Current Trends in the Labor Market Transformation Under the Influence of Environmental Factors

E. S. Smolina\textsuperscript{1}, M. V. Greshnova\textsuperscript{1}, and A. S. Ryzhova\textsuperscript{2}

\textsuperscript{1} Samara State University of Economics, Samara, Russia
ekaterinsmolin@yandex.ru,
mariyagreshnova2019@yandex.ru

\textsuperscript{2} Kazan Federal (Volga Region) University, Kazan, Russia
a.s.ryzhova@yandex.ru

Abstract. The first half of 2020 has become interesting and unique in terms of the changes that have taken place. The declared pandemic has affected all areas of life in both developed and developing countries, where cases of coronavirus infection have been detected. The labor market, which was previously influenced by factors and products of technological progress, as a result of the manifestation of crisis phenomena was among the vulnerable areas. In this case, crisis phenomena are understood as the adoption of quarantine regimes and general self-isolation, restriction or complete suspension of the functioning of economic entities (small, medium and large businesses). As a result of the impact of many factors, the labor market is transformed, the priorities of popular professions are changed, some of them are “dying”, and some are just beginning to appear, becoming widespread. In this paper, based on the study of expert opinions (labor market) and analysis of information, the trends of the labor market are identified and potential changes in the requests of employers are described, which are interesting for potential applicants to study.

Keywords: Changes · Labor market · Pandemic · Robotization · Transformation

1 Introduction

Scientific and technological progress, the fourth industrial revolution, digitalization and robotics, the Internet of things – all these terms have entered our lives and have begun to change the conditions of the world’s functioning, increasingly penetrating into various spheres of human life and society, including the influence exerted on the labor market, under the influence of factors, its transformation is taking place. In 2020, in addition to the development of technologies, the declared coronavirus pandemic had an impact on the economy and on certain areas, in particular, on the labor market. As a result of various events, new trends appear and spread, as well as changes in the interests and behavior of employers and job seekers.
One of the trends of modern life is the spread of digitalization. It leads to an increase in the value of candidates who were able to adapt and learn to work in a digital format. Now remote work and flexible hours are becoming more and more popular, the coronavirus pandemic has also contributed to such conditions, companies have decided to transfer employees to such format, and employees have tried new conditions. New realities have provided an urgent mass transfer of employees to remote work. Companies that have the necessary resources have been able to change their methods of work.

The current trends in the labor market are:

– use of big data for various purposes (in particular, forming a value proposition for customers), cloud technologies. This leads to increased demand for mathematicians, programmers, and system architects [3],
– increasing the role of online sales leads to an increase in demand for hiring sales managers,
– remote work (reducing the need to rent office space and additional fixed costs,
– automation and simplification of routine processes leads to the replacement of people with “robots”.

As a result of these changes, the demand for professions changes, some are no longer in demand, and others, on the contrary, come to the fore.

In order to be in demand on the labor market both now and in 5–10 years, you need to make the effort and take the necessary steps to find significant areas, learn new methods of work, get additional knowledge that can be used in the future, choosing a set of educational programs and getting the necessary knowledge and competence.

2 Methodology

In 2018, “PwC” company prepared an analytical material on the labor market future based on global trends (megatrends) [7].

In the labor market these trends stand out:

– development of technologies, automation and robotics, making life easier and increasing productivity, a threat to social stability,
– demographic shifts – aging of the population, continued work of elderly employees,
– increasing the role of cities in the choice of employment, the impact of cities on the formation of jobs due to urbanization,
– economic problems of developing countries,
– climate change and depletion of natural resources [7].

Some scientists claim that there are not many areas where people will not be replaced by robots in the near future [4]. In health, education, household, and some other areas in which it is still difficult to completely exclude human participation and performance of certain actions, that is, it is difficult to refuse using of human intelligence. Despite this statement, it should be said that information mechanisms are and will be used in these areas with varying degrees of application intensity, and it is possible to use new robotic technologies in the processes.
Scientific materials publish the results of analytical work of labor market researchers with an assessment of current changes and a forecast of the future. Kolontay, professor of the Higher School of Finance and Management of the Russian Presidential Academy of National Economy and Public Administration (RANEPA), analyzing the labor market trends, wrote on an important trend, which is a reduction in the need for labor power with the growth of production (the jobless growth term) [5]. Robotization leads to a decrease in the need for the number of employees, as people begin to replace labor power with the “machine”.

