

# Perspectives of Development of Personnel Potential in the Economy of Innovative Type (Regional Aspect)

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**Abstract**—The paper considers the prospects for the development of personnel potential in an innovation-type economy using the example of the city of Taganrog in accordance with the data obtained on the basis of the monitoring of the labor market in the city in order to adjust the Program for interaction of labor markets and educational services at the regional level and reduce tensions in the labor market

**Keywords**—human resources, monitoring, labor market, job market, market conditions, innovative economy

## I. INTRODUCTION

The systemic transformation taking place in the modern world is due to various factors and demonstrates qualitative changes in the development of the productive forces in the world economic system. The transition to mainly intensive factors of economic growth lays the foundations for the competitiveness of the economy in the global market, since it involves not only the expansion of national production, but also its improvement, creation of the benefits of the new generation, for which demand is steadily increasing in the light of changing conditions. In such conditions, there is widespread interest in new solutions, approaches to production and sales, which is amply determined by the category of “innovation” [1].

## II. METHODS

The study of new processes taking place in society requires the use of new methods, which include monitoring the state of the studied environment, applied statistical, sociological research based on the survey of subjects directly involved in the process. The results of this analysis allow us to develop mechanisms to improve the level of manageability, harmonization of actions of all stakeholders [2], [3], [4].

## III. RESULTS

Innovative processes form the prerequisites for changing the existing patterns in all aspects of society. The ubiquity of telecommunications technologies, increasing access to information contributes to a change in the quality of life of the entire population, changing structurally the demand in the most diverse market segments [5].

However, the market for an innovative product, in whatever area it is presented, presupposes an approach to its creation, promotion and implementation that is significantly

different from the industrial-type economy. First of all, it is impossible to compete in the field of innovation without having a modern production oriented to high value-added items, formed on the platform of advanced production technologies, as well as an entrepreneurial system interested in the widespread introduction of the principles of the innovation economy into its own business. At the same time, increasing investment in the introduction of innovations, expanding their spectrum and areas of application is obviously possible only if such expenditures cause a significantly larger alternative effect than the established traditional areas and methods of doing business.

The spread of innovation, the widespread introduction of new digital technologies also determines the transformation of the demand for labor with relevant professional qualification characteristics. Here priority is given to the training of specialists with the necessary competences to work in the conditions of the spread of the foundations of the digital economy. Herewith, a distinctive feature of Russian economic system is the significant differentiation of industries and spheres of economic activity in the country regarding the use of new technologies.

It can be said that the preservation of the foundations of a multi-structured economy creates restrictions for economic growth and development, since it translates, including through the system of higher education, traditional ways of organizing economic activity, reinforcing conservatism and setting limits to growth. This is most clearly manifested in the regional context, demonstrates a significant differentiation in the level of production and innovation. The heterogeneity of the markets, the priority of the traditional sectors of the economy in the regions, the conservatism of the system of management of individual areas of life is also reflected in the patterns of labor behavior that determine the processes of self-organization and self-development of human resources organizations [6].

In addition, the creation and promotion of innovations requires relevant, high-quality technical and technological developments, as well as investment opportunities for their implementation. The role of creating and transmitting new knowledge, digitalization of all spheres of society’s life is increasing, aimed at the wider spread of new technologies: from the level of work organization at each workplace and down to the issues of home improvement, personal space, organization of social communication, etc. [7]. Here we see the decisive role of state regulation and support in the

creation of suitable infrastructure in scientific, creative, educational activities, as well as support for relevant investment flows. The Strategy for the Development of the Information Society in the Russian Federation for 2017-2030, approved by Decree of the President of the Russian Federation [8], the program “Digital Economy of the Russian Federation”, developed and implemented by the Government of the Russian Federation [9], states the need to expand state participation in the growth of the innovation component development of the digital environment and key institutions, digital platforms, which should accelerate the widespread digitalization of all aspects of society and allow for a breakthrough in the field of innovative solutions, expanding the demand for an innovative product, and its widespread introduction. In this sense, the country is following global trends, which should create prerequisites for economic growth and development in the direction of an innovation-type economy.

