

Institutional measures to support the Education – Labour Market system in regions of Russia

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ORIGINAL ARTICLE

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Abstract. The paper analyses the dynamics of unemployment in the Central Federal District regions in 2018-2022. The main issues are problems at the Russian labour market in 2020-2023, and measures of their state regulation taken at the federal and regional levels. The paper considers the measures of state support for the Russian labour market during the COVID-19 pandemic and economic restrictions, and describes their consequences. Also there is an assessment of the role of secondary vocational education system, implementation of state programs and national projects, i.e. the federal projects «Professional», «Young Professionals». Paper listed the professions and specialties in colleges of the Ivanovo and Yaroslavl regions. On the example of the Ivanovo region we consider the establishment of educational and production centres (clusters). The study considers goals, objectives, stages, directions of development, institutional environment, services of the National Qualifications System of the Russian Federation, the essence of Independent Qualification Assessment in details. The study also highlights the role of the state for a secondary vocational education system development.

Keywords: labour market; staff shortage; secondary vocational education; federal projects «Professionalism», «Young Professionals», «Abilimpics»; System of National Qualifications; Independent Assessment of Qualifications; Central Federal District; Ivanovo region; Yaroslavl region

JEL codes: J11, J12, J13, R23

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Introduction

Currently, researchers have an important methodological problem. It related to the search for effective methods of managing the development of the labour market in the short, medium and long term, strengthening the education and training system in terms of the labour market needs. This problem is connected with the development of new tools for state regulation of the labour market and increasing the efficiency of using budget funds.

The main issues are problems at the Russian labour market in 2020-2023, and measures of their state regulation taken at the federal and regional levels.

According to modern researches, over the past 25 years, the dynamics of the main Russian labour market indicators has become cyclical. The modern type of employment in our country is associated with the globalization of the economy, the post-industrial stage of economic development, and the transition to the market [12, p. 268]. Government measures to support and develop the labour market play an important role in regulating its fluctuations. Recently, in the context of the pandemic, additional economic sanctions have been used, including new measures to deal with the labour market problems. The institutional environment of the regions plays an important role. For example, E. Patrusheva, D. Solovyova, and K. Podgornova consider the important role of regional development institutions in the promotion of investment projects, in particular – the Regional Development Corporation; its effective activities are based on the use of regional investment

standards [9].

The new problems appeared at Russian labour market during the COVID-19 pandemic [4]. Indeed, I. Antonova and I. Sartakov consider advantages and disadvantages for economic and employment in terms of the pandemic consequences [2]. A. Babushkina, A. Bulanova, and M. Gruzdeva study the non-standard measures for making decisions to overcome a new type of crisis. Moreover, they use a qualitatively new approach to the implementation of anti-crisis measures, including in the labour market [3, p. 105]. G. Rodina based her work at Arthur Oaken's approach. However, examining the statistics of employment and unemployment, the sectoral economy of the Yaroslavl region, she highlights the high role of state support measures during the COVID-19 period, and destruction of the relationship between the unemployment rate and GDP/GRP [10, p. 72].

At a meeting on the state of the labour market in Russia (May 2023), Russian President Vladimir Putin noted: "the coronavirus epidemic and related restrictions ... have negatively affected the economies of all countries of the world, without exception: demand has fallen, business activity has decreased, many collaborations and investment plans failed"¹. Excluding the seasonal factor, the industries with the highest number of redundancies during the pandemic were non-food retailing, catering and hospitality. From the very beginning of the epidemic, preserving jobs and the incomes of Russian families have been stated as the most important priorities in the measures of state regulation of the Russian national economy. During the pandemic, as unemployment increased, the government imposed a number of measures on businesses in the most affected sectors of the economy to keep companies operating and their employees employed:

- preferential loans (at 2% per annum with government subsidies);
- interest-free loans and grant presidential support for salaries and other urgent needs, etc.;
- reducing the tax burden, providing a deferral for all taxes except VAT for the most affected small and medium-sized businesses;
- 2-fold reduction in insurance premiums for small and medium-sized businesses in the amount of wages exceeding the minimum wage (from 30 to 15%);
- direct subsidies for the payment of salaries in small and medium-sized enterprises (in the amount of one minimum wage per employee);
- extending the payment of unemployment benefits to citizens lost the jobs previously;
- increasing the availability of other social support measures for the unemployed, when the assessment of family needs did not take into account the previous earnings of citizens lost the jobs;
- for families where one or both parents are temporarily unemployed, an extra payment of 3 000 RUB per month for each minor child should be established in addition to unemployment allowances;
- 2-fold increase in the minimum amount of childcare allowance for non-working parents;
- Simplifying the procedure for processing federal child benefits for citizens who are unemployed;
- increasing the amount of unemployment allowance to 12 130 RUB with the possibility to apply it remotely, through the portal "Work in Russia", etc.².

Indeed, portal "Work in Russia" provides online monitoring of the labour market. The regulatory framework for remote, platform employment, and digitalization of personnel records management has been developed.

The economic papers of 2022-2023 explore the impact of economic sanctions on the Russian labour market. Scientists are investigating the parameters and factors of labour market transformation during the numerous sanctions.

By V. Bylkov, despite unprecedented sanctions against Russia, "the parameters of domestic labour market development have relative stability." Moreover, the author highlights the following risks as the prerequisites for economy destabilization [7]:

- departure of foreign companies (direct consequences: decrease in demand capacity by sector, delayed:

¹ Vladimir Putin held a videoconference meeting on the state of the labour market. Available at: <http://www.kremlin.ru/catalog/persons/503/events/63419> (Accessed 18.11.2023)

² Vladimir Putin held a videoconference meeting on the state of the labour market. Available at: <http://www.kremlin.ru/catalog/persons/503/events/63419> (Accessed 18.11.2023)

finalizing business processes);

- suspension of enterprises due to a shortage of components, debugging of logistics chains;
- sectoral decrease in production volumes, decrease in business activity.

From 2022 the Russian economy has unprecedented staff shortage. St. Petersburg International Economic Forum 2022 involved a panel discussion on "How to provide the Russian economy with qualified personnel?". The "qualification pit" was noted. It is a discrepancy between the skills and competencies of employees to business requirements.

The participants of expanded meeting of the Presidium of the State Council on the issue "On the development of the labour market in the Russian Federation", Veliky Novgorod, Russia, September 21, 2023 noted low unemployment and a shortage of labour resources. The implementation of investment projects in a number of regions of Siberia, the Far East, and the North Caucasus Federal District was noted. It causes the creation of new jobs, including remote employment; the implementation of a professional development program for women who are on maternity leave; support for veterans of a special military operation, including advanced training; job retraining; employment; running own business, etc. There was named a problem of regions "with low quality of employment, where people formally have jobs, but their salaries and incomes seriously behind the national average". The objective is to annually form a 5-year forecast of personnel needs on the national economy level from 2025-2026 academic year to determine the parameters of personnel training with secondary and higher vocational education³.

However, the problems of labour market effective functioning are relevant primarily for young people. By 2030, according to experts' forecasts there will be 8.3 mln young people in the Russian Federation aged 20-24; in 2035 – 9.7 mln people. It is 2.4 mln people more than at present.

For instance, M. Alpidovskaya and A. Ivannikova show the difference between the number of jobs created and eliminated in Russia from 2017 to 2021 in terms of types of economic activity [1]. P. Semenova, S. Shkiotov, and M. Markin identify the relationship between the population and the dynamics of macroeconomic indicators of the Russian economy development (the relationship between the country's population and migration growth, economic growth rates, labour productivity index, unemployment rate, average wages, poverty level, etc.). They revealed an inverse statistically significant relationship between the population, unemployment rate, labour productivity, etc. [11, p. 122].

An important object of research is the state regulation of the system "education – labour market" T. Shpilkina, A. Kovalev, and N. Filimonova consider the absence of educational and labour balance, weak relationship between demand in the labour market and education, etc. They notice unsatisfied employers demand for professionals and universities graduate specialists [12].

E. Nikolaeva actualizes the problem of universities graduates' employment, difficulties in finding a job in their specialty, due to deindustrialization and low salaries in the economic sectors (services, trade, construction, etc.). Also, the author notes the need to change all institutions related to labour relations, establish new regulatory requirements and laws in terms of the platform economy [8, p. 66, 69].

