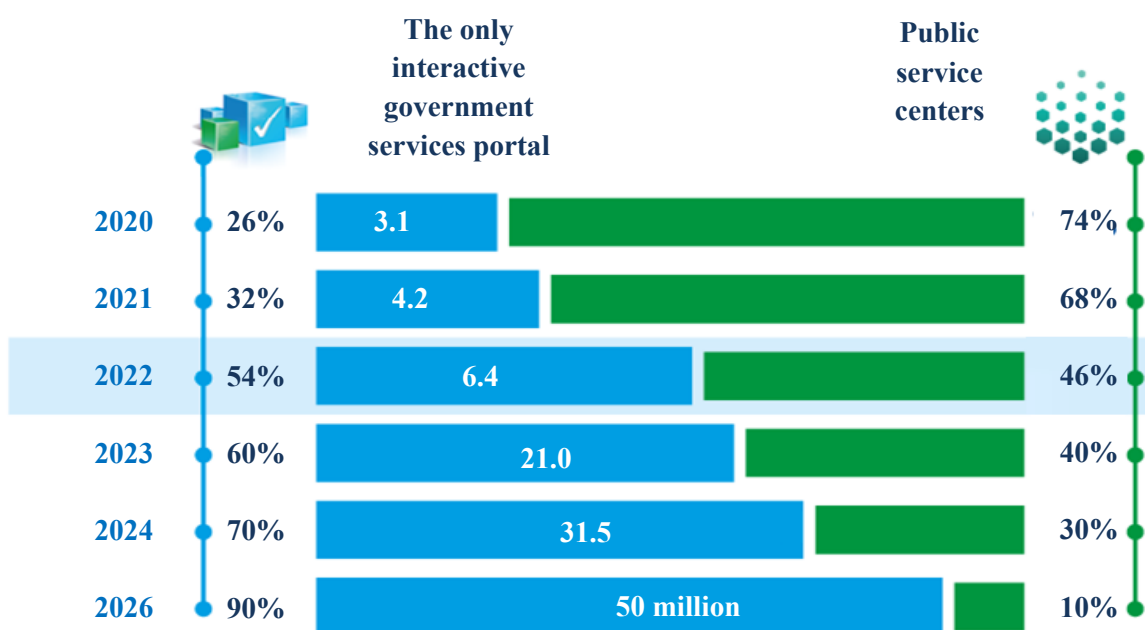


Figure 2.1.8. Increase in the share of online users of a single interactive government services portal⁷⁶

Simplify more than 50 public services by 2024;

Integrate all state services of state bodies into a single billing system and create the opportunity to pay for state services online;

100 the transformation of public service into the private sector;

The development of the possibility of remote biometric identification is considered an important factor, and it is important that an important road map is set for the implementation of future projects.

⁷⁶ Worked and enjoyed by the author

Table 2.1.7

**Target indicators for the accelerated development of the system
of providing public services in villages in 2022-2026⁷⁷**

| T/r | Target indicators | Unit | Annual indicators | | | | | |
|-----|--|-------------------|-------------------|--------|--------|--------|--------|--------|
| | | | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
| 1. | Number of government services provided | number, million | 14 | 16 | 19 | 20 | 21 | 22 |
| 2. | Share of government services provided electronically* | % | 30 | 35 | 40 | 50 | 60 | 70 |
| 3. | Number of services provided by public service centers | Number | 172 | 200 | 225 | 250 | 275 | 300 |
| 4. | Number of services provided through the single interactive government services portal* | Number | 300 | 340 | 570 | 700 | 720 | 740 |
| 5. | Number of services provided through the “Licensing” information system | number | 17,000 | 20,000 | 25,000 | 28,000 | 30,000 | 35,000 |
| 6. | Creating a welcoming environment for people with disabilities in public service centers | number of centers | 2 | 10 | 15 | 20 | 25 | 30 |
| 7. | Number of government services provided via mobile application* | number | 60 | 100 | 130 | 180 | 200 | 250 |
| 8. | Improving the delivery of public services using business process reengineering (BPR) methods | number | 100 | 110 | 115 | 120 | 125 | 130 |
| 9. | Establish free Wi-Fi zones in public service centers | number | 0 | 14 | 30 | 40 | 50 | 60 |
| 10. | Scientific analysis of the importance, scope, and problems of each public service | number | 5 | 10 | 20 | 25 | 30 | 35 |

In order to improve the mechanisms of public-private partnership in electronic cooperation between agencies, it is necessary to improve the information exchange system through the Inter-Agency Integration Platform (IIP) and the Digital Information Platform (see Figure 2.1.9).

Problems in implementing the public-private partnership mechanism in electronic cooperation between departments:

⁷⁷ The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was awarded the title of President of the Republic of Uzbekistan on the basis of the materials of the presentation “On measures to promote the development of the information and communication technologies sector”

the lack of an effective mechanism to regulate the provision of information to the private sector;

the existence of the practice of providing information to third parties without permission;

Failure to comply with cybersecurity requirements when processing personal data;

Frequent outages in information systems and resources due to the blindness of the sleeping people;

It is necessary to narrow the gap between problems such as the lack of financial resources necessary for the material and technical support of the authorized bodies due to the legal problems and to develop an effective mechanism based on a plan for each party (see Figure 2.1.9).

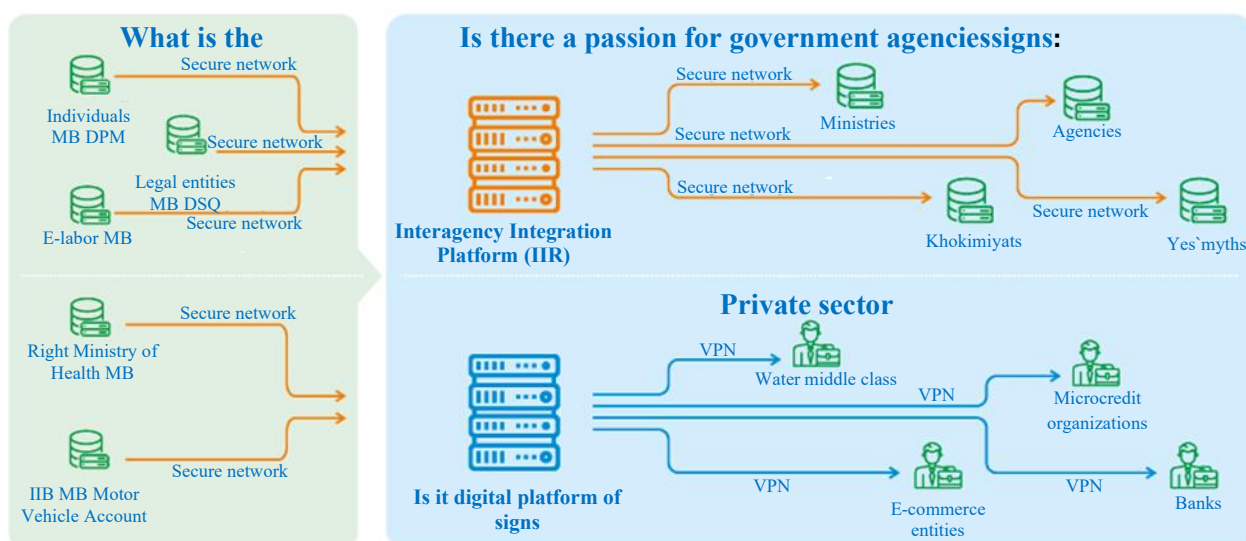


Figure 2.1.9. Public-private partnership mechanisms in interagency electronic collaboration⁷⁸

Proposed and expected results:

development of the digital economy by providing economic entities with information from state databases;

⁷⁸ Worked and enjoyed by the author

improving the quality of public services to the population and business entities;

control over the completeness, relevance and coherence of information available in state bodies;

ensuring information security when processing personal data;

An important factor is the implementation of tasks such as verifying the practicality of providing information to third parties by ministries and departments.

Is the digital economy an algorithm for implementing projects for the digital transformation? It is considered appropriate to organize projects based on the implementation algorithm for digital transformation (see Figure 2.1.10).

