# The demand for the quality of human resources in the context of changing generational groups

**Victoria A. Vinichenko** (ORCID 0000-0002-8947-2842)<sup>1</sup>, **Yulija A. Masalova** (ORCID 0000-0001-5298-5743)<sup>1(1)</sup>

**Abstract**. The purpose of the study: to substantiate the factors and constraints that determine the request for human resource characteristics by employers. Data analyses, generalization, synthesis, method of age shifting were used as methods of research. A number of prerequisites that change the duration of the period of labor activity are analyzed: reform of the education system and the pension system of the Russian Federation; socio-economic transformations; sanctions restrictions; specificity of generations, etc. The considered prerequisites determine the presence of factors influencing the peculiarities of the processes in human resource management of the organization. It is hypothesized that internal factors are controllable and have a greater influence on the choice of human resource policy in the context of digital transformation. The professional and qualification structure of generational groups is presented in the nexus of generational shifts in the labor market. The results of the study suggest that sanctions will have a negative impact on the employment conditions of workers. There are gaps between the professional training of specialists and the demands of employers, who create alternative forms of training to meet their needs. The novelty of the study lies in the analysis of the current situation in the Russian labor market and the conclusions about the need to provide new formats of interaction between universities and business.

**Keywords:** Quality of human resources · Theory of generations · Generational group · Employer · Human resources.

#### 1. Introduction

For the last 20 years vocational education in Russia has been focused on the formation of competencies required by companies. Universities identify employers' demand for professional and supraprofessional skills; however, the relationship between universities and business is quite complicated and not as fast as it is in developed countries (Usmanov et al., 2021). The role of universities could be more significant, related not only to the training, creation and dissemination of new knowledge, but also to the provision of services for businesses in research, consulting, digital platforms, etc. (Cosh and Hughes, 2010). Partnerships that increase the return on their resources will form the backbone for universities in competition (Derkachev et al., 2021). According to foreign experts, research universities are important for the knowledge economy (Altbach, 2016), for which innovation is what provides a response to the demands of society (Mayer, 2021). Not only universities are interested in interaction, but also business itself, for which development occurs through the introduction of new developments and the attraction of human resources of appropriate quality.

-

<sup>&</sup>lt;sup>1</sup> Novosibirsk State Technical University, Russia

<sup>&</sup>lt;sup>1</sup> Corresponding author: ymasalova@yandex.ru

The quality of human resources is the degree to which the set of their characteristics meets the requirements formed in the external and internal environment of the system in the process of creating its competitive advantages (Masalova, 2015). Advantages are connected with efficiency of business processes and technological superiority; therefore requirements to quality of human resources permanently change. The environment is becoming increasingly dynamic and unpredictable, associated with reforms in education and the Pension System of the Russian Federation; socio-economic transformations, including digital transformation, sanctions restrictions, pandemic, generational specificity, etc.

It is important to determine how these conditions have influenced the formation of requirements for the quality of human resources. How have digitalization and the pandemic affected the employers' demands? How do sanctions affect employment? What are the preferences of Generation Z?

The article identifies the factors and constraints affecting the formation of employers' requirements for the quality of human resources, and proposes areas of interaction between universities and business in terms of alignment of requirements.

## 2. Materials and Methods

The purpose of the study is to substantiate the factors and constraints that determine the request for human resource characteristics by employers. The objectives of the study are: 1) analysis of prerequisites determining the duration of the period of labor activity; 2) identification of factors affecting human resource management processes; 3) identification of factors forming the employers' request for the quality characteristics of human resources; 4) establishment of limitations that do not allow to form an adequate request for the quality of human resources.

Methods: statistical analysis of data provided by statistical authorities, work sites; method of age shifting to model the structure of generations in the Russian labor market until 2032, synthesis in terms of generalizing factors and constraints to develop recommendations to ensure the interaction between universities and employers to ensure their human resources of the required quality.

