IOP Conf. Series: Materials Science and Engineering 890 (2020) 012196 doi:10.1088/1757-899X/890/1/012196

# The labour market in the digital economy and features of its modernization in Russia and Abkhazia

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Abstract. In this article, the labour market is considered from the perspective of its development goals in the digital economy. The analysis of scientific literature is carried out taking into account the main directions of labour market research, their classification is proposed. Among the areas of research, the formation of a joint economy, the creation of digital platforms and a transparent information environment, labour market mobility, advanced training and retraining of workers, the development of the educational system, and the importance of human potential are highlighted. A concept has been developed to study the characteristics of the labour market development in the digital economy, which is based on aspects of the development and realization of human potential. The experience of foreign countries was studied, the state of the Russian and Abkhaz labour markets was investigated. The results of a study of the prospects for the educational system development in the context of the digitalization of the labour market are presented, the directions of education modernization and advanced training of workers are established. The features are identified and the risks of the labour market development of Russia and Abkhazia are specified.

**Key words:** labour market, digital economy, modernization, transparent information, human potential.

# 1 Introduction

The digital economy is represented at three levels: markets and industries; information platforms and technologies; environment for their development and interaction [1]. Accordingly, in the context of its active development, the importance of studying the state of the labour market, which is adapting to the changing needs of society, is growing.

The analysis of the scientific literature allows us to identify the basic directions of research related to the transformation of various fields of human activity in the digital economy. Among them, the formation of a transparent information environment with a significant reduction in geographical, coordination and other restrictions is considered [2-4]. The concept of the joint economy and digital platforms development is studied [5-7]. There is an increase in the importance of human potential and human capital, as well as the possibilities of their development and implementation [8-10]. It shows the growth of mobility and the need for continuous training and professional development of workers, especially in the field of digital technologies [2, 5, 9, 11-16]. The regular growth of the importance of the education system modernization is studied, directions and prospects for its improvement are analyzed [1, 4, 8, 11, 14-15, 17].

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As a part of a joint study of the characteristics of the labour market transformation in the context of the economy digitalization, in this work we found it necessary to pay special attention to the state and prospects of the labour market in Russia and Abkhazia. This choice is due to a similar vision of the concept of studying labour market dynamics based on the prospects for the development and realization of human potential in the digital economy. The central link of the study can be called the improvement of the education systems of Russia and Abkhazia, the importance of which is emphasized by a number of national projects. In particular, Russia has developed the National Technological Initiative, which presents a programme of measures to form fundamentally new markets and create conditions for Russia's global technological leadership by 2035, which requires serious modernization of the educational system, primarily the highest one. In Abkhazia, within the framework of national development, the transformation of the education system is accompanied, first of all, by organizational and institutional contradictions [18-19]. The analysis of statistical data indicates the absence of a high-quality institutional environment, which limits development and determines the need to improve the education sector from the standpoint of the importance of human potential in the digital economy. This fact is reflected in the National Development Strategy of the Republic of Abkhazia. Accordingly, as the objectives of our study, we call an analysis of the features of scientific papers on the dynamics of the labour market in the context of the economy digitalization; substantiation and development of a concept for studying labour market dynamics, taking into account the importance of human potential; assessment of the current state of the Russian and Abkhaz labour markets; identification of areas of modernization of the training system for Russia and Abkhazia.

## 2 Materials and methods

Based on the analysis of studies of labour market dynamics in the digital economy, we classified the directions of these studies according to the following criteria.

- 1. The advantage of a positive or negative assessment of the prospects for the development of the labour market in the digital economy.
- 2. Linking the analysis to the age categories of employees, taking into account the degree of their adaptability and ability to learn and retrain.
- 3. The orientation to the territorial features of the labour market development, taking into account the scale of territorial formation.
- 4. The emphasis on industry-specific features of the labour market with an analysis of the specifics of workers' activities.
- 5. The approach to the study of the labour market from the point of view of specialties, the relevance of which is closely related to the introduction of digital technologies.
- 6. The study of directions and prospects for the development of the labour market through the prism of transformation of the educational system, primarily higher education.



**Figure 1.** Aspects of human potential in the concept of labour market research.



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The analysis has showed that there is no consensus on the degree of significance of certain features of the labour market dynamics in the digital economy in scientific research. By virtue of this, it can be argued that it is advisable to formulate a conceptual approach that makes it possible to take into account all the positions noted above. We propose a concept based on the human potential in aspects of its development and implementation. The study of the dynamics of the labour market is carried out by assessing the status and prospects of changing aspects. Moreover, we consider the human development aspect as basic, educational and funded, dynamic, and the implementation aspect – applied, labour and static, relevant for a given period of time (figure 1).

The development and realization of human potential are interconnected in the process of accumulating knowledge and skills, that is, the common basis for them is the educational system. Given this circumstance, we propose to assess the state of the modern labour market.

The labour market both in Russia and abroad, along with pronounced differences, demonstrates a number of universal patterns [1, 4]. Automation and computerization of production processes lead to the intellectualization of labour, an increase in the share of people employed in the service sector and the development of new employment forms, including, in particular, remote work in cloud platforms. This circumstance, on the one hand, enhances the competitiveness of vulnerable groups of the population, and on the other hand, increases the risks of precarization. So, additional competencies allow a person to expand the scope of activities and, accordingly, increase the level of demand for the employee in the new conditions. At the same time, some professions lose their relevance, which leads to job loss and increases both economic and social tension in society. There is a need to train specialists of a wide profile, which, among others, is connected with the demographic factor.