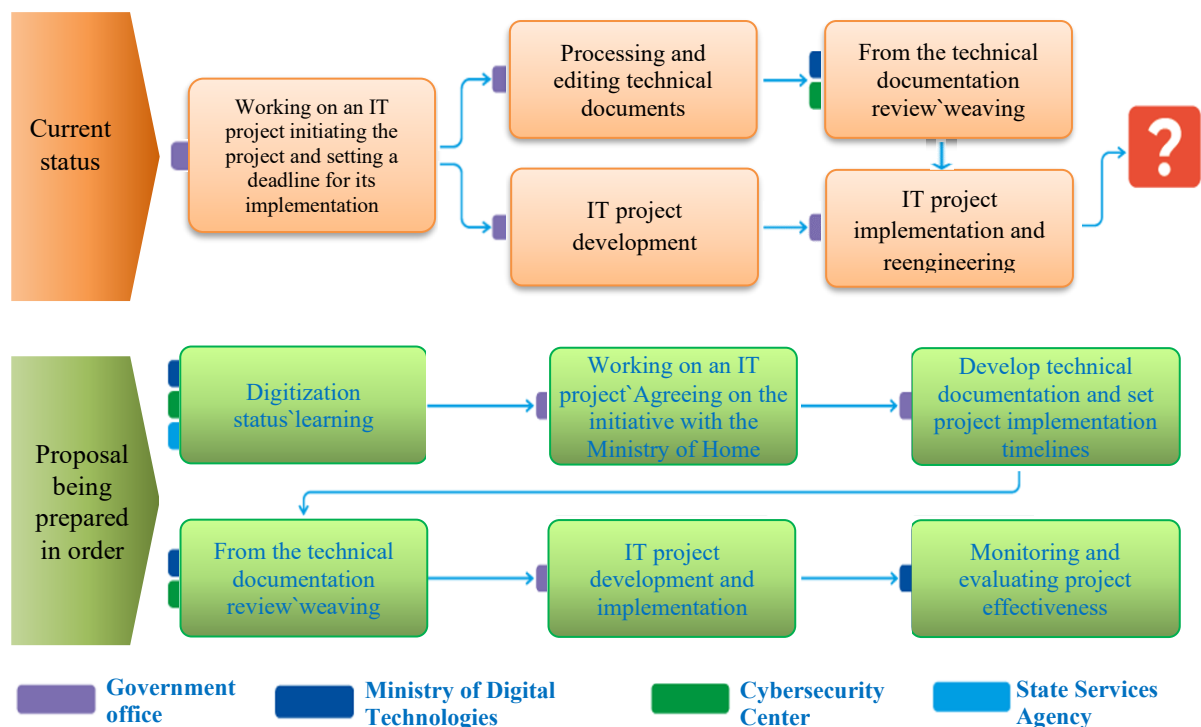


Figure 2.1.10. Monitoring and evaluating project effectiveness⁷⁹

⁷⁹Worked and enjoyed by the author

When implementing digital transformation projects, the following guidelines are recommended to consider the necessary measures, including:

Conduct an IT audit at least once every three years;

determining the performance indicators of the deputies and heads of the ICT departments responsible for digitization of state and economic management bodies, departments;

Conducting an IT project review involving experts;

submit proposals to address identified problems;

introducing the position of project manager for the development of the digital economy;

It is important to conduct annual certification of IT department managers and introduce a system of annual and annual reporting.

§ 2.2. Prospects for the development of IT specialists for the development of the digital economy

As the President of our country, Shavkat Mirziyoyev, emphasized, we are well aware that the formation of the “Digital Economy” requires the necessary infrastructure, significant financial and labor resources. Digital technologies not only improve the quality of products and services, reduce overhead costs, and are key enablers of modern economic development, including:

technologies for working with large volumes of data - Big Data;

artificial intelligence - Artificial Intelligence;

neural technologies;

quantum technologies;

Internet of Things - Internet of Things;
robotics and sensors;
digital electronic platforms;
cloud computing technologies - Cloud Computing Technologies;
mobile technologies;
virtual and augmented reality technologies - Virtual Reality and Augmented Reality (VR, AR);
BPO crowdsourcing and BPO crowdfunding technologies;
blockchain technologies;
cryptocurrencies and ICO (Initial Coin Offering) technologies;
3D- technologies.

However, one of the most important conditions for the effective development of the digital economy in our country is the formation of an appropriate institutional environment. The program for the development of the digital economy of the Republic of Uzbekistan should include the issue of personnel training and the organization of the education system among the key factors and devote a separate section to it. This program identifies key areas of focus related to personnel and education, including:

To promote personnel training on the use of the technologies and solutions presented in the report;

to develop an education system that can train personnel with deep knowledge of these areas;

Promote the training of highly qualified specialists needed for the digital economy, both in secondary and higher education institutions;

promote the recruitment of qualified software and engineering and technical personnel;

study foreign experiences in digital transformation and apply them to the republican economy;

It is important to develop national ecosystems in various sectors of the economy, taking advantage of electronic platform technologies⁸⁰.

In addition, the recruitment of IT specialists is considered an important factor in the development of the digital economy. The growth dynamics of IT in the republic are presented in the table below, compared to the analysis and forecast indicators (see Table 2.2.1).

Table 2.2.1

Analysis of the growth dynamics of IT education and the recruitment of IT specialists⁸¹

| Growth Dynamics | 2020 | 2021 | 2022 | 2024 | 2026 |
|---|-------------|-------------|-------------|-------------|-------------|
| Youth growth dynamics (million people) | 18.5 | 19 | 19.5 | 20.5 | 21.5 |
| Growth dynamics of IT centers | 115 | 205 | 220 | 332 | 500 |
| Employment indicators of IT specialists (thousand people) | 10 | 20 | 30 | 60 | 100 |
| The activity of specialized schools and the number of students, units/thousand people | 14/4.2 | 82/2.8 | 64/4.8 | 45/10.9 | -/21.9 |
| Organization of IT-Technicians and training of IT-specialists, one and a thousand people. | 3/1.62 | 11/7.56 | 0/15.12 | 0/15.12 | 0/15.12 |
| Jobs created in “Digital Technologies” training centers, thousand people. | 5.0 | 10.0 | 12.0 | 14.0 | 16.0 |
| The number of jobs created and created by the organization of IT Academies in the regions, one thousand people. | - | 1/1.0 | 12/6.0 | 1/14.0 | - |
| Promotion and creation of jobs in the regions of specialized schools | 1/200 | - | 1/200 | 6/600 | 6/900 |

⁸⁰ Abdullaev MK Digital economy - current trends in personnel training// Economics and innovative technologies. - Tashkent, 2020. No.-1.- P. 2-13.

⁸¹ The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was presented with the materials of the presentation “On measures to accelerate the development of the information and communication technologies sector”.

| | | | | | |
|--|-------|-------|---------|----------|--------|
| named after Muhammad al-Khwarizmi, units/thousand people. | | | | | |
| Organization of foreign higher education institutions | - | - | 1/200 | 3/1000 | 5/5000 |
| Number of jobs created and created by IT clusters, thousand people | - | - | 2/1.0 | 6/6.0 | 6/6.0 |
| Number of branches of IT-Rark regional organizations and jobs created, units/thousand people | 1/5.0 | 5/3.0 | 8/5.0 | 0/10.0 | - |
| Remote service centers, BRO School activities and job openings | - | - | 70/0.84 | 135/1.35 | 50/1.0 |
| Attracting foreign IT specialists, who | 50 | 1000 | 3000 | 8000 | 10000 |
| Number of people employed by IT-Rark and its residents, people | 6000 | 10000 | 29000 | 50000 | 100000 |
| Number of people who have committed themselves to the ACT, people | 20000 | 40000 | 60000 | 100000 | 150000 |
| Attracting foreign IT companies, unity | 500 | 1000 | 3000 | 10000 | 30000 |

In addition, within the framework of the implementation of the “Digital Development in Uzbekistan” project, jointly with the World Bank, it is planned to allocate a 30-year preferential loan in the amount of 80 million dollars, attract more than 1,000 foreign enterprises and orders, create an additional 200 thousand jobs, increase annual export volumes to 500 million dollars, and provide each employee with a minimum monthly salary of 350 US dollars under consideration.

It is important to implement the following recommendations in recruiting IT specialists to develop the digital economy.

1. Through a single platform:

IT - training in the monitoring of graduates' performance;

Provide opportunities for students to gain practical experience;

2. Transfer the management of IT education in IT schools to the Ministry of Digital Technologies.

3. To effectively manage the IT education ecosystem, the Ministry of Digital Technologies has introduced the position of Deputy Minister for Digital Education and Childrens Affairs.

4. Extending existing tax incentives for foreign professors at IT educational institutions for a period of five years;

5. Promoting distance learning in IT educational institutions;

6. Establish an international certification center to determine the level of programs.

7. To organize and ensure the smooth functioning of IT clusters and academies, IT cities in regional centers;

In the republic, higher educational institutions for IT education and training of IT specialists, IT technical schools, IT lyceums and schools, branches of “IT-Rark”, BPO schools and centers, “Digital Technologies” training centers, as well as planned IT clusters and academies, IT-city, within the framework of the “One Million” and “Youth Program” projects, are being established. One-year forecast indicators for the development of learning platforms by specialists are presented (see Figure 2.2.1).