The “Roadmap” of the “Digital Economy of the Russian Federation” program establishes the need to provide resources and harmonize the structure and mechanisms of general, vocational, additional education in the interests of the digital economy by the year 2020, and by 2024 to provide constantly updated human resources and competence of citizens in this area [9]. Apparently, it is an essential part of the educational model of lifelong education [10]. This requires a significant revision and development in the relationship of vocational education systems at all levels and additional education to ensure the development of the necessary basic competencies for digital economy [11].

The need to obtain reliable, timely information on the state of the regional labor market situation is also actualized in order to develop the necessary solutions to create transmitting channels, and required infrastructure institutions to optimize actions aimed at introduction and widening the basics of the digital economy in the country's regions.

At the level of matching the demand and supply of labor in terms of industry, profession, qualification, territory, etc., researches are undertaken by specialized personnel agencies, employment centers, etc. The main purpose of their activity is to determine the current market situation and to collect the information for making management decisions in a particular market segment.

However, it seems that such information is not enough to make decisions on the strategic issues of developing regional policy for training, retraining, and increasing regional human resources in the conditions of the digital economy's extension. One of the most effective mechanisms in such conditions seems to be the municipal monitoring of the labor market, a coordinated study conducted by local authorities and the academic community. Work in this area should be aimed at developing a system of measures to harmonize the needs of the labor market with the educational services market so as to provide the regional economy with the necessary personnel [2], [4].

Some experience in this area has been accumulated in Taganrog, where, within the framework of the tripartite agreement between Taganrog Institute of Management and Economics, the City Administration and the Employment Center, a periodic study of the labor market is carried out, taking into account the needs of enterprises and organizations

of the city for qualified labor resources. The aim of the work is the implementation of adjustments to the Program of interaction of labor markets and educational services at the regional level to reduce tensions in the labor market. The enterprises of the city are surveyed according to the questionnaires developed and agreed by the research participants. Such research has been going on since 2010, and its results are the subject of extensive discussion at all levels of city life [12].

The survey includes a number of questions that reveal information about the staffing of workers in organizations and the prospects for its change, taking into account the changing market conditions, education, qualifications, career opportunities and development, skills development and the need for retraining, assessing the planned staffing needs in the near future and so on. Moreover, questions may somewhat change and expand to meet the requirements of the time, but the innate approach aimed at identifying trends and coordinating the activities of the real and educational sectors is fundamental, which makes it possible to obtain comparable characteristics and consider the conclusions sufficiently substantiated [13].

One of the identified trends deserves special attention and is associated with changes in demand for workers with higher education. Thus, according to the monitoring of the labor market in the city of Taganrog, in the periods from 2010 to 2018, the largest share of jobs created was associated with industrial work – blue collar jobs [14]. This is due to the peculiarity of the city, as a developed industrial center, which, however, due to objective factors, is in a rather difficult economic situation.

The deterioration of the conjuncture was influenced by problems of geopolitical nature, the rupture of the existing systems of production and infrastructure cooperation with enterprises in Ukraine, a decrease in cargo turnover, due to the border position of the city, etc. In the studied enterprises, the number of employed in industrial work is about 65% of the total number of personnel.

In the period under review, there were some changes in the increase in the need for specialists.

