

THE MAIN TRENDS IN THE LABOUR MARKET DEVELOPMENT IN THE CONTEXT OF THE ECONOMY DIGITALIZATION

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Abstract

The article considers the influence of the digital economy development on the labour market, identifying its main advantages and disadvantages. The increase in the unemployment rate due to the disappearance of a number of obsolete professions, that have lost their relevance in the context of modern developing relations, can be attributed to the fundamental negative factors of the labour market digitalization. In addition, after analyzing the opinions of various domestic and foreign experts, it is concluded that it is impossible until 2030 to completely replace human labour with robotics, despite the rapid development of information and communication technologies.

Keywords: ICT, trends, digitalization, digital economy, labour market, robotics, Industry 4.0

I. Introduction

The transformation of the labour market due to the digitalization of the economic system plays a very important role at the current level of economic development and is studied by many both domestic and foreign scientists and experts.

Digitalization did not originate immediately and has a sequence of stages that played an important role in the formation of a particular technological order.

As you know, the fifth technological order includes such key components as information and knowledge, which serve as the main factors of production.

In addition, the importance of innovative technologies is considered by both domestic and foreign economists, who highlight their impact on all spheres of society.

After all, there is a process of the fastest possible spread of digital technologies, services, online platforms for labour relations, which changes the previously formed traditional type of society.

All this, in turn, is accompanied by an increase in labour productivity indicators, an increase in wages of certain professions, and an improvement in the welfare of society.

Accordingly, new vacancies are being created, but at the same time, professions that are already irrelevant in this era, are disappearing.

That is, thanks to the processes of digitalization, the population gets the opportunity to acquire new knowledge with an increase in their level of competence.

But, as we understand, as any other social phenomenon, the economy digitalization has both

positive and negative sides.

The negative side, first of all, is the reduction in the number of jobs that have lost their relevance.

II. Methods

The aim of our work is to study the main trends in the labour market development in the context of the economy digitalization.

The object of our research is the labour market.

And the subject is the consideration of the positive and negative aspects of the labour market digitalization.

Various textbooks, manuals of foreign and domestic economists, data from mass media, Internet resources, as well as articles devoted to the topic of our research were used as sources of information.

As for the methodology of the research, we would like to note that both theoretical and empirical and mathematical research methods were used, in particular, the method of problematic and structural analysis and synthesis, as well as comparison method.

Undoubtedly, the topic of our research is quite relevant both now and in the near future, since digitalization processes serve as a new era and are being rapidly implemented around the world.

III. Results

Thus, technological orders smoothly flow into the industrial revolution, known as the Fourth Industrial Revolution, or as it is also called – Industry 4.0.

In general, many researchers call this era the new industrial age, during which artificial intelligence, robotics, 3D printing, etc. appeared.

Undoubtedly, at the current level of economic development, almost all spheres of society feel certain transformations inherent in the digital economy through various innovative challenges.

One of these factors is the challenges covering Industry 4.0 on labour issues.

The essence of this trend is that due to the economy digitalization many professions simply disappear from the labour market, but at the same time a number of other professions are being created, which, in turn, need appropriate personnel with such skills.

But, for modern society, there are certain difficulties regarding the issues of forecasting the digital economy development, which is primarily due to the fact that this area is quite extensive, and full forecasting of the future for 100% is practically impossible.

Also, we'd like to consider the essence of the impact of robotization of the labour market on the decline in the level of jobs on a global scale.

As practice shows, there is an increase in the number of robots in the industrial and other sectors of the economy.

The result of these actions is an increase in labour productivity, the formation of new jobs, followed by the reduction or complete destruction of those areas that are no longer relevant in the digital economy.

According to the viewpoints of many scientists, there is also an opinion that there is a high probability of human labour displacement in 20 years due to a robotic attack.

There is also an opinion about the disappearance of those professions that contain a template structure of work to be performed.

The category of such persons includes, for example, the category of production managers, technical staff, accountants, auditors, cashiers, etc.

Accordingly, based on certain information regarding the further development of robotization and automation of production processes, one can judge the further development or disappearance of various professions.

It should be noted that, according to a number of experts, in the near future, the professions that will be at risk of disappearance will be:

- Drivers who will be replaced by vehicles with drones, which will significantly reduce the share of drivers;
- Service workers who will be replaced by robots engaged in household chores, office work, up to robotic guards and others.

All these phenomena will play a significant role in the quantity of supply and demand in the sectors of social workers and office services.

That is, in other words, in any areas affected by robotics, there will be significant shifts in the supply and demand curves that change the structure of the market.

Thus, we would like to refer to Fig.1, which clearly illustrates, on a global scale, the exposure of certain countries, which, first of all, are dependent on the risks of automation and robotization of labour markets.