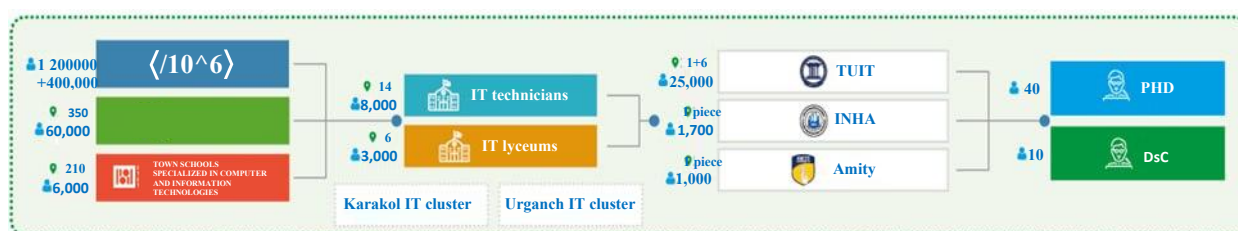


Figure 2.2.1. Analysis of one-year forecast indicators for IT professionals turnover⁸²

⁸² The President of the Republic of Uzbekistan, Sh. Mirziyoyev, was awarded the title of President of the Republic of Uzbekistan on the basis of the materials of the presentation “On measures to promote the development of the information and communication technologies sector”

It is necessary to develop and expand the opportunities of the “One Million Program” and “Youth Program” (sode.org) projects, as well as implement the work outlined in the law on the broad involvement of women, including:

The “One Million Program” project will add new functionalities to the uzbekcoders.uz platform;

Add sound effects that enhance programming skills;

developing and implementing a community platform;

Integration of the sode.org platform “Youth Program” among students in grades 1-6;

Establish a career center and work on a platform to place IT graduates in employment;

holding an international conference within the framework of the “One million program” and “Youth program” projects once a year;

promotion of start-up projects and increasing the volume of exports of program products;

Launching business process outsourcing centers in cities and districts;

Continuously increase the number of residents and strengthen practical integration, as well as promote mutual and international cooperation.

In order to successfully transition to a digital economy, it is necessary to expand and improve the training of specialists in modern educational institutions in our country.

In addition, schools should identify students with high mathematical abilities (grades 1-4), introduce a model for developing

abilities, and encourage talented students by holding various competitions.

To facilitate admission to higher education institutions on a grant basis, to provide all students with computers that incorporate world-class programs, and to support the benefits.

To ensure that resident schools are equipped with curricula, to prevent corruption in the educational process, to conduct intermediate and final inspections at the testing center, where applicants take the entrance exam starting from the 2nd year.

Analyze the activities of students and professors based on current results and take appropriate measures, and use the most advanced programs from the USA and the EU in developing curricula and textbooks.

To provide qualified doctoral students and independent researchers with the opportunity to submit dissertation topics on the introduction of 15 technologies of the digital economy in Uzbekistan and to create sufficient conditions for them.

Assigning chapters and sections of the research dissertations to masters and bachelors degree students as master's dissertations, graduation thesis, and coursework.

The establishment of modern universities with distance learning programs in 6-month and 1-year short courses (the experience of India and China) will make a significant contribution to the development of this field⁸³.

⁸³ S.S. Gulomov, M.K. Abdullaev. The main directions of the implementation of one million programs in Uzbekistan // Marifat, 10.03.2020. <http://marifat.uz/marifat/ruknlar/fan/4373.htm>

In order to activate the educational process in our republic and create opportunities for everyone to receive quality education, it would be very effective to improve the Uzbek language versions of existing distance learning platforms and implement them into the existing national education system.

In this regard, while ensuring the employment of the population, it is necessary to achieve the level of world rankings and indices of digitalization of the economy (see Figure 2.2.2).



Figure 2.2.2. World rankings and indices that reflect the economy's readiness for digitalization⁸⁴.

In order to provide access to the population, we have divided the information and protection into groups by training a number of human resources. Therefore, in order to fundamentally solve the problems in the field of access to telecommunications services, it is necessary to introduce digital management of service provision.

⁸⁴ Worked and enjoyed by the author

In the field of telecommunications, the organization of a digital management system for service provision uses human resources with intellectual knowledge to process data, transmit information, organize electronic document exchange, and introduce interactive services.

In the process of digital management of telecommunications services, it is important to provide human resources with intellectual knowledge to monitor management using modern methods and digital technologies, to support digital technologies for information security, to manage the database, and to ensure that the right management has access to digital technologies (see Figure 2.2.3).

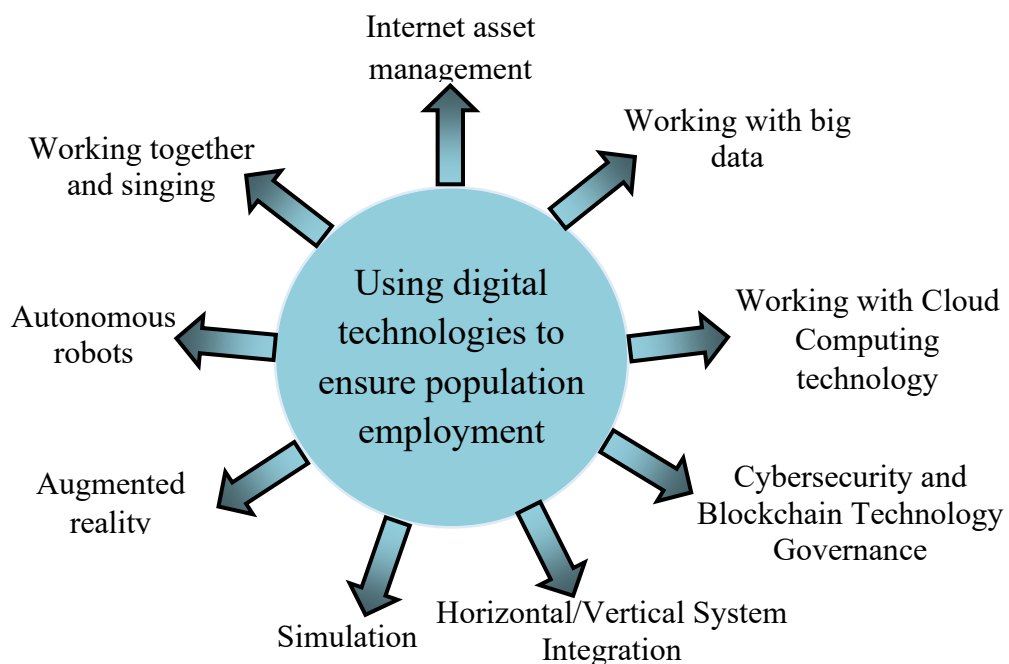


Figure 2.2.3. Use of digital technologies in ensuring population employment⁸⁵

In the field of telecommunications, the organization of a digital management system for service provision uses human resources with

⁸⁵ Worked and enjoyed by the author

intellectual knowledge to process data, transmit information, organize electronic document exchange, and introduce interactive services.

In the process of digital management of telecommunications services, it is important to provide human resources with intellectual knowledge to monitor management using modern methods and digital technologies, support digital technologies for information security, manage the database, and ensure that the right management has access to digital technologies.

Telecommunications services are the basis for changing the patterns of communication in the digital transformation of the national economy. The level of coverage of the population with telecommunications services is included in the system of indicators of the quality of life of the population.

The development of ICT and their integration into the social environment is leading to changes and formation of population patterns.

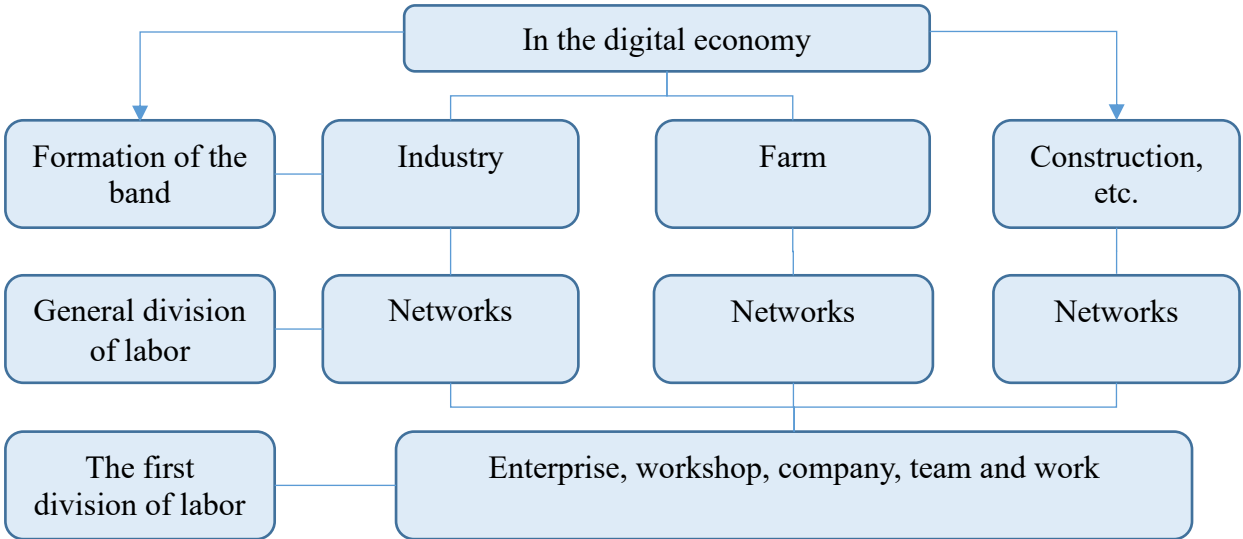


Figure 2.2.4. Priorities for changing regional patterns of gangs⁸⁶

⁸⁶ Worked and enjoyed by the author

In the context of digitalization of the economy, the use of such methods and the division into network structures in the digital transformation of the national economy form the priority tasks of changing the patterns of employment [3] (see Figure 2.2.4)⁸⁷.