Considering the future of the labor market, we study how the demand for professions will change. We must understand what will be irrelevant in the future in order to use the time resource efficiently at the present time. The Future of Jobs study, published by the world economic forum in 2016, reported that between 2015 and 2020, 7.1 million jobs will disappear, most of them are “concentrated in routine white collar office”, while 2 million new jobs “in Computer and Mathematical and Architecture and Engineering related fields” will be created [9]. Such changes are influenced by the socio-demographic situation and the development of new technologies. We will be able to see and evaluate the results of these changes in 2021.

In 2020, new trends caused by the spread of coronavirus began to appear, including remote work. Professions that may become popular in the near future as a result of the development of the labor market are highlighted. Based on current conditions and future forecasts, we can say that automation and robotics are among the main factors affecting the labor market.

3 Results

The world is constantly changing, both in favorable and unfavorable way, the division is conditional. Changes under the influence of external and internal factors contribute to development. The higher the level of development, the more serious changes begin to occur, the speed of implementation becomes higher. The labor market is also dynamic, it is influenced by technological factors. If earlier in Russia a lot of students have tried to get a degree in economics or law, now it becomes clear that the supply exceeds the demand, you need to look for more popular professions that guarantee future employment. In 2018, it was reported that a significant part of unemployed graduates (about half) have degrees in economics and law [8].

In order to be useful to employers and competitive in the labor market, you should learn new things. In the Sobesednik.ru review professions that may cause high demand in the near future were named: sanctionist, urbanist, Big Data analyst, specialist in religious conflicts and gerontologist [1].

Over the next 5 years, there may be more and more staff reductions due to robotization and automation. Payment terminals, Internet banks replace operators, self-service ticket offices, ticket terminals eliminate the need to maintain a full-time cashier, robotic car washes also do not require human participation, you can continue to list the areas of work in which a person can be displaced by a computer mechanism, as it is already happening in many areas. An adverse consequence is an increase in the number of unemployed. Major Russian companies announced large-scale cuts, Sberbank
reported a reduction in accountants from 33,000 to 1,600, and then even to 600 people, Russian Railways announced the dismissal of almost 30 thousand employees by 2025, explaining this by the introduction of new technologies.

The coronavirus pandemic also have its impact on the labour market. Short-term demand is predicted for some professions, but they will be relatively new for Russia: an organizer of VR/AR broadcasts, an online doctor, an anti-crisis manager, a time manager, an IT consultant, and other professions that help to set up remote processes, optimize business, and take care of health. Additionally, well-known professions can gain popularity:

– financial consultant. In the second quarter of 2020 in Russia, there is an increased interest in the topics of personal and corporate finance management, ensuring solvency, and maintaining current and future financial stability,
– online store manager, as well as content manager will be in demand as a result of the spread of online trading to attract and interact with customers,
– psychological crisis phenomena affect not only the economy, but also relations. This fact requires the help of professionals to resolve conflicts and vulnerable situations,
– programmer. Digitalization will inevitably affect many companies, in order to use technologies and optimize business processes, it will be necessary to attract specialists for the initial configuration of data and in the future to provide support.

Quarantine restrictions make business representatives who are not yet represented in the online space to think on the need to take steps towards digital transformation. Currently, there is a trend for remote employment. The need to rent large offices is decreasing. After an office employee has “tried” remote work, there is no guarantee that they will have a desire to return to the office – because this generates additional costs of both time and money. From the point of view of the employer, it should be said that the lack of need for offices can also reduce the monthly fixed costs of maintaining the office, and the weight advantage will be that there are no borders for admission, if previously managers chose geographically convenient employees, now it is possible to find employees from other cities without their moving, which means that there are advantages for each side in remote employment. It is important to ensure information security and preserve the company’s trade secrets, as well as find ways to motivate employees to work effectively.

