
The Impact of Digitalization on the Labor Market

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Abstract: The article analyzes the main trends affecting the modern labor market, and especially the professional self-determination of young people. It contains the results of a sociological study conducted in 2022 among the population aged 16-30 years living in ten regions of Uzbekistan.

Key words: professional self-determination, digitalization, labor market, employment, unemployment, shortage of qualified personnel, young, working population.

INTRODUCTION

Digitalization of society taking place for more than half a century rapidly has intensified in the last decade, and especially in the last two years, which marked the global confrontation challenges associated with the COVID-19 epidemic. It is in recent years that remote education and events, remote (hybrid) employment, telemedicine and electronic democracy.

The sector's share is increasing information technologies; in Uzbekistan it leads in terms of gross value added dynamics and is ahead of the dynamics GDP by 2-4%, it employs more than 1.2 million people.

Requirements are being transformed to specialists. Widespread implementation robotization, artificial intelligence, machine learning entails a change in the need for labor resources and their qualifications. On the other hand, these processes simplify access to information, do a job search and do it yourself the work process is more efficient and independent of physical factors. In the new economy, the role of specialists with a high level of emotional intelligence and developed digital competencies.

Purpose of the study: to determine the degree of influence of the digitalization process on the professional self-determination of young people, taking into account settlement characteristics.

Digitalization is an extremely important trend in the modern world. The changes taking place in the labor market as a result of the growth in the use of digital technologies are analyzed. The methodological basis of the study is the dialectical approach, which gives an understanding of the interdependence of technological changes, growth in labor productivity, rethinking labor skills and transforming the structure of the economy. A study of the impact of digitalization on the American and German labor markets research has shown the controversial impact of digitalization on employment. The multi directionality of the changes it causes does not allow us to conclude that general employment is necessarily under threat. At the same time, the increasing complexity of new jobs under the influence of digital technologies predetermines the need for workers to acquire a wider range of skills, including basic digital skills. The relationships identified during the study can be used to accelerate digitalization processes in the Uzbek economy.

LITERATURE REVIEW

An important component of technological processes in modern societies is digitalization. And although the term "digital economy" was first used in scientific research in 1995, the basic concept of "digitalization" does not have a single clear definition. According to leading IT

industry analyst Jason Bloomberg, two main approaches to disclosing its content can be considered. In the first approach (J. Scott Brennen, Daniel Kreiss) Digitalization is seen as a way to “restructure many areas of social life and media infrastructures” as the transition from analogue to digital technologies occurs, resulting in work and leisure domains becoming digital.

Focusing on changes in social interactions during digitalization is a widely accepted approach.

A study by Thomas Olsson noted that the use of information and communication technologies has led to the explosive growth of various social networks and online communication applications and has enabled the creation of many new forms of mediated social interaction between remote people.

The active penetration of digital technologies between people (for example, through social networks such as Facebook) was highlighted in the Lamber Royakkers study.

Since 2014 in EU countries to assess the results of digitalization national economy index is used digital economy and society DESI, which includes data on the development of the broadband market in the EU, human capital development in terms of digital skills, data on the use of Internet services for citizens, data on the integration of digital technologies by enterprises, on the electronic format of government services, as well as data on research and development of information and communication technologies. In particular, modern and reliable digital infrastructure providing access fast broadband connection (including fixed and mobile), refers to key social and economic services provided online. From the report according to the dynamics of DESI in 2019, it follows that in countries EU household coverage by NGA networks increased over the year from 83 to 86%; over the past five years the number households with a fixed broadband subscription increased from 70 to 78%; almost the entire European population is covered by 4G networks.

Research by Russian authors also notes the leading influence of digitalization on social interactions. For example, according to V. G. Khalina, G. V. Chernova, in digital conditions economy not only processes large amounts of data in digital form, but also provides access to it for a wide range of users. Another approach (contained in the Gartner Incorporated IT Glossary) links the concept of digitalization using “digital technologies to change the business model and provide new income generation and value creation opportunities.” This view is justified by the fact that business operations consist of business processes, which digital technologies can transform.