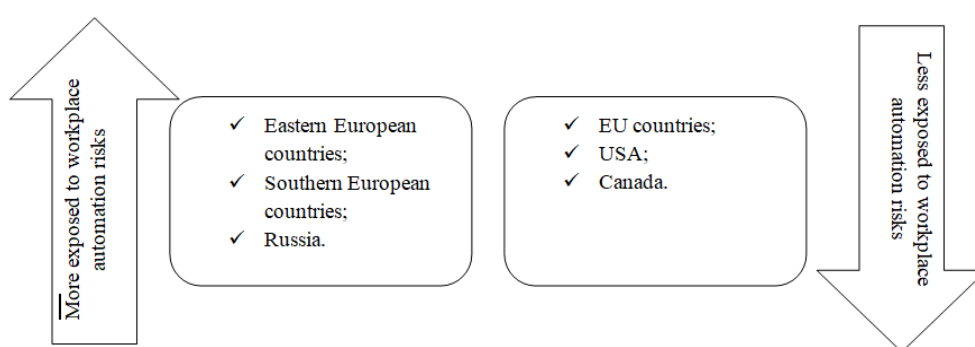


Fig. 1: Assessment of the exposure of various labour markets to workplace automation according to 2021 data

Also, having considered the level of robotization around the world, we'd like to note such a comparative analysis of the indicators of other countries with Russia.

As practice for the development of robotization in the Russian Federation shows, the situation here is not positive enough, since the level of this indicator is not high enough.

This is primarily evidenced by the indicators for the introduction of robotics around the world, exceeding the value of 2 million, while in Russia their total number is about 5 thousand.

It turns out that on a global scale 10 000 workers are replaced by 113 robots, and in Russia only by 5 robots.

At the same time, significant shifts in the Russian economy in matters of robotics have been carried out since 2018.

For clarity, we would like to refer to the diagram below (Fig.2), which shows the number of installed robots on a global scale compared to Russia.

IV. Discussion

Thus, after analyzing all of the above, we can conclude that the development of automation processes plays a decisive role to a greater extent for countries with a high unemployment rate, followed by a low level of employment among the population.

Therefore, the task of the relevant structural units becomes control and readiness for risks that have an automated nature of origin.

In our opinion, a strong impact of the economy digitalization on the labour market can be observed not only in a global scale, but also in relation to a specific category of the labour power.

To prove our point of view, we would like to give, as an example, various scenarios for the manifestation of the digitalization of the labour power in the transport sector.

Let's consider, as the first situation, the presence of an average level of independence and average skills of the staff. Here there is a limited range of automated means of transport, accompanied by the preservation of workplaces due to the inexpedience of their robotization.

That is, it is very important to correctly calculate the expedience of using automation, as, for example, loading operations that are carried out outside the enterprise, of course, can be automated, but it must be taken into account that these actions in the conditions of the organization in a metropolis are far from budgetary and not expedient.

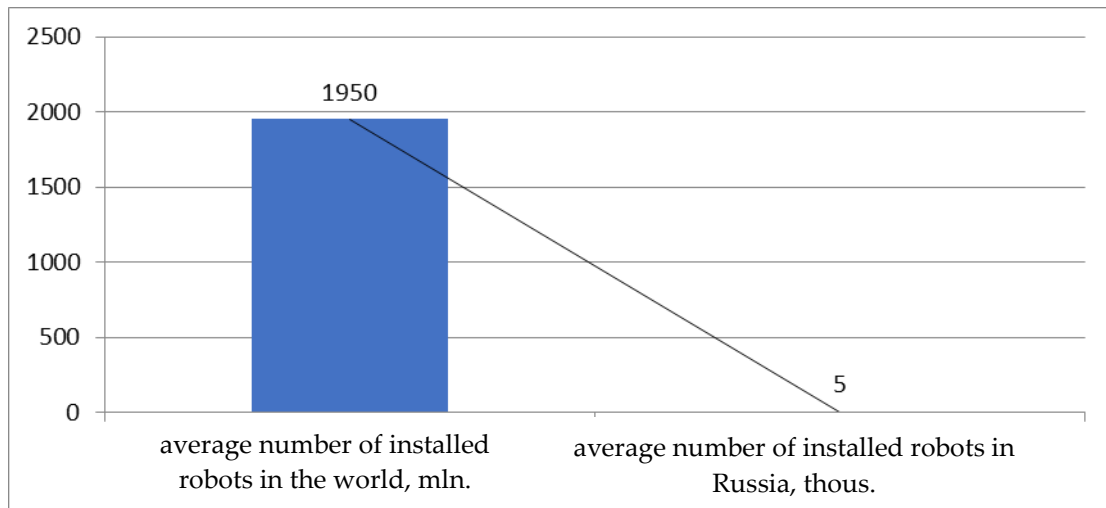


Fig. 2: Number of installed robots around the world and in Russia

Also, we would like to refer to Fig. 3, which lists countries with a total number of robots that replace 10 000 workplaces, according to data for 2020.