In particular, according to existing data, there is a decrease in the working-age population, labour market tension is 48 people per 100 vacancies, unemployment is mainly structural in nature, due to the imbalance in the labour market and the vocational education market, while in rural areas and small towns it retains stagnant forms [1]. The informal sector accounts for about 20% of total employment. 30% of HR professionals believe that half of the jobs can be replaced by computers and robots by 2050. There is an opinion that Industry 4.0 will lead to an increase in inequality and erosion of the middle class, taking into account the demographic situation [4, 20].

There is a clear priority for the development and relevance of competencies in the field of information technology. The same global trend is emphasized by labour market research in Japan and China [7], Australia and New Zealand [14-15], Finland [16], and Canada [17].

According to researchers, the situation on the modern Russian labour market indicates the need for the modernization [1, 4]. Experts suggest that by 2030 the workforce will decrease, the average age will increase. Along with this, it is possible to increase labour mobility, stimulate learning and development throughout life [20]. Accordingly, modern labour market modernization programmes should be aimed, first of all, at training citizens in relevant professions. In addition, the implementation of continuing educational programmes, including the remote format, is becoming increasingly important. Particular attention should be paid to the direction of development of programmes related to the field of information and communication technologies.

One of the strategic tasks of the Republic of Abkhazia in the context of the economy digitalization is the development of human potential, which is determined by the role of a man as the main productive force of society, his intellectual and labour abilities, and the possibilities of their implementation [19]. Thus, in 2017, the state budget expenditures on education amounted to 5% of GDP. For comparison, this indicator in the Russian Federation is 4.1%, in the USA - 5.5%, in Iceland - 7.7%. According to the results of a sociological study, respondents rate the level of knowledge obtained in educational institutions of the country as average - 68.08%, low - 14.82%, high - 6.32% [18]. It is advisable to carry out the modernization of the educational system and advanced training of workers in the following areas: basic qualifications, maintaining skills, increasing the competitiveness of workers, integrating into the international educational process with the acquisition and development of language and information competencies.



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#### 3 Results and discussions

A separate study deserves a study of the risks that arise and intensify in the digital economy, and in many ways determine the direction of the labour market. In addition to economic, among which are named precarization, structural and stagnant unemployment, the digital economy in relation to the labour market carries a number of social risks. This is not indicated at all in the objectives of the article. Among them, we single out the intensification of social inequality and the growth of agerelated imbalances among specialists. The work in the field of information technology is currently aimed at young people: the average age of highly qualified specialists in this group is 33.5 years. Over 40% of specialists are under the age of 30 years. In the most difficult situation are groups of workers who are least competitive in the development of digital knowledge and skills. At the same time, there is likely to be lack of a permanent employer, due to which employee should think about his advanced training or professional retraining by himself.

In addition, the question remains to what extent the digital economy creates the conditions for the development of human potential today. This issue is due to the ambiguity of the consequences of automation and robotization of the production processes in the vast majority of life spheres. On the one hand, the possibility of improving the living standards is being technologically improved, and on the other hand, the opportunities for earning necessary to increase the quality of life are being reduced.

## 4 Conclusion

The modernization of the labour market in the digital economy, taking into account world experience, has a number of common features. Among them, the formation of a joint economy, a clear tendency to increase the number of digital platforms, increased information transparency, focus on the acquisition and improvement of competencies in the field of information technology, increased mobility of the labour market as a whole, the emergence of new professions and reduced demand for a number of existing ones, the need for continuous improvement knowledge and skills of workers, changing requirements for the educational system and professional training of specialists.

The directions of research in the field of labour market dynamics in the digital economy are classified according to a number of signs, and it is concluded that none of the signs has primary importance.

A conceptual approach to the study of changes in the labour market based on aspects of the development and realization of human potential has been developed. The aspect of human development is considered as basic and cumulative, dynamic, and the implementation aspect - as applied and relevant for a given period of time.

The development and realization of human potential is determined by the knowledge and skills acquired in the educational process. The educational system is considered as a key link in the successful modernization of the labour market in the context of the digitalization of the economies of Russia and Abkhazia. The goal of a highly qualified specialist is to achieve and maintain a state of working capacity, develop skills, experience and knowledge, regardless of the particular employer. The importance of developing the education system and retraining, advanced training is constantly growing.

The main features of the Russian labour market modernization are: priority of improving the educational system; training of broad specialists with information and communication competencies; development of a system of continuing education.

In the interests of modernizing the labour market of Abkhazia, a comprehensive state programme has been proposed for the successful reform of the education sector. The importance of providing institutional conditions aimed at modernizing the regulatory framework for the effective functioning of the educational system of the state is substantiated. The expediency of enhancing the influence of educational institutions on the value orientation of children and youth in order to form a generation capable and ready to participate in the creation of new social institutions is noted. Among the features of the national labour market modernization there is the integration into the international educational process with the acquisition and development of language and information competencies.



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