Inspired by the above scientific research The following priorities for changing forms of slavery were identified:

This encourages specialization and specialization in the field of business. For example, hiring a marketing specialist is a good idea for a manager;

It improves the coordination of functional areas. Employees are better trained in this system;

It reduces or completely eliminates the repetition of actions and reduces the consumption of material resources.

One of the most important aspects of the long-term development of the telecommunications sector is the transformation of employment patterns and the promotion of research and innovation in the digital transformation of the economy. It is essential to maintain the economic competitiveness of organizations in technological sectors that are important for the digital economy, which requires supporting and promoting changes in the form of employment.

In the context of global competition, innovation strategies for changing the pattern of communication play a key role in regulating international innovation processes. The introduction of foreign innovative technologies into the labor market affects not only

⁸⁷ Worked and enjoyed by the author

telecommunications companies, but also the states changing patterns of communication in the global telecommunications sector[4].

The business model that enables the region's telecommunications services structure to achieve competitive advantage allows us to develop and implement the principles of changing the most important functional form of economic systems (see Figure 2.2.5).

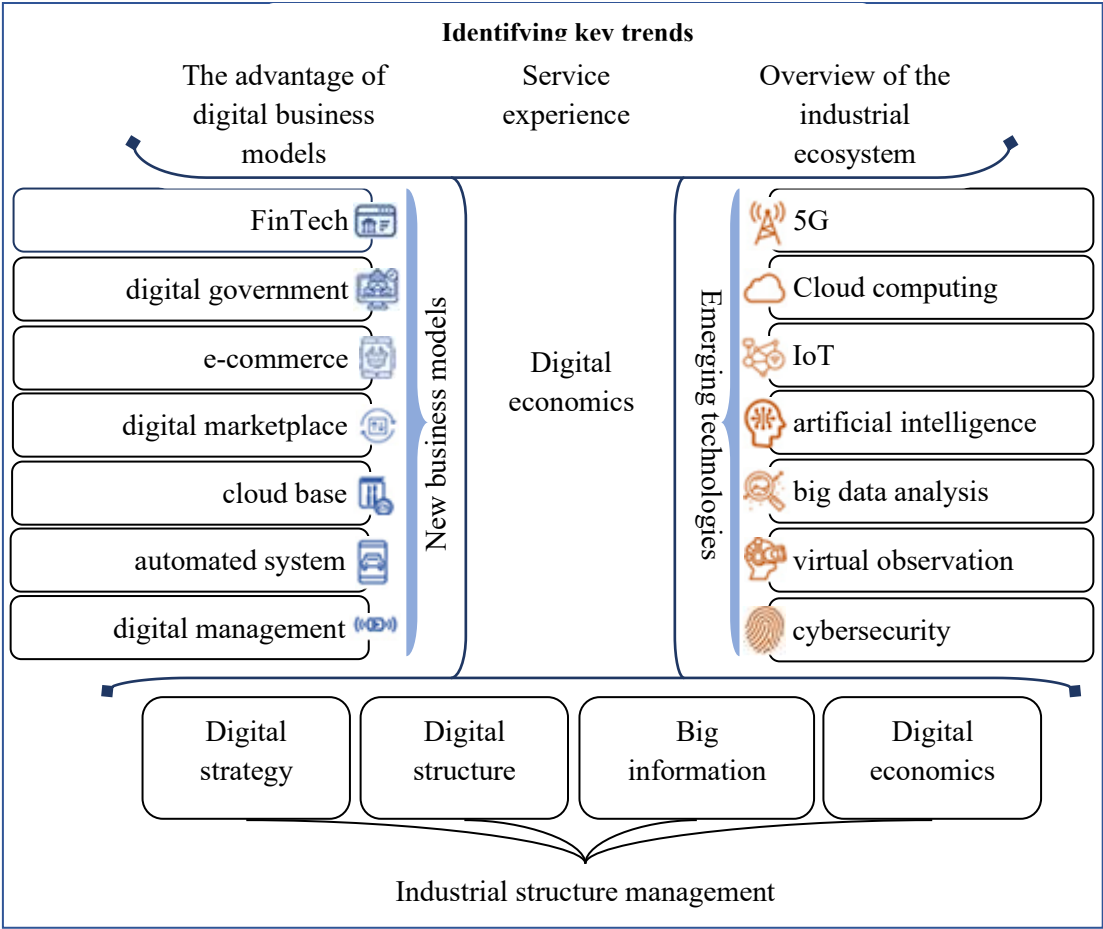


Figure 2.2.5. Trends in the transformation of forms of employment⁸⁸

Using cloud services, you can manage data in the process of implementation via the Internet. Then we need to bring IoT technologies from the integral parts of information technology. These technologies are one of the leading technologies in changing the patterns of communication in the current digital economy. For this reason, it is a

⁸⁸Worked and enjoyed by the author

technology used to increase comprehensive efficiency in enterprise location detection systems, intelligent identification, remote service provision, logistics, security, and other infrastructure areas. At the same time, we need to consider artificial intelligence technologies, which are gradually entering the lives of business and industrial enterprises, increasing the number of artificial intelligence devices, and increasing the populations productivity.

Its main purpose is to expand the capabilities and possibilities of people. For this reason, such technologies are considered a valuable business resource[6].

In the sustainable development of information resources, it is also important to conduct big data analysis, implement various goals and objectives, methods of processing the enterprises information resources, various situations and data processing processes, and implement analysis processes.

At the same time, ensuring cybersecurity is one of the most important tasks in the stable development of the region. This is an activity aimed at protecting information systems, networks, and programs from digital attacks in the current digital economy. Cybersecurity integrates technology, people, information, and processes to ensure operations in the presence of malicious actors [7].

The strategy for changing the workforce in remote service enterprises should be reflected in an action plan that identifies strategic goals and identifies means to ensure the implementation of the chosen development strategy. The future success of the enterprise depends on the degree to which the various directions of its current activity are

financially coordinated. Its long-term development and growth depend on its ability to timely and in advance anticipate changes in the market and to adapt its structure and product portfolio accordingly.

Through the use of ICT, it helps to analyze, analyze complex issues, and make incremental decisions that change the way we think.

The possibilities of using modern forms of work-related employment in our country, as well as the issue of regulating remote work, which is considered relevant in today's conditions, were analyzed and implemented.

However, the overall economic, organizational, and marketing characteristics of the telecommunications services market, which have a significant impact on the system of service provision in this market, have not been fully studied.

The intellectualization of the form of slavery is expressed in the expansion and deepening of international relations in the fields of investment, labor, trade, supply and marketing, finance, scientific and technological development, and education.

The creation of special “areas” on the Internet is a transformational step in increasing access to information. In particular, in our republic, there are emerging trends in access to information-based knowledge, which is closely related to understanding the modern economy. Bunda, The Internet and mobile communications are essential for solving problems, and the rapid exchange of information is helping to transform society.

According to the characteristics of the provision, telecommunications services are divided into basic and additional

services. The provision of basic services is determined by technological processes, and the provision of additional services is determined by the technical capabilities of network operators and service providers engaged in the telecommunications sector.

§ 2.3. Remote service and self-service modern methods

The global BPO (Business Process Outsourcing) market is expected to reach \$187.97 billion in 2020, \$245.91 billion in 2021, \$314.81 billion in 2022, and \$435.89 billion in 2023, with a compound annual growth rate of 8.5%.

In Uzbekistan, 57% (196 million dollars) of services exports went to service companies, 23% (79 million dollars) to food companies, and 20% (69 million dollars) to resident companies providing BPO services.

However, the main exporting countries are as follows:

USA 44% (\$151 million);

Great Britain and EU countries 24% (\$82.5 million);

CIS countries 20% (\$69 million);

Asia-Pacific countries 8% (\$27.5 million);

MENA countries 4% (\$14 million) (see Figure 2.3.1).