All above mentioned provides the establishment of state regulation measures in this area, including traditional and new, institutional ones related to a program-oriented approach, project management, etc. aimed at improving the efficiency of the education system on the labour market in terms of the IV industrial revolution.

The system of secondary vocational education (SVE) in our country consists of 3 433 865 students, 86.9% of them studying on a full-time basis. Total number of students in SVE has increased by 391 655 people over the past 3 years. 198,378 people employed in this system – 72.6% of them are teachers, 10.9% are masters of industrial training⁴.

According to the Ministry of Education, today more than 60% of schoolchildren choose SVE. It is

³ Decree of the Government of the Russian Federation dated October 6, 2021 No. 2816-r "On approval of the list of initiatives for the socio-economic development of the Russian Federation until 2030".

⁴ Website of the Ministry of Education of the Russian Federation. The Federal Project "Professionalism". Available at: https://edu.gov.ru/activity/main_activities/additional_vocational_education/ (Accessed 18.11.2023)

currently considered as a key link in solving relevant to Russia socio-economic problems⁵. Currently, new measures of state support for the SVE are being implemented in Russia. They increase the prestige of training areas and specialties, train specialists for the labour market, form conditions for young people self-realization, etc.

Methods

In the study of institutional measures to support and develop the labour market, we used Rosstat data from the state collection "Regions of Russia", data from national projects and state programs, information from the meeting of the State Council of the Russian Federation, and the meeting on labour market problems in May 2022, September 2023. When characterizing the unemployment rate, 18 subjects of the Central Federal District were considered as the object of the study. When analysing the implementation of the federal project "Professional", two regions of the Central Federal District became the object of research: Ivanovo and Yaroslavl regions. The methods of comparative, statistical, tabular, graphical analysis are used.

Results

Our analysis of unemployment based on Rosstat data in 18 subjects of the Central Federal District (CFD) showed the following (Table 1):

– in 2020 (the beginning of the COVID-19 epidemic) the number of unemployed in the Russian Federation increased compared to 2019 – by 1.25 times; in the Central Federal District – by 1.35 times; in the Vladimir region – by 1.35 times; in the Ivanovo region – by 2.49 times; in the Yaroslavl region – by 1.35 times. The maximum increase in unemployment was typical for Moscow – almost 2 times;

– the largest decrease in employment to population ratio in 2022, according to sample surveys of the population (60-70% compared to the level of 2021) was typical for the Vladimir, Ivanovo, and Smolensk regions; the smallest (more than 90%) – for the Bryansk, Voronezh, Kaluga, Moscow, Tver, and Tula regions;

– the total number of unemployed in 2022 amounted to 3.9% of the labour force in Russia; 3% in the Central Federal District, respectively; 2-2.9% in Moscow, Vladimir and Ryazan regions; 3-4% in most subjects of the Central Federal District. The minimum value (2.2%) is in Moscow, the maximum (5%) is in the Yaroslavl region.

According to Rosstat, registered unemployment in the Ivanovo region was 6.3 times higher than total unemployment; in the Yaroslavl region – more than 6.6 time. The need of employers declared to the employment service in the Ivanovo region is almost 4.5 times more than the number of registered unemployed. The vacancies are less than the total number of unemployed. It is 71.5% of the total the overall unemployment rate in the region. There are more vacancies in the Yaroslavl region – 2.8 times compared to the number of registered unemployed. However, they are 2.3 times lower than the total number of unemployed [14, p. 148]⁶.

Table 1 – The total number of unemployed according to sample surveys of the labour force, 2018-2022

Period	2018	2019	2020	2021	2022		
					thousand people	in % by 2021	%, workforce
Russian Federation	3,658,5	3,464,8	4,321,3	3,630,5	2,950,7	81.3	3.9
The Central Federal District	620,2	612,1	828,9	743,8	630,4	84.8	3.0
Belgorod region	32,6	31,9	40,6	34,7	30,6	88.0	3.7
Bryansk region	24,0	22,5	23,3	20,1	18,7	92.7	3.2
Vladimir region	33,8	29,2	39,5	27,5	18,6	67.5	2.6

⁵ S. Kravtsov: more than 60% of ninth graders choose colleges. Available at: <https://ria.ru/20231004/kravtsov-1900368610.html> (Accessed 18.11.2023)

⁶ The main indicators of the socio-economic situation of the subjects of the Russian Federation in 2022. Available at: https://cdnstatic.rg.ru/uploads/attachments/2023/03/28/13p-table_368.pdf (Accessed 18.11.2023)

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 INSTITUTIONAL MEASURES TO SUPPORT THE EDUCATION...