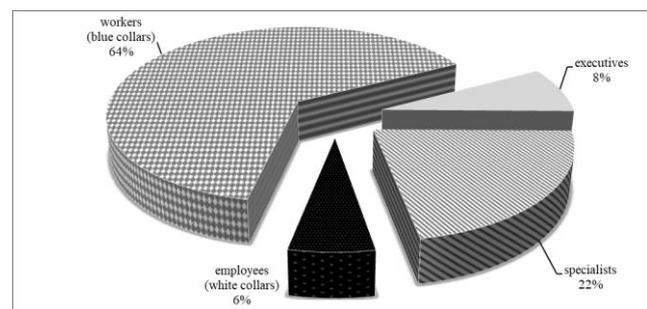


Fig. 1. Structure of personnel on the enterprises of Taganrog

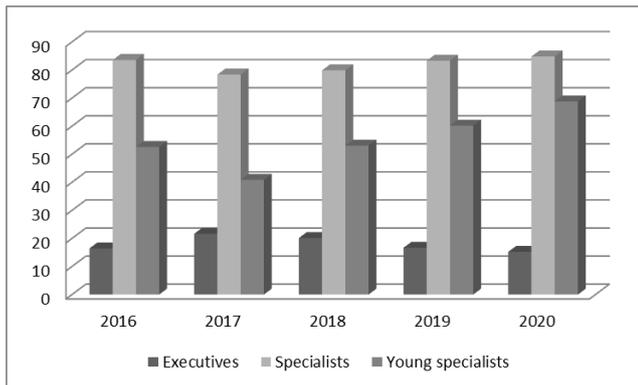


Fig. 2. Projected need for higher professional education personnel for the period 2016-2020 according to the monitoring data of 2015 (as a percentage of the total)

Which was more reflected in 2015 compared to 2010, but was almost leveled by 2018 and did not make significant adjustments to the structure of work force.

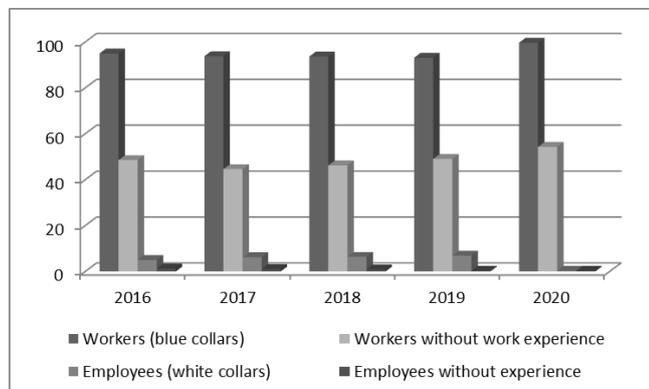


Fig. 3. Projected need for professional education personnel for the period 2016-2020 according to the monitoring data of 2015 (as a percentage of the total)

A study of the level of education at the enterprises of the city of Taganrog showed that in 2015 compared to 2010, the level of demand for workers with higher education increased. The data have a positive trend in all categories, while in 2015 the number of workers with higher education reached a figure of 14% compared to 7% in 2010 of their total number. Preliminary, according to the results of the 2018 study, this point tends to increase to 16-17%. The growth in the number of workers with higher education among workers in the labor market may indicate an increase in the demand for working professions. And also the growth of the need for personnel with potential for further training and self-development, inherent in the system of higher education [12]. However, there is another view, which is determined by the decrease in the employment potential of people with a specialized higher education in the profession indicated in the diploma [15]. Such an inconsistency in the demand for specialists leads, on the one hand, to a shortage of labor, and on the other, to an increase in structural unemployment and the need to expand the costs of retraining and employment.

#### IV. CONCLUSION

The uniqueness of our research lies in the identification of the peculiarities of the development of the labor market using the example of a statistically medium city, characterized by its multi-facet economy. In the 1960s- late

1980s, Taganrog was frequently used as the research material for sociological studies, however, in the 21<sup>st</sup> century, our research is the pioneering one. Coordinating the actions of all stakeholders in this field at the regional level, creating an appropriate infrastructure for making and executing decisions to regulate the interaction of the real economy and the educational services market, including the system of additional professional education, is one of the possible ways of providing the digital economy with the necessary human resources, its quality conversion to meet the requirements of the time. The research results may be used to develop the economy's policy at the labor market in other regions of Russia, as one third of the Russian population are residents of cities such as Taganrog.

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