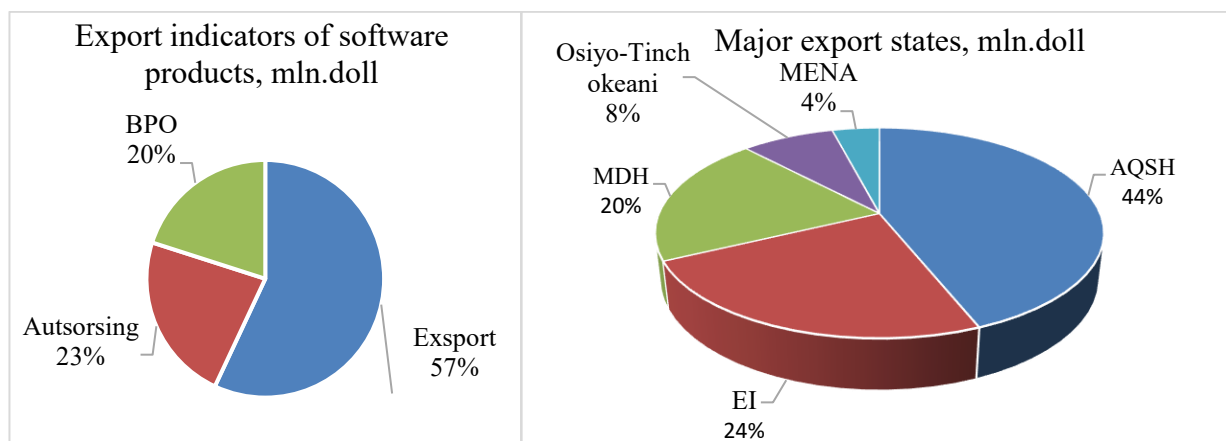


Figure 2.3.1. Software product exports and exporting regions⁸⁹

It is worth noting that the increase in export volumes was achieved due to the increase in the number of resident enterprises engaged in export at the end of 2024, which amounted to 551 enterprises, which is 1.5 times higher than the same period last year.

As of 2024, the number of IT-Park residents has reached 1,652 companies (523 of which are registered in the regions and 1,129 in the city of Tashkent), so:

- 362 educational institutions;
- 426 enterprises with foreign capital participation;
- 400 food companies;
- 890 service providers.

The total volume of services provided by IT Park resident companies in 2023 amounted to 12.5 trillion soms. Compared to the volume of services last year, which amounted to 5.1 trillion soms, a 2.4-fold increase can be seen.

Thanks to the benefits offered, IT-Park residents are creating additional jobs and expanding the ranks of IT specialists in our country. As of January 1, 2024, more than 26 thousand people were provided with jobs in resident companies. Of these, 18,950 are students, 4,091 are employees of BPO companies, 2,442 are foreign specialists, and 736 are IT specialists.

Decree of the President of the Republic of Uzbekistan No. RF-60 dated January 28, 2022 “On the Development Strategy of the New

⁸⁹ Developed by the author

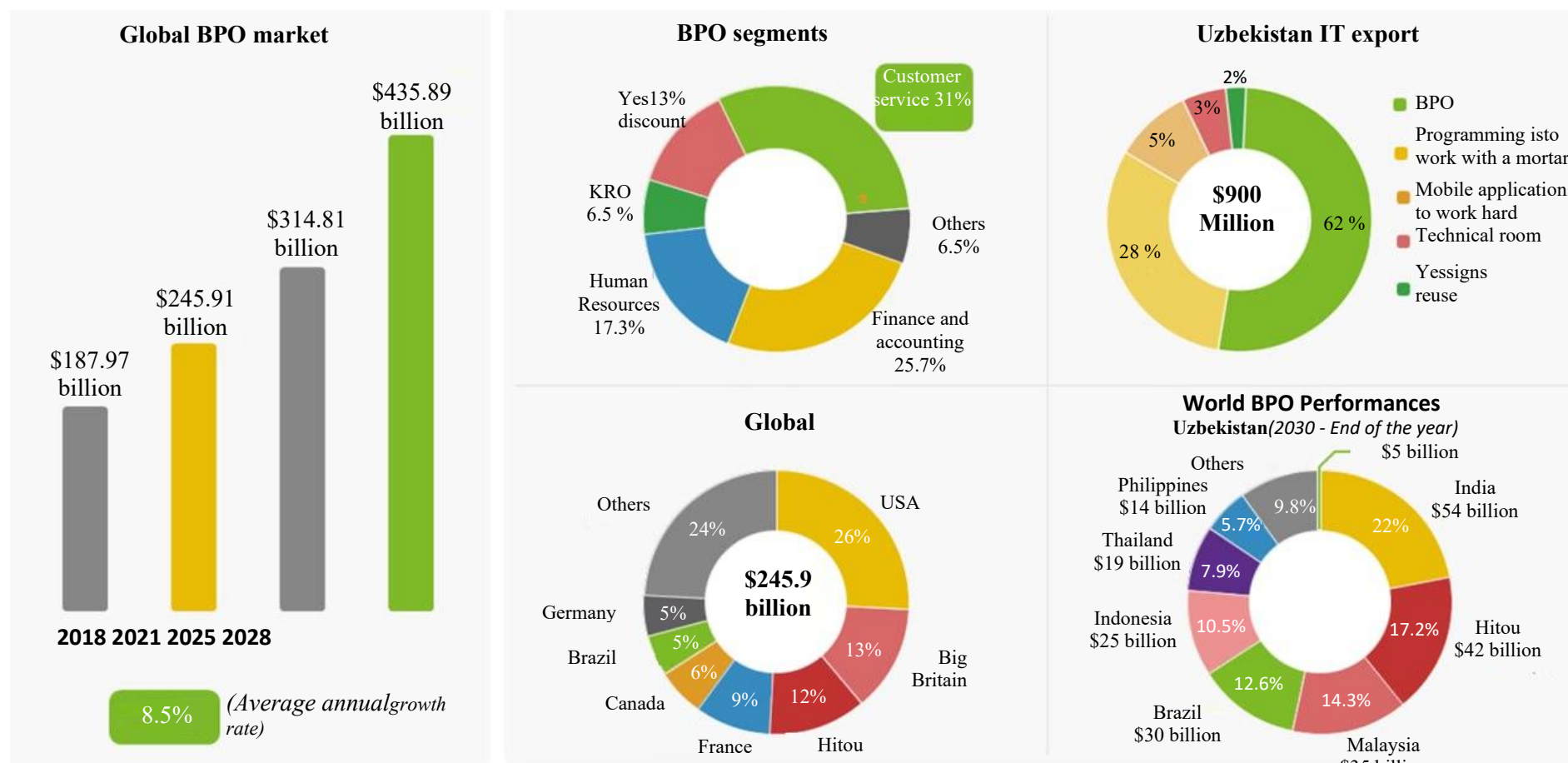


Figure 2.3.2. Analysis of the global BPO market and forecast indicators of performance⁹⁰.

⁹⁰ The author worked on the materials of the meeting held on April 14, 2022 under the chairmanship of the President of the Republic of Uzbekistan on the effectiveness of reforms in the development of information technologies and the digital economy, as well as the tasks that need to be implemented in the sector.

Uzbekistan for 2022-2026” and Resolution No. RQ-104 dated January 27, 2022 “On additional measures to develop the services sector” and under the chairmanship of the President of the Republic of Uzbekistan on April 14, 2022 At the meeting “On the effectiveness of reforms in the development of information technologies and the digital economy, as well as the tasks that need to be implemented in the sector,” specific tasks were set for the development of information technologies and the digital economy.

Within the framework of the task of transforming Uzbekistan into a regional IT center, At least 800 mln. to dollars and to 5 billion dollars by the end of 2030, to ensure that the volume of business IT services grows by at least 50% per year;

-The full operation of IT infrastructure in all regions, the establishment of remote service export centers in all cities and districts, and the provision of qualified personnel, the development of at least 50 IT companies in the regions, and the creation of 50 thousand people with gainful employment will be ensured.

The world is witnessing the rapid development of technologies in the digital ecosystem, including social networks, blockchain, artificial intelligence, business process outsourcing (BPO) and knowledge process outsourcing (KPO). One of the modern and successful business models that allows you to gain a competitive advantage is outsourcing.

Remote service export centers (from English - Business Process Outsourcing - refers to the fact that an organization outsources a certain

part of its business processes to external service providers on a contractual basis⁹¹.

Organizations engage in business process outsourcing in two main ways, including:

- back office.** Functions include accounting, IT services, human resources, quality assurance and claims processing;

- front office.** Functions include customer service, marketing, and sales.

Types of outsourcing. The following main types of outsourcing are widespread: accounting, legal, human resources, IT outsourcing, building management (clearing), outsourcing of the use of non-residential property, logistics and transport outsourcing, personnel outsourcing (see Figure 2.3.3).

Advantages of outsourcing:

- Save money.** The cost of outsourcing services is relatively low compared to the cost of building such a structure yourself. You are required to make social security contributions and withhold income tax from the wages paid to your employees. The cost of outsourcing services reduces the base on which your expenses are calculated and taxed.