Period	2018	2019	2020	2021	2022		
	thousand people				thousand people	in % by 2021	%, workforce
Voronezh Region	43,3	42,0	50,4	45,3	41,3	91.3	3.5
Ivanovo region	22,1	19,5	27,9	23,7	16,3	68.8	3.1
Kaluga Region	21,4	19,8	25,4	21,6	21,0	97.0	3.9
Kostroma region	14,3	12,6	17,1	13,5	10,3	76.7	3.4
Kursk region	23,0	22,5	27,1	22,7	16,5	72.9	3.0
Lipetsk region	23,0	22,3	25,8	25,3	21,8	86.2	3.7
Moscow region	110,6	114,1	150,3	140,5	129,8	92.4	3.1
Oryol region	18,2	18,5	21,3	16,4	13,6	83.0	4.0
Ryazan region	22,0	21,1	27,6	20,6	15,3	74.2	2.9
Smolensk region	26,2	25,3	25,3	24,2	16,6	68.7	3.5
Tambov region	20,5	19,6	22,8	19,8	16,5	83.1	3.3
Tver region	27,9	26,7	29,0	25,3	23,8	94.1	3.8
Tula region	30,6	29,9	35,1	30,1	28,2	93.7	3.6
Yaroslavl region	36,4	35,0	47,4	39,0	31,9	81.9	5.0
Moscow city	90,1	99,5	193,0	193,5	159,6	82.5	2.2