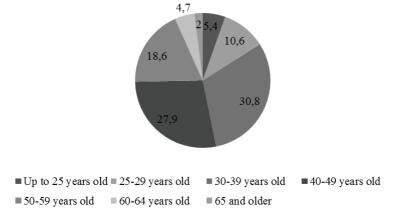
The study analyzes the prerequisites that influenced the duration of labor activity, reveals the factors that create the peculiarities of human resource management. The structure of generational groups is shown, which is presented in the nexus of generational shifts in the labor market. The authors put forward a hypothesis that internal factors are controllable, so they influence the choice of human resource provision policy.

#### 3. Results

The knowledge economy requires human resources of high quality, moreover, the digital transformation, including business processes, requires a change in approaches to quality management. The sanctions policy against Russia promotes the transition from large-scale borrowing of foreign technologies to their development within the country, provided that the mark as a technological frontier is passed (Balatsky, 2021). This requires specialists with special competences.

The mainstay will be universities, which will form supraprofessional competencies and conduct scientific research commissioned by companies. It is important to take into account that the attempt to implement large-scale research and development when the national economy is significantly below the technological frontier entails unjustified costs due to their unrequited demand (Balatsky, 2021). The situation in the Russian economy is ambiguous. The technological frontier, which reflects labor productivity in relation to the technological leader country, is differentiated by industry. In military technologies it is passed, and in the economy as a whole labor productivity lags behind the developed countries. Another problem is the mismatch between the structure of personnel training and the industry specialization of the economy (Blinova et al., 2021). In this regard, companies have problems in attracting human resources that meet their requirements. Recruiters have to face situations when an employee comes from unrelated industry. The risks of burnout are increasing even at a young age. For example, in Great Britain there is a high rate (40%) of surgeons of the highest qualification leaving the profession, especially characteristic of women (Walker, 2020).

In the economy, there are preconditions that change the length of the period of labor activity. For example, the education reform has led to a break between theory and practice, so large corporations are creating corporate universities, "retraining" or retraining their staff. The structure of employees who took professional development courses in 2020 is shown in Figure 1. The most active employees are 30-39 year-old representatives of Generation Y. Their number in 2020 in Russia accounted to 34 million (29.9%), however, by 2032 their number will decrease to 29.5 million and will be 24.4%, which is associated with the "demographic hole".



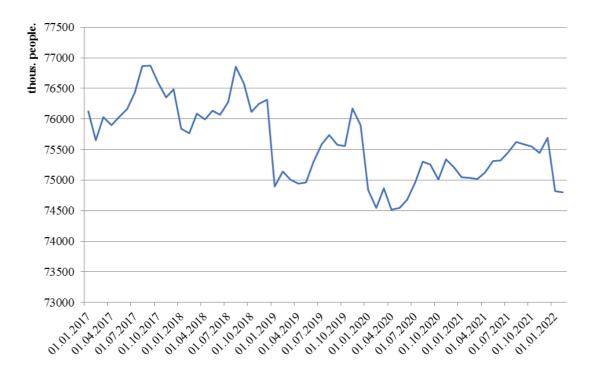
**Fig. 1.** The structure of employees by age groups who completed advanced training courses. Source: compiled by the authors (Workforce, Employment and Unemployment in Russia, 2022).

Millennials are currently the most active part of the workforce, but younger generations with their own values are gradually entering the market. The area of activity where millennials are the most active (39.4) is information and communication. The least (23.3%) of them are employed in the field of education. Most of all, they go to innovative industries with high development dynamics. This conclusion is confirmed by observations of "baby boomers" (65 years and older), they are the most active (4.4%) in educational organizations and the least active (0.4%) – in organizations for the extraction of minerals. Representatives of generation X are significantly represented in the labor market, they are distinguished by their accumulated experience and high professionalism. However, representatives of this cohort alone are not enough to cover the needs of employers. Analysts expect a decline in Russia's population, so employers will be forced to deal with all generations. According to the low version of the forecast, by 2035 the population of Russia (according to Rosstat) will be 135.2 million people. On average – 143.1.