- Save your job.** Developing an appropriate structure yourself may require additional office space, office equipment, stationery costs, IT systems, and licensed software.

⁹¹ The author worked on the materials of the meeting held on April 14, 2022 under the chairmanship of the President of the Republic of Uzbekistan on the effectiveness of reforms in the development of information technologies and the digital economy, as well as the tasks that need to be implemented in the sector.

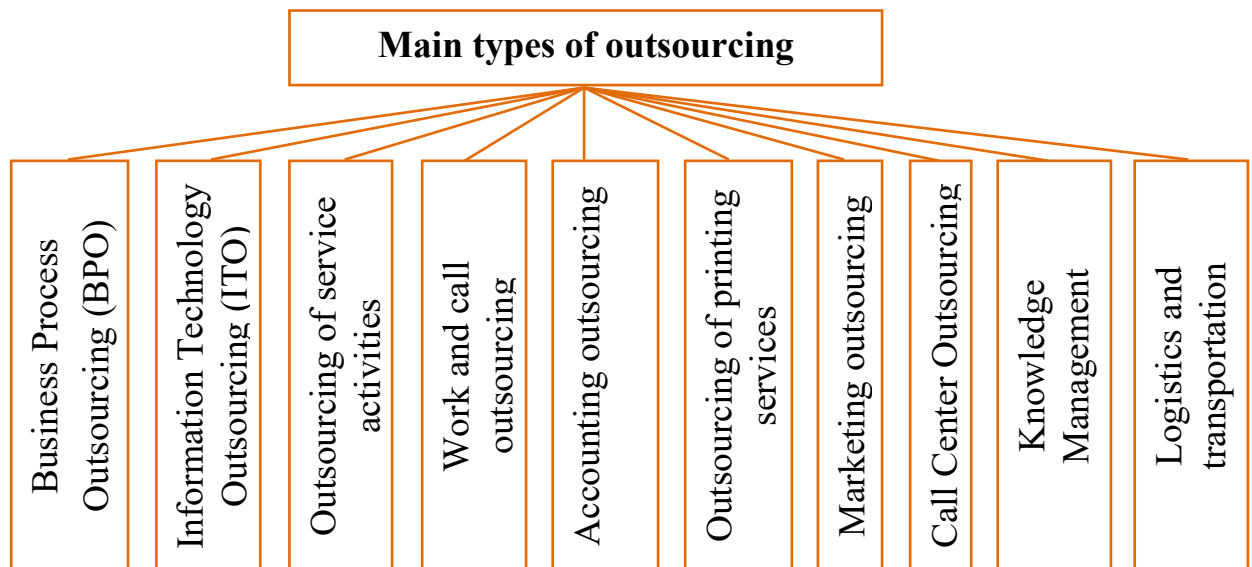


Figure 2.3.3. Basic types of outsourcing⁹²

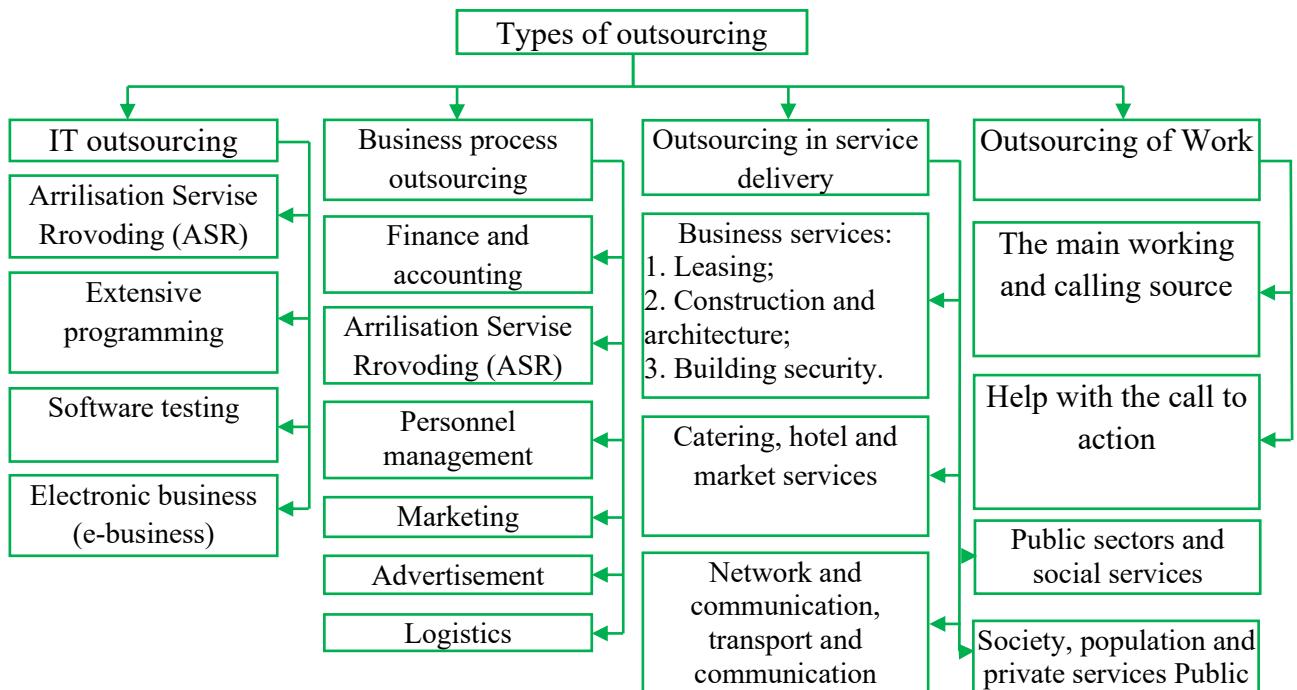


Figure 2.3.4. Types of outsourcing⁹³

-Continuous work. You are obligated to provide your business and employees with annual leave and sick pay. The outsourcer company is always working.

⁹² https://buhgalteriua.uz/autsorsing_uz.html

⁹³ https://buhgalteriua.uz/autsorsing_uz.html

-**Save time.** Staffing is not a simple matter that takes time. We have the infrastructure, technologies, and specialists you need.

-**Guaranteed quality.** The outsourcing company has a team of highly qualified specialists on its staff and has extensive experience in implementing such projects.

The Government of Uzbekistan is working diligently to strengthen digital skills and create digital jobs in Uzbekistan, including by expanding IT and Business Process Outsourcing (BPO) and Knowledge Process Outsourcing (KPO) services to empower women. While the Uzbek government has demonstrated its ability to leverage IT outsourcing, it is expanding these opportunities by establishing specialized BPO training institutions in all regions and districts to improve the digital skills of the population, especially women.

During 2022-2026, more than 200 BPO centers will be established in the regions, creating more than 10,000 high-paying jobs. As a result, by the end of 2030, the potential for exporting IT services and software products in the amount of 5 billion US dollars will be created (see Figures 2.3.5 and 2.3.6).


| Export results of the BRO market |  | ● Work force 3 times increase | | ● Reinvest in 3 countr |
|-------------------------------------|---|----------------------------------|---------------------------------|----------------------------------|
| | | Expected income | Tax collected by the government | IT-Market'discounted deductions' |
| 50 people BRO Center Revenues | 1st son | \$450,000 | \$11,250 | \$4,500 |
| | 2nd son | \$900,000 | \$22,500 | \$9,000 |
| | 3rd son | \$1,350,000 | \$33,750 | \$13,500 |
| | Total 1 center for education | \$2,700,000 | \$67,500 | \$27,000 |
| | Total 14 centers are closed. | \$37,800,000 | \$945,000 | \$378,000 |
| | Total 205 centers are closed | \$553,500,000 | \$13,837,500 | \$5,535,000 |

Figure 2.3.5. Analysis of the income indicators of a 50-person BRO center⁹⁴

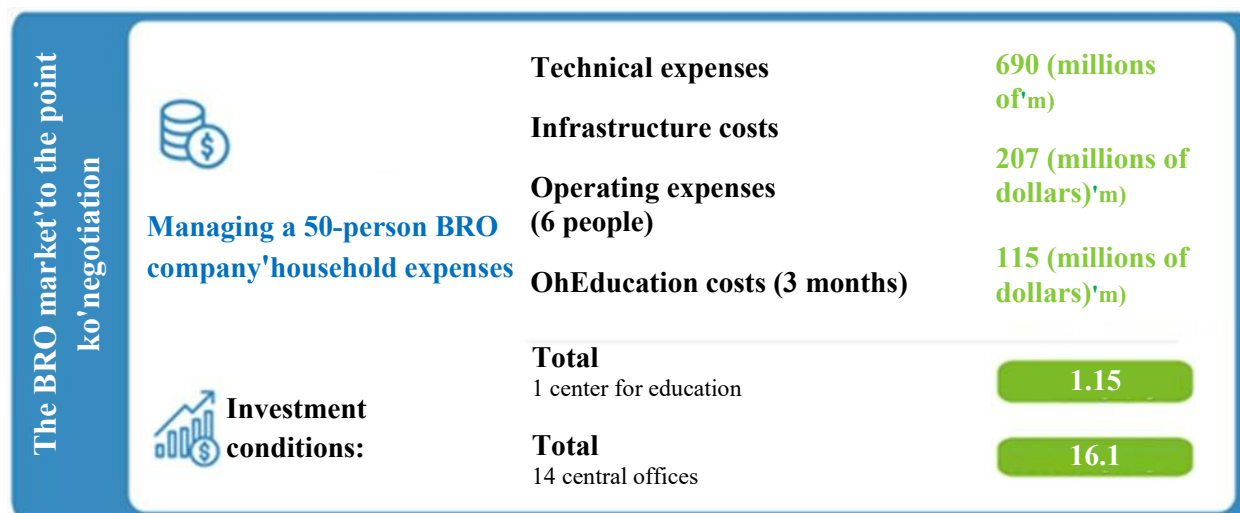


Figure 2.3.6. Costs of establishing a 50-person BPO center⁹⁵

The comprehensive strategic program being implemented will create a solid foundation for increasing the volume of product exports by 10 times, reaching \$5 billion by 2030.