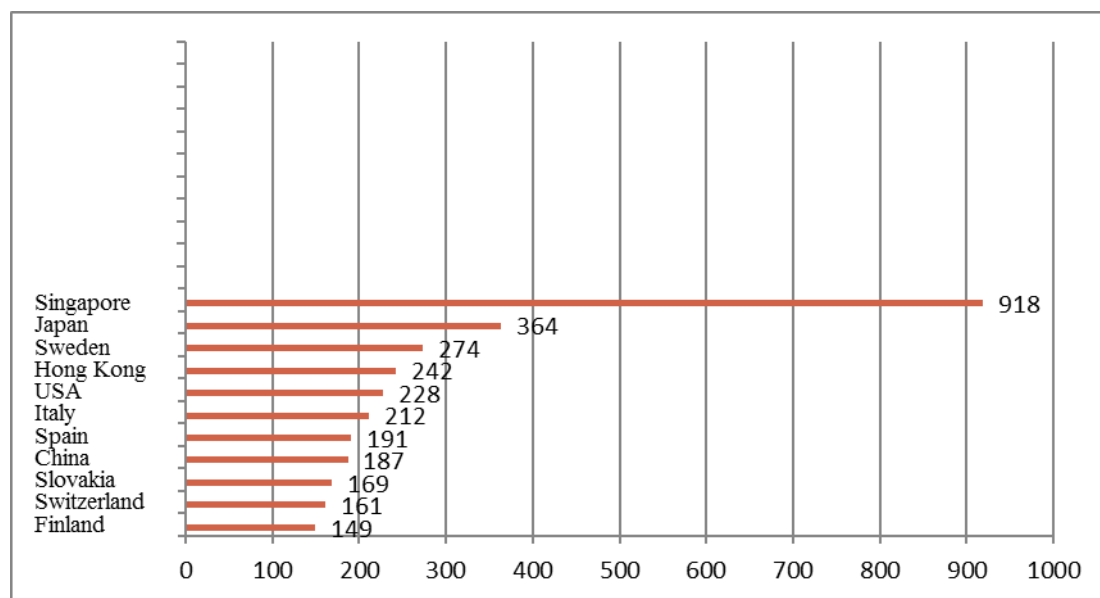


Fig. 3: Number of robots installed per 10 000 workplaces globally, according to 2020 data

The situation is different in case of high level of independence and low qualification of staff, since the staff does not have all the necessary skills to solve the tasks. Then robots, the work of which will largely reduce production costs and increase the labour productivity, are already coming to help.

Accordingly, one can note the important role and impact of the economy digitalization on the labour market, which changes the supply and demand for labour power.

Due to the creation and implementation of new technologies, an economic growth on a global scale and an increase in labour productivity occur.

In our opinion, one of such challenges for modern society was the emergence of computers, which greatly facilitated the work of people, becoming an auxiliary tool. But, at that time, the computer did not replace the work of a person then, but only helped him for further development and improvement of his qualifications.

Now, the situation is a little different. Because in the modern digital economy human labour, both physical and mental, is being replaced by robots.

V. Conclusion

Thus, according to a number of experts, in the process of the economy digitalization in matters of the labour market transformation, there will be an increase in conflicts both between labour and capital, and between employees of different age groups.

Based on the analysis of the McKinsey Global Institute, which has been researching business and economics on a global scale since 1990, it was noted that by 2030 there will be an increase in the gross income of labour automation productivity from 0.3 to 2.2%.

In addition, it is noted that, despite the rapid development of the digital economy, there will not yet be a complete replacement of human labour with robots.

Also, according to the McKinsey Institute research, it is noted that more than 60% of professions can be automated, but at the moment only 3% of professions are subject to full automation.

Thus, regarding to the automation of the labour market, as we see, there are opposing views.

This is evidenced by various seminars and webinars organized in 2020 by the European Trade Union Institute (ETUI), lawyers from ELW Network, ELDH, as well as the European Trade Union Confederation (ETUC).

According to the above organizations, the task of labour legislation is to directly protect the interests of the working population in case of worsening of their labour conditions caused by the economy digitalization.

Thus, we have revealed the topic of our study and analyzed the views of various experts on the transformation of the labour market under the condition of digital economy, and we can note that the introduction of information and communication technologies in the digital economy plays a very important role in the global development of the economic system and labour market.

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