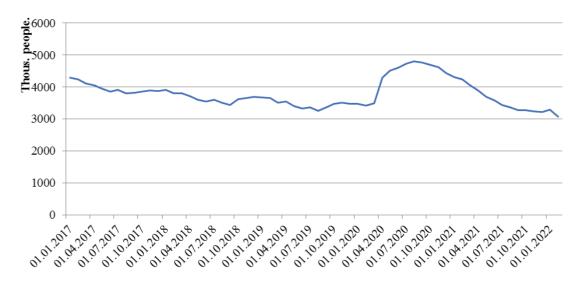
The analysis of the current situation shows the diversity of the personnel composition of companies (some are dominated by X or Y, others are mixed teams), while the proportions in the structure of generations are different. The need for proportions depends on the technology, life cycle stage, and resource capabilities. The situation with the pandemic also played a special role, forcing companies to work remotely or temporarily suspend operations. To a greater extent, epidemiological restrictions have affected young employees (Generation Z). The working-age population in Russia during the period of activity of the Covid-19 virus can be traced by statistical data that have a peak-like character, changing with a maximum amplitude of 2.3 million people (Fig. 2).

The share of the working-age population for the period under review varies in the range from 51 to 53% of the total number, which, as of 01.01.2022, is 146.81 million people (for comparison: in the USA -63.3%; in China -66.5%; in India -53%; in Germany -65%; in Turkey -65.7%). During the pandemic, the labor market lost almost 2 million people, of which 60% were employees under 30 (Melik-Shakhnazarova, 2021).

The dynamics of the number of unemployed before and after the pandemic is shown in Figure 3.



**Fig. 2.** The number of working-age population (15 years and older) in the Russian Federation for the period 2017-2022 Source: compiled by the authors (Workforce, Employment and Unemployment in Russia, 2022).



**Fig. 3.** The number of unemployed in the Russian Federation for the period 2017-2022 Source: compiled by the authors (Workforce, Employment and Unemployment in Russia, 2022).

The most affected sectors were trade, services, transport, industry and construction. The ILO also notes that epidemiological restrictions have a negative impact on young workers.

New business conditions are associated with sanctions. Although non-violent in nature, they cause catastrophic damage to both sides. Over a ten-year period, sanctions have been applied to a large number of countries. All of them directly or indirectly affect the state of the labor market, the quantity

and quality of labor resources (Kelishomi and Nisticò, 2022). Thus, the sanctions imposed on Iran (in 2006 by the UN, in 2011 by the United States, in 2012 by the EU) contributed to a reduction in the number of people employed in the manufacturing industries by almost 20 thousand people.

Several packages of sanctions restrictions have already been applied to Russia, starting in 2014, and their strengthening took place in 2022. Sanctions against Russian companies have affected the world trade market, which accounts for about 70% of all transactions.

Sanctions inadvertently contribute to the criminalization of the labor market of both the state itself and its neighbors located in the immediate vicinity (McCaig and Pavcnik, 2018).

Reducing costs in the face of sanctions restrictions will negatively affect the working conditions of workers against the backdrop of an increase in demand for professions with daily payments. More than 71 thousand requests per month for such vacancies (in the top five most popular requests according to (Wordstat.Yandex, February 2022). Only 6% want to receive wages once a month.

For representatives of generation Z, finances are not dominant when choosing an employer; emotional trust in the employer is more important, therefore, problems related to its formation at the cognitive (rational) and affective (emotional) levels are raised. The company is based on processes based on the theory of social capital. It is important that employees share the same values, which helps to attract and retain Generation Z talent (Leung et al., 2021). Employers are increasingly using labor-saving technologies (Hogan et al., 2022).

#### 4. Discussion

The considered prerequisites determine the presence of factors affecting the peculiarities of the processes in human resource management in terms of their involvement. When selecting candidates, the authors have to focus on the preferences of Generation Z as well as on the capabilities of specialists of pre-retirement age. External factors set the constraints in which employers have to act. They are associated with changes in the structure of the workforce and the emerging opportunities of digital transformation. Studies show that some current jobs and professions will disappear, but new jobs will appear, including high-tech jobs that require new competencies, including digital ones (The Future of Jobs, 2016). It is impossible to influence external factors, but companies create an internal manageable environment, which makes it possible to shape the policy of providing human resources. The overcoming of the limitations in terms of employers' demand for the quality of human resources can be ensured through a close relationship between companies and universities. Targeted recruitment can become a mechanism to dictate the requirements for training, organize internships and employment.