In order to ensure the employment of the population, the Residence of the Republic of Uzbekistan has issued instructions to provide incentives and references for freelance activities, to teach young people how to use the Internet to earn money through smart work, and to develop the industry by introducing popular payment systems abroad.

The draft resolution of the Resident on supporting web freelancers envisages a number of important changes to help them develop the skills and knowledge to become modern professionals, and to raise them to the level of highly qualified specialists.

First of all, to establish a national freelance center.

⁹⁴ The President of the Republic of Uzbekistan chaired the 2022 National Day celebration on the basis of educational materials on April 14.

⁹⁵ The President of the Republic of Uzbekistan chaired the 2022 National Day celebration on the basis of educational materials on April 14.

Secondly, the issue of payment systems, which is cited as one of the main problems by Uzbek freelancers, has been addressed. In particular, a contract for web-freelancers to perform work remotely via the Internet, to accept payments in foreign currency for the services provided without entering information into the electronic information system of foreign trade organizations and without paying bank commissions, and to provide services to foreign individuals and legal entities. Instead of concluding a contract, it is proposed to grant the right to accept a public offer for a transaction (offer), exchange information electronically, and issue an invoice for work performed, including by submitting it electronically.

From the tree, it is planned to combine the efforts of state and non-state educational institutions to train young people in the freelance profession. That is, young people who want to become freelancers and have the necessary qualifications can undergo training in special courses at both state and non-state educational institutions.

From the fourth, students who wish to study in such courses, but who need state support for their studies, will be provided with a document by the Ministry of Education and School Education on the allocation of a state grant for their studies, taking into account their personal circumstances regarding their freelance work. Through this, it is planned to provide all students with the opportunity to become qualified specialists, regardless of their family circumstances⁹⁶.

freelancing, like any business, involves the following, including:
self-organization and responsibility for results;

⁹⁶[https://uzedu.uz/uz/frilanserlar-ni-kuллаб-куvvatлаш-sхора-тадбирлари-to'g'risida-президент-карори-лоуихаси](https://uzedu.uz/uz/frilanserlar-ni-kuллаb-куvvatлаш-sхора-тадбирлари-to'g'risida-президент-карори-лоуихаси)

Quality work for reputation;
strategic planning and goal setting;
self-development and networking;
the ability to narrow down and select the most profitable clients;
risk aversion, because the client may refuse your services tomorrow and you will have to look for a new client;

Ability to independently pay taxes, keep accounts, and manage the budget, or hire an accountant.

Self-employment should be developed as a priority method of human resource management and ensuring population employment. The advantages of self-employment over manual labor can be seen in the following:

to be self-directed and have full control over ones work activities and to be an advocate for ones own product;

Having the opportunity to earn more, freelancers have the opportunity to work while saving on travel expenses and living expenses, while also raising children;

Enjoy the variety of work, adapt to constant work, improve your skills and grow, be creative with each new client, and grow your business through new challenges;

setting ones own schedule, lack of a set work schedule, and flexibility in working hours;

to have full control over their clients and whom they serve.

In order to ensure inclusion and facilitate the employment of women, children, and persons with disabilities, the adoption of separate

programs and advisory programs for them is leading to the active involvement of these groups of the population in labor activity.

If we consider the dynamics of the total income of the population of the republic, in this dynamics, in 2011 this indicator amounted to 101,661.18 billion soms, in 2019 it amounted to 342,613.32 billion soms, and in 2023 this indicator amounted to 728,826.1 billion soms.

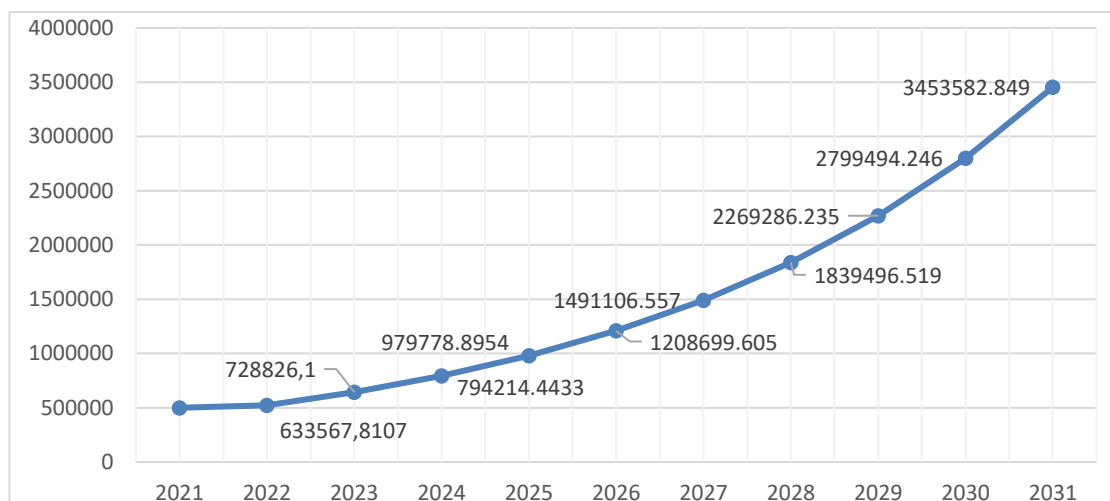


Figure 2.3.8. Dynamics of total income of the population of the republic forecast values for 2021-2031⁹⁷

In the research work of O.A. Nabiyeu entitled “The impact of the population's dependence on unstable work on social and labor relations” According to the forecast values of the dynamics of the total income of the population of the republic in 2021-2031, the volume of population income in 2021 will be 521864 billion soms, in 2025 - 1208700 billion soms, and by 2031 this indicator will be 3453583 billion soms (see Figure 2.3.8). According to the specified forecast values, in 2030 the total income of the population of the republic could increase by 6.6 times compared to this indicator in 2021.

⁹⁷ Nabiyeu O.A. Social and labor relations of the population with unstable employmentsecret. Ifb Abstract, 2020 u.

When assessing the quality of the forecast, the mean absolute percentage error (MAPE) indicator is used, calculated according to the following rule:

$$MAPE = \frac{1}{n} \sum_{t=1}^{n-1} \frac{|F_t - F_t^*|}{F_t} * 100\% \quad (2.3.1.)$$

Look at him, $MARE < 10\%$ - forecast accuracy is considered good, $10\% < MARE < 20\%$ - forecast accuracy is good, $20\% < MARE < 50\%$ - forecast accuracy is satisfactory, and $MARE > 50\%$ - forecast accuracy is considered unsatisfactory.

According to the calculations carried out, the average absolute percentage error of the forecast is 7.82 percent. This shows that the accuracy of this forecast is very high.

In conclusion, forecasting assumes that the result indicator calculated over time is monotonic with respect to the time factor. Otherwise, the obtained result indicator cannot reflect the real state of the future. If the function is not monotonic, then other forms of the time function are used, and then the forecast values are narrowed.

By 2030, the dynamics of the total income of the population of the republic could amount to 3,453,583 billion soms, and this indicator could increase by 6.6 times compared to 2021. This proves the need to reduce the number of people with unstable, informal work and, for this reason, take measures to create more productive jobs.

A BFA model was built to reconcile the future of remote and self-employment sectors⁹⁸. To this end, it is necessary to perform the following tasks:

⁹⁸Worked and enjoyed by the author

To form a database of remote work, self-employment networks and factors influencing them, and to identify relationships;

Develop a separate model for remote work, self-employment networks, and review the evaluation criteria;

Formulating a forecast based on certain laws of factors influencing forecasting through significant computational models;

Achieving effective factors based on predictive models.