Despite the different emphasis in definitions digitalization, both approaches, according to Jason Bloomberg are interconnected because they reflect the impact of digitalization on people. In the second approach, this occurs through changes in the labor market, which is convincingly substantiated in a large-scale report by Brookings University staff Mark Muro, Sifan Liu, Jacob Whiton, Siddharth Kulkarni "Digitalization and the American Workforce." The authors proceed from the fact that it is integration digital tools to the workplace redefines work and transforms structure the entire economy. Digital technologies have special property consisting in enhancing the ability of workers and firms to create added value value by improving organizational, analytical and management aspects production. Therefore, purchasing digital skills are now essential a condition for individual, industry and regional success.

Changes in the labor market under the influence of new digital industrial technologies are especially noticeable in countries with a developed economy. For example, Carl Benedikt Frey and Michael A. Osborne (2013), examining occupational automation in the United States based on expert judgment and occupational structure, concluded that 47% of US workers are employed in occupations that, in the next 10–20 years, with a high probability (>70%) can be automated. Calculations by Holger Bonin, Terry Gregory, Ulrich Zierahn in a similar way methodology for the German labor market showed that the proportion of such workers in Germany is 42%. However, Holger Bonin et al. believe that the potential of technical automation will be less, since the methodology does not take into account practical, legal and ethical obstacles to the introduction of new technologies. In addition, machines can change jobs without replacing them. But even if there is a loss jobs due to automation, then workers can be transferred to solving other

problems. Taken together, the multidirectionality of such changes does not allow one to conclude that overall employment is necessarily at risk. But since the general trend is to increase complexity new jobs resulting from automation, compared to rationalized jobs, requires implementation measures in the field of advanced training and retraining, in accelerating lifelong learning. The authors note that a higher load Low-income and low-skilled workers are responsible for adapting to work in the context of the introduction of digital technologies.

Differentiated picture of impact digitalization on employment also gives a forecast, calculated on the basis of quantitative modeling of the development of the German labor market for 23 manufacturing industries Markus Lorenz, Rainer Strack, Knud Lasse Lueth, Moritz Bolle. For the period 1997—2013. as a result automation and offshoring workforce size in manufacturing industry Germany decreased by 18%. But for the period 2015–2025, according to the authors, reduction jobs in assembly plants and the production of finished metal products in the future will be accompanied by exceeding the growth of jobs in the region information technology, analytics, R&D and production related to new business models of Industry 4.0: about 610,000 and 960,000 places respectively. In the longer term job cuts will be due to with progress in the use of artificial intelligence and the transfer of such cognitive functions such as “providing oversight of human and automated workers, ensuring compliance with legal and regulatory requirements, and performing management responsibilities staff”. At all stages of implementation new digital industrial technologies will require retraining of the workforce, providing a wider range of workers' skills, and addressing the looming gap among workers in information skills technologies.

Conclusion about the difficulty of assessing the impact of new technologies on the labor market, difficulties in purification this impact from other accompanying ex-post impulses and the low realism of mass job losses in the economy as a whole with the advent of digitalization are also supported in a study by Ulrich Walwei. Current problems in the German labor market and other Western countries arising from the production and use of digital logic circuits and their derivative technologies (including computer, smartphone, Internet), the author considers first of all structural problems such as shortage of qualified personnel, skill gap between job requirements and workers' abilities, persistence of unemployment, inequality in forms of employment. Importance problems raised in the work of Ulrich Walwei for EU labor markets are confirmed by data from the DESI 2020 report. A significant part of the population The EU still lacks basic digital skills although most jobs require such skills. In 2018, there was a shortage of specialists in the field information and communication technologies was 64% in large enterprises and 56% in small and medium.

DISCUSSION

The increase in the number of working-age population of Uzbekistan reduces poverty and general is a great opportunity to increase well-being. Uzbekistan Europe and Central Asia (CEA) has the largest percentage of young people in the region in terms of absolute numbers. 15 million of the population under 24 years (18 million of them are young people under 29 years old). To work in the next ten years the number of able-bodied population is expected to grow by 12%, and this is according to the population growth rate of Uzbekistan in Europe and Central Asia It ranks third after Tajikistan and Kyrgyzstan. In 2020, about 535 thousand young people after graduating from vocational colleges and universities, they looked for employment opportunities for the first time.