After professions become unnecessary, some people begin to retrain and even reach career “heights” in a new direction, while the other part, due to low flexibility and lack of adaptability, remains for a long time without a job and a source of income, not realizing that there no longer will be former demand and you need to move on. Modern specialists are becoming more mobile and adaptive, striving to gain new knowledge and experience. Changes and uncertainty when changing the sphere of activity are not so much frightening. You need to constantly focus on learning and becoming professionals in the right areas. Robots can displace many professions in the labor market from simple to more complex, but the need for highly qualified specialists with a high level of knowledge and developed intelligence will remain.
4 Discussion

Digital transformation is a modern phenomenon of our life that affects business structures. The reason for changes in modern life is the development of technologies in all areas. The topic of labor market transformation has been in the focus of researchers for many years, presenting results in the form of analytical reviews and forecast materials on future changes. There are various scenarios for the development of the labor market. In the presented review materials and development models, some experts note the adverse side of the changes, concluding that automation and robotization will cause mass reductions and increase in unemployment, which, in turn, will harm the countries economies and exacerbate social tensions. To a greater extent, such shifts in the labor market will adversely affect developing countries, since the spread and use of IT technologies has so far been much lower than in developed countries.

In Russia, there is now a gap between supply and demand, that is, employers need one thing, and applicants are interested in another, interests differ, and a solution is needed. We need to track trends in order to be successful both from the point of view of the company and each individual, we need to focus on the needs of society caused by a number of factors that are constantly changing.

One of the current trends in the labor market is remote employment, which has its pros and cons. According to NAFI, the number of remote workers in the European Union is about 17%, in Japan, Sweden, Finland and the United States in some industries it reaches almost 40%. It is noted that for the employer, in addition to the advantages (saving on some items of fixed costs), remote work carries a number of disadvantages, for example, it is more difficult to control an employee when he is not near, which may lead to a decrease in productivity and deterioration in the quality of performed work [6], as a result, you need to look for motivation. By studying the topic of labor market transformation, you could understand what you need to be in demand and what steps you need to take to be in demand in the labor market for professional competencies in the future.

5 Conclusion

Professions of the future, if you have the inclination and interest, you need to learn now, this will give you an advantage when the need arises. The main “engines” of changes and transformation of the labor market are automation, robotics and digitalization, they contribute to the development of technologies in companies, which is why professions associated with performing routine operations are becoming less popular. Digital transformation should affect the processes of production, personnel management, and interaction with customers. Most of all, digitalization will be relevant for large and medium-sized businesses in both B2C, B2B, and B2G segments [2].

In addition to the development of information technologies, the labor market is also affected by socio-demographic changes, economic changes (economic transformation), urbanization, and others. One of the factors influencing the labor market in 2020 was the coronavirus pandemic, which contributes to the acceleration of the development of optimization and informatization processes due to the remote work processes...
development. Now we could see that in the future the world will be more technological, and some of the process will be performed automatically. Robots will not completely replace people, but they will replace some professions. We need to be in demand today, tomorrow, in 5 and 10 years. In order to do that, it is important to be professionals in the areas that the modern world needs.

References

1. Akhmirova, R.: Five professions that will be in demand in the near future (2017). https://sobesednik.ru/tehnologii/20171208-professii-budushego. Accessed 30 June 2020
2. Fomichev, K.: Go digital or die: Digitalization of business as an inevitability (2017). https://nand.ru/professional-information/and_library/20565/. Accessed 30 June 2020
3. IOT: Digitalization sets trends in the labor market (2018). https://iot.ru/promyshlennost/tsifrovizatsiya-zadaet-tendentsii-na-rynke-truda. Accessed 30 June 2020
4. IQ Consultancy: What professions will be in demand in 5–7 years (2017). https://www.iqconsultancy.ru/articles/kakie-professii-budut-vostrebovany-cherez-5-7-let/. Accessed 30 June 2020
5. Kolontay, M.M.: How to change the labor market in the next 20 years: Trends and opportunities (2017). http://mkolontay.ru/publications/275. Accessed 30 June 2020
6. NAFI: Russian companies are in no hurry to transfer employees to a remote work format (2019). https://news.myseldon.com/ru/news/index/212167194. Accessed 30 June 2020
7. PWC: The future of the labor market (2019). https://www.pwc.ru/ru/publications/workforce-of-the-future-rus.pdf. Accessed 30 June 2020
8. Vaschenko, V.: We do not need a lawyer: Universities got criticized for bachelor’s training (2018). https://www.gazeta.ru/social/2018/01/29/11629591.shtml. Accessed 30 June 2020
9. World Economic Forum: The future of jobs. Employment, skills and workforce strategy for the fourth industrial revolution (2018). http://www3.weforum.org/docs/WEF_FOIJ_Executive_Summary_Jobs.pdf. Accessed 30 June 2020