# 5. Conclusion

The employers' demands are influenced by the current situation in the labor market, characterized by an unfavorable political situation, growth of life expectancy, changes in the generational structure, gaps in the training of specialists and requirements at workplaces.

The practical significance of the research consists in the recommendations aimed at overcoming the limitations in the formulation of the employers' demand in terms of requirements for the quality of human resources.

### References

- 1. E. Balatsky, Foresight and STI Govern. **15(3)**, 23-34 (2021). https://doi.org/10.17323/2500-2597.2021.3.23.34
- 2. T.N. Blinova, A.V. Fedotov, A.A. Kovalenko, Univ. Manag.: Pract. Analysis **25(2)**, 13-33 (2021). https://doi.org/10.15826/umpa.2021.02.012
- 3. A. Cosh, A. Hughes, J. Techn. Transfer **35(1)**, 66-91 (2010)
- 4. P.V. Derkachev, K.V. Zinkovsky, I.A. Kravchenko, K.A. Semenova, Univ. Manag.: Pract. and Analysis **25(1)**, 131-141 (2021). https://doi.org/10.15826/umpa.2021.01.010

- 5. C. Hogan, J. Kinsella, B. O'Brien, A. Markey, M. Beecher, J. Dairy Sci. **105(6)**, 5109-5123 (2022). https://doi.org/10.3168/jds.2021-21216
- 6. A.M. Kelishomi, R. Nisticò, World Devel. **151**, 105760 (2022). https://doi.org/10.1016/j.worlddev.2021.105760
- 7. X.Y. Leung, J. Sun, H. Zhang, Y. Ding, J. Hospit. Tourism Manag. **49**, 262-269 (2021). https://doi.org/10.1016/j.jhtm.2021.09.021
- 8. Yu.A. Masalova, Bul. Omsk Univ. Ser.: Econ. 1, 81-85 (2015). Accessed on: October 26, 2022. [Online]. Available: http://journal.omeco.ru/ru/archive/doc/2015 01/81-85.pdf
- 9. G.V. Mayer, Univ. Manag.: Pract. and Analysis **25(2)**, 6-12 (2021). https://doi.org/10.15826/umpa.2021.02.011
- 10. B. McCaig, N. Pavcnik, Amer. Econ. Rev. **108(7)**, 1899-1941 (2018). https://doi.org/10.1257/aer.20141096
- 11. E. Melik-Shakhnazarova, V pandemiyu rossiiskii rynok truda poteryal pochti million molodykh rabotnikov [In the pandemic, the labor market lost almost a million young workers] (2021). Accessed on: October 26, 2022. [Online]. Available: https://www.solidarnost.org/news/v-pandemiyu-rossiyskiy-rynok-truda-poteryal-pochti-million-m olodyh-rabotnikov.html?utm source=yxnews&utm medium=desktop
- 12. Ph.J. Altbach, Globalnye perspektivy vysshego obrazovaniya [Global Perspectives of Higher Education], Y. Kapturevsky (transl.), A. Ryabov (ed.) (Publishing House of the Higher School of Economics, Moscow, 2016)
- 13. The Future of Jobs (2016) Accessed on: October 26, 2022. [Online]. Available: <a href="https://www.weforum.org/reports/the-future-of-jobs">https://www.weforum.org/reports/the-future-of-jobs</a>
- 14. M.R. Usmanov, M.A. Shushkin, M.G. Nazarov, P.A. Krylov, Univ. Manag.: Pract. and Analysis **25(1)**, 83-93 (2021). https://doi.org/10.15826/umpa.2021.01.006
- 15. H. Walker, Surgery (Oxford) **38(3)**, 179-183 (2020). https://doi.org/10.1016/j.mpsur.2020.01.002
- 16. Rabochaya sila, zanyatost i bezrabotitsa v Rossii [Workforce, Employment and Unemployment in Russia] Accessed on: October 26, 2022. [Online]. Available: https://rosstat.gov.ru/folder/210/document/13211