The level of participation of the workforce in the labor market in Uzbekistan is similar to that of other countries has comparatively good indicators; however, gender gap indicators, especially among young people in between, it is not positive compared to other countries with higher middle income. 2017-according to HHBR data of 2016, 61% of people aged 16 and older are able to work and more than 56 percent of them were employed. More than half of women age 16 and older less (47 percent), in contrast, three quarters of men (75 percent) are active in the labor market is participating. Low participation of women in the labor market is often due to gender stereotypes and related to societal norms.

Jobs for young people and youth entrepreneurship are the first on the agenda of Uzbekistan's development is in place. The year 2021 in the country is "Supporting the youth and strengthening the health of the population year" was announced, which is a clear example of the attention paid to young people. The youth of the government policy has two main directions: modern education and youth employment. The last five the number of higher educational institutions increased during the year, and the admission quota to higher educational institutions more than doubled increased by more. In addition to active labor market programs, last year new measures were taken to provide employment to young people and encourage entrepreneurship including, allocation of wage subsidies for young people, for students of vocational colleges providing subsidies for internships in companies, preferential for business projects providing loans and investing in youth technology parks.

Youth employment is a complex program, because young people need different kinds of support make up many different populations. Young people, girls and boys, living in villages and cities, school leavers and university graduates will have different profiles and different opportunities and face limitations. In the standard analysis of the labor market, it is usually a traditional definition of youth 15-24 age group is accepted as. However, as in many other countries, In Uzbekistan, in general, youth is the age group between 29 and 35 years old understood.

Youth employment is not a one-sided issue. Solving this problem belongs to the youth to pay attention to the quality of general education and vocational education in order to increase their qualifications and productivity, while encouraging their participation in the labor market and reducing depression, existing regulatory barriers in the labor market (licensing and certification requirements) and obstacle to the development of a competitive private sector, productive agriculture and entrepreneurship requires removing the obstacles of the business environment. The issue of entrepreneurship is manpower as it relates to the problem of limited demand, to the problems of labor supply will be discussed less in this report.

RESULTS

The high level of inactivity and depression among young people is mainly due to unachieved aspirations in addition) of social norms, low wages and "formal" job opportunities depending on the limitation. As a rule, the unemployment rate of young people is higher than that of older workers much higher. Youth unemployment and depressed mood due to lack of experience and skills depends. Young people not engaged in work, study or vocational training (usually abbreviated as "YNWSVT") make up 24% of the 16-24 age group and 26.4% of the 16-29 age group. The share of "depressed" youth is 5% of the 15-24 age group, most in neighboring European and Central Asian countries of Uzbekistan, this indicator is less than 2.5 percent; indicator for the 25-29 age group will decrease by 4 percent. Low level of job formalization and employment with wages lack of opportunities is one of the biggest obstacles in providing employment to young people. Focus group Most of the young people who took part in the discussions are on the official list when they get a job they reported that it was not received and that the "workbook" was not opened.

Uzbekistan has the highest YNWSVT gender gap indicator in Europe and Central Asia. Young women The rate of YNWSVT is four times greater than that of boys. Women aged 16-24 in 2017 for YNWSVT was 38.2 percent, compared to only 9.4 percent for men in the same age group. made up, the difference between them is 29 percent. For the wider group (16-29 years old), the difference decreases to 18 percent, 44% of women do not participate in work, study or job search, 8.5% of men.

Labor migration shapes youth labor market outcomes, especially depression plays an important role in the existing labor market. Through focus group discussions with young people qualitative evidence collected shows that most of the labor force consists of low-wage and informal work local labor conditions, international migration of unemployed youth to work and earn a decent wage encourages to consider it almost the only way. About 5.5 percent of those 16 and older are

international are labor migrants. The majority of labor migrants are aged 25-34 and the majority of migrants (about 90 percent) are men. Russia - Uzbek labor main destination for immigrants. Kazakhstan is the second place for the total population and for men; the third address - Turkey. The level of internal migration is quite low, because the wages paid in Tashkent are foreign lower compared to the country and the cost of living is higher than in the regions.