Source: *Regions of Russia. Socio-economic indicators, 2021*

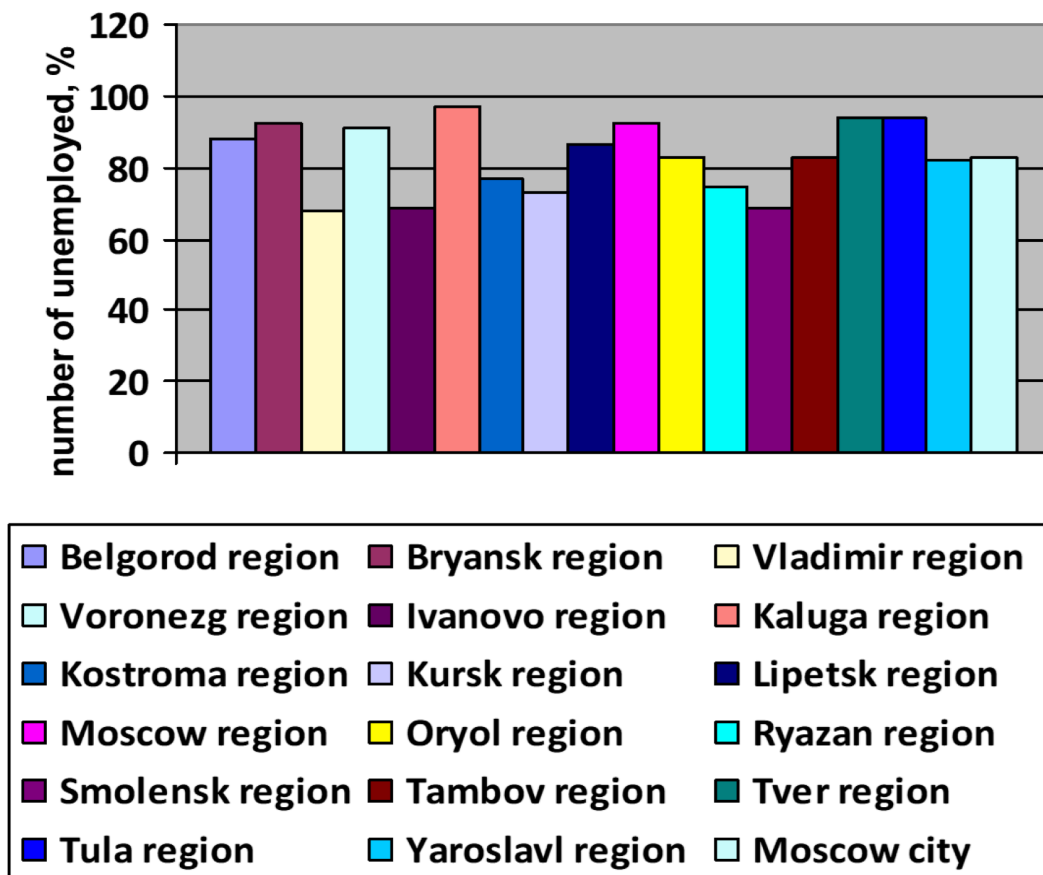


Figure 1. The number of unemployed in the regions of the Central Federal District, 2022 compared to 2021, %
 Source: *Regions of Russia. Socio-economic indicators, 2021*

In recent years, our country has been actively implemented various measures to support the effectiveness of the "secondary vocational education – labour market" system [5; 6].

Primarily, these are government programs promoting the creation of jobs with decent working conditions: "Promotion of Employment", "Economic Development and Innovative Economy", "Scientific and Technological Development of the Russian Federation", "Accessible Environment", etc.

There is an implementation of different national projects, e.g. "Education", "Improving Labour Productivity and Employment support", "Digital Economy", "Small and Medium-sized Entrepreneurship and Support for Individual Entrepreneurial Initiative", etc.

Within the framework of the federal project "Young Professionals" (national project "Education") all colleges are provided with the renewal of infrastructure, new form of certification for students mastered vocational education programs, modernization of vocational education through the introduction of adaptive, practice-oriented, and flexible educational programs, advanced training of teachers (masters) of industrial training and professional retraining of managers in the field of vocational education, etc.

An important part of this project is the establishment of more than 5 000 workshops with modern equipment for teaching the most in-demand jobs, and specialties. It is particularly relevant for small towns and cities.

The federal project "Young Professionals" provides the establishment of 100 centres advanced vocational training (AVTC) by 2024. They are new structures determining the most in-demand competencies of the future, and ensuring close interaction between the educational organization, the employer and the student. Also they will develop educational programs, and perform other functions in terms of vocational education. Moreover, AVTC will actively participate in the training of both young people and citizens of pre-retirement age.

However, the World Skills project was implemented in the regions of Russia until 2021.

The list of initiatives for the socio-economic development of the Russian Federation until 2030 includes projects: "Professionalism", "Russia is an Attractive Country for Study and Work", "Training for IT", "From Start up to IPO", "University Technology Entrepreneurship Platform", "Advanced Engineering Schools", etc⁷.

The federal project "Professionalism", as one of the 42 initiatives of the President of the country for the socio-economic development of Russia until 2030, is considered as the locomotive of a comprehensive reboot of the secondary vocational education system. This project is based on an industry-specific training model, primarily for high-demand professions in each specific region. One of the project key initiatives is the involvement of business into the partner management of educational organizations, the training of specialists in-demand professions in a short time, the maximum orientation to practice [13].

The establishment of educational and production centres (clusters) is one of key initiatives of "Professionalism" project. It is the integration of colleges with workshops in the cluster profile and organizations into the real sector of the economy. In this case, they choose a college, select a supporting employer, form new content and structure of educational programs, a new teaching staff, a new management structure. Also the educational and production complexes are formed⁸.

For instance, in March 2022, there were announced the winners of the competition for grants in the form of subsidies from the federal budget for state support of educational and production centres (clusters) development. The centres based on the integration of vocational education organizations and companies operating in the real sector of the economy within the framework of the federal project "Professionalism" of the Russian Federation state program "Development of education".

More than 100 applications were submitted from 54 subjects of the Russian Federation in 11 different sectors of the national economy: nuclear and mining industries, metallurgy, mechanical engineering, light industry, chemical, pharmaceutical, aviation and shipbuilding, railway transport, agriculture, etc. 70 educational organizations received grants.