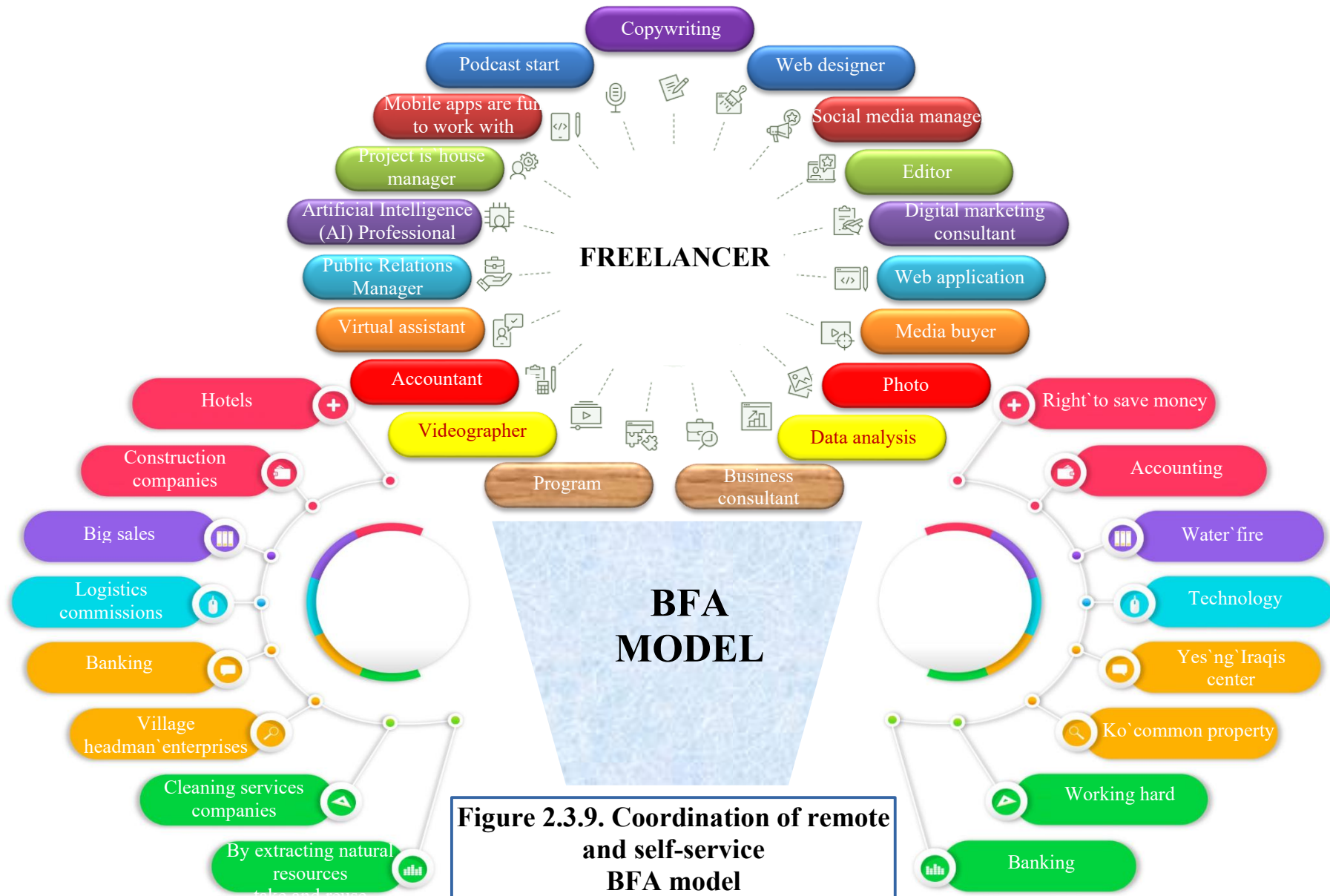
Conclusion to the second chapter

1. The analysis of modern indicators of the prospective development of the digital economy and e-government system, the commercialization of IT specialists, remote service provision, and self-service was carried out.

2. The current architecture of the “Digital Government” system is designed to accelerate the integration of departments in society, to create broad opportunities for digital integration of departments, and to provide business entities with the “Digital Government 2.0” architecture.

3. The socio-economic nature and content of modern employment in the labor market, its scope and characteristics were identified, and types of employment were classified according to the procedure for formalizing employment.

4. Taking advantage of the experience of leading countries in the world with a labor market model, the BFA model of coordination of distance and self-employment was developed.



CONCLUSION AND SUGGESTIONS

As a result of the scientific research carried out in the monograph, the following scientific conclusions, proposals and practical recommendations were developed:

1. Theoretical foundations of ensuring employment in the transformation of the digital economy, Foreign experiences in the development of informal employment systems and directions for their implementation in Uzbekistan were identified.

2. In the digital transformation, the mechanism for ensuring the availability of BPO logistics management in the form of IT outsourcing, freelancer and outstaffing has been improved, the economic essence and classification of types of services, as well as the definition of authorship have been developed.

3. The economic term “flexibility of labor market” has been clarified, that is, an adaptive labor market is considered to be the ability to adapt the composition and supply of labor and its volume to changes in the external environment, ultimately ensuring the full use of the skills of modern professionals and their effective performance.

4. Digital economic sectors and structural changes in them have a significant impact on the employment composition of labor resources. The emergence of modern forms of remote work in the labor market in the conditions of the digital economy has revealed the intellectualization of professions, and its transformation has led to the improvement of the composition, types, and quality criteria of remote work.

5. In the digital economy, the labor market is a transforming market in terms of its impact on changing labor demand and supply. Therefore,

based on the modern manifestations of labor mobility in the labor market and its transformation, a classification of the types and composition of labor mobility, a description of its changing parameters, and a classification of its adaptability according to quantitative and qualitative criteria were developed.

6. Analytical and statistical indicators are presented on the issue of ensuring employment in the transformation of the digital economy, improving the methodology for assessing informal employment, the state of employment and socio-economic indicators in our Republic, and improving the methodological foundations for introducing modern forms of employment.

7. The analysis of modern indicators of the sustainable development of the digital government and digital economy system, training of IT specialists, remote service provision and self-service, and mechanisms for economic assessment of communication and information services supporting the activities of IT enterprises in increasing the volume of remote service provision and self-service, software exports, and Scientific and theoretical views on improvement issues were compared and critically analyzed.

8. The socio-economic essence and content of modern labor market employment, its scale and features were identified, types of employment were classified according to the procedure for formalizing employment, as well as the current architecture of the “Digital Government” system, which is designed to accelerate the possibility of interdepartmental integration in public life, create broad opportunities for digital

integration of departments and business entities. The “Digital Government 2.0” architecture has been developed.

9. Using and implementing the experience of economically developed countries and socially developed states in ensuring modern labor market flexibility is an important means of increasing the effectiveness of labor market policies and developing legal frameworks. Therefore, using the experience of leading countries in the world, specific to the labor market model of our Republic, a BFA model of coordination of remote and self-employment was developed.

10. Indicators expressing the interests of employees and employers, characterizing the scope and level of communication and information services supporting the activities of “IT” enterprises in increasing the volume of software exports, were identified, and as a result, a three-way communication between employers, online exchanges and employees was established based on optimizing the social security system and developing digital platforms. The remote work system has been improved, focusing on one-on-one relationships.

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191.www.mehnat.uz- Website of the Ministry of Poverty Reduction and Employment of the Republic of Uzbekistan.

192.www.stat.uz- Official website of the State Statistics Committee of the Republic of Uzbekistan.

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198. www.tsue.uz- Tashkent State University of Economics website.

199. www.ser.uz- Economic Research Center website.

200. www.review.uz- sound magazine “Ekonomicheskoe obozrenie”.

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202. www.my.gov.uz- The only interactive public services center.

203. www.mu.soliq.uz - Electronic government services portal of tax authorities.

204. www.it-park.uz- “IT-PARK” website.

205. www.it-market.uz- IT companies websites.

206. www.mits.uz(www.digital.uz)- Ministry of Digital Technologies website.

207. www.ssec.uz- Cybersecurity Center website.

208. www.e-gov.uz- Digital Government Project Management Center website.

209. www.edu.uz— Website of the Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan.

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LIST OF CONVENTIONAL ABBREVIATIONS AND TERMS

AI – artificial intelligence;
DBMS – database management systems;
RI – digital economy;
MB - database;
IT – information systems;
BD – big data;
ICT – information and communication technologies;
IoT – Internet of Things Technology;
RT – digital transformation;
BPO - business process outsourcing;
KPO – knowledge process outsourcing;
IT – information technology;
BPA - business process outsourcing, freelancer, outstaffing;
ERI - electronic digital signature;
BPM - business process management;
YIDHP - is a single interactive government service portal;
BKM - Center for Assistance to the Disabled;

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MONOGRAPHY