For the first time in our country, the problems of employment with informal labor and the hidden economy began to be openly discussed, and our state took extensive measures to reduce its scope. Informal employment of the population exists even in the most developed countries, and it is not only negative, but also performs some important social and economic tasks.

Firstly, by ensuring that the human resources who could not find work in the formal sector of the economy get a job and, as a result, income, it reduces unemployment (a real means of social protection for the helpless), prevents poverty, and by spending their income in the formal sector, increases domestic demand and increases GDP. will encourage

Second, informality is often a stepping stone to the formal sector as a way to start a business.

Informal employment is a widespread phenomenon all over the world, and reducing its scope requires the state to carry out a systematic and complex policy in this area. According to the report of the International Labor Organization, 6 out of 10 workers (61% of the employed) and 4 out of 5 enterprises in the world operate informally in the shadow economy.

The most detailed description of the positive and negative aspects of digitalization for labor market is given, in our opinion, in the report "Digitalization and the American Workforce." The positive effects in the study included the following effects:

- creation of hundreds of new professions that did not previously exist (cloud services specialist, application developer, social manager networks, etc.);
- rapid growth in production and labor productivity at the turn of the 1990s - 2000s. (about 4% per year in real terms) due to investing in information and communication technology tools and business reengineering;
- increasing productivity and wages of workers in industries receiving digital innovation;
- improving the overall functioning of the market labor through increased use of online talent recruitment platforms (Monster.com; LinkedIn).

Negative aspects of digitalization for the labor market include:

- growth in employment in non-standard cognitive and non-standard manual jobs, while the level of employment in regular jobs remains unchanged all types;
- increasing discrepancy between wages pay for the most highly qualified technical workers and all other workers;
- reduction of mid-level jobs qualifications during downturns during implementation labor saving technologies;
- uneven distribution of digital skills across professions;
- uneven distribution of digital skills across regions of the country;
- uneven distribution of digital skills across industries;
- uneven distribution of digital skills among men and women;
- uneven distribution of digital skills by race.

Digitalization is taking place in everything industries, but the extent and pace of it vary greatly. Significantly higher digital indicators than the rest of the economy demonstrate 50 industries that make up the country's high-tech advanced industrial sector. Industries with medium and low levels digitalization are education, transport and warehousing, production of basic goods and

construction. The authors of the study found that workers with excellent digital skills such as typically receive higher wages than similarly educated workers with more low digital skills and they may be slightly less susceptible to movement, caused by automation. In particular, analysis showed a consistent, statistically significant wage premium for computer skills, which cannot be explained solely by differences in education.

CONCLUSION

Thus, digitalization is an extremely important trend in the modern world. The ubiquity of digitalization makes it difficult to assess its impact on the workforce and markets labor - in the future, changes in the quantitative parameters of the labor market may occur, as well as modification of the practical format of interaction between employees and employers. The introduction of digital technologies, accompanied by an increase in the role of some types of human labor and the depreciation of others, complicates forecasting employment and unemployment already in the medium term. More detailed information about progress and consequences is required to make informed decisions digitalization for every profession, industry and the region as a whole.

Uzbekistan today has a low share of employed in the information and communication sector technologies. In the future, the acquisition of basic digital skills by the population can be facilitated by the active upgrading of educational institutions of all levels with personal computers for the educational process per 100 students.

In the long-term perspective, there are opportunities to improve the youth employment policy are the most important constraints, including the quality of vocational education, access to higher education opportunities, large gender differences and limitations in the implementation of measures allows you to find a solution. A better understanding of the main limitations and international experience is as follows can help: employ youth, such as internships, apprenticeships and wage subsidies strong cooperation with employers to increase the effectiveness of the provision programs installation; labor market requirements and revised national qualifications system and assessment of education work to update educational programs of vocational training and retraining in accordance with the system strengthening cooperation between providers and educational institutions; get higher education expand the possibility; and individual employment of Employment Assistance Centers support, including facilitating the transition to workplaces with digital technologies empowering.

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