⁷ On approval of the list of initiatives for the socio-economic development of the Russian Federation until 2030: Decree of the Government of the Russian Federation on October 6, 2021 No. 2816-r

⁸ Website of the Ministry of Education of the Russian Federation. The Federal Project «Professionalism». Available at: https://edu.gov.ru/activity/main_activities/additional_vocational_education/ (Accessed 18.11.2023)

In our research we consider the participation of the Ivanovo and Yaroslavl regions in the project "Professionalism".

In the Yaroslavl region, the project participants were:

- Yaroslavl Industrial and Economic College named after N.P. Pastukhov, Yaroslavl, Russia (since 2022);
- Emperor Alexander I St. Petersburg State Transport University, Yaroslavl branch, Yaroslavl, Russia (since 2022);
- Yaroslavl College of Automotive Mechanics, Yaroslavl, Russia (since 2023);
- Rybinsk Vocational Pedagogical College, Rybinsk, Russia (since 2023).

Educational organizations applied for recognition of workshops: Zavolzhsky Polytechnic College, Zavolzhye, Russia; Rostov Pedagogical College, Rostov, Russia; Yaroslavl Pedagogical College, Yaroslavl, Russia; Yaroslavl College of Commerce and Economics, Yaroslavl, Russia; Yaroslavl College of Radioelectronics and Telecommunications, Yaroslavl, Russia; Lyubimsky Agrarian Polytechnic College, Lyubim, Russia⁹.

Indeed, it is planned to establish a cluster of "Mechanical engineering" on the basis of Yaroslavl Automotive College, Yaroslavl, Russia; Tutaevsky Polytechnic College, Tutaev, Russia; Rybinsk College of Urban Infrastructure, Rybinsk, Russia; Rybinsk Industrial and Economic College, Rybinsk, Russia, Yaroslavl College of Management and Professional Technologies, Yaroslavl, Russia in 2023. Yaroslavskiy Zavod Dizelnoy Apparatury, Yaroslavl, Russia and PAO Avtodiesel, Yaroslavl, Russia are the partners of the cluster¹⁰.

Moreover, 9 educational organizations implementing SVE programs became winners in the category "Railway transport", including Emperor Alexander I St. Petersburg State Transport University, Yaroslavl branch, Yaroslavl, Russia.

Table 2 – Admissions of students enrolled in "Professionalism" program in Emperor Alexander I St. Petersburg State Transport University, Yaroslavl branch, Yaroslavl, Russia, 2023-2024

Specialization	intramural form of study	
	9 Grades primary general education	
	budget supported	on a commercial basis
Technical Operation of Railway Rolling Stock	25	25
Railroad Construction, Track and Track Maintenance	25	0
Automation and Telemechanics in Transport (railway transport)	25	0
Power supply (by industry)	25	0

Source: Emperor Alexander I St. Petersburg State Transport University, Yaroslavl branch¹¹

Hence in the Yaroslavl region there were established biopharmaceutical and railway scientific and educational clusters in 2022; scientific industrial complex "Mechanical Engineering" was established in 2023.

The Yaroslavl Region developed a program of the federal project "Professionalism" promotion. The target audience of the Program are as follows: 6-11Grades students and their family members; teachers; students of the vocational education system and their family members; vocational education teachers; vocational training masters; curators of vocational education groups.

Recommended participants of the Program:

- regional executive authorities of the Yaroslavl region;
- employment centres; advanced vocational training centres;

⁹ Website of the Institute of Education Development of the Yaroslavl region. The federal project «Professionalism». Available at: <http://www.iro.yar.ru/index.php?id=7134> (Accessed 18.11.2023)

¹⁰ In 2023 the implementation of the Professionalism project will continue in the Yaroslavl Region. Available at: <https://yarsmi.ru/2023/01/11/v-2023-godu-v-yaroslavskoj-oblasti-prodolzhitsya-realizatsiya-proekta-professionalitet/> (Accessed 18.11.2023)

¹¹ The website of Emperor Alexander I St. Petersburg State Transport University, Yaroslavl branch, Yaroslavl, Russia. Available at: https://yarpzugs.ru/?page_id=21797 (Accessed 18.11.2023)

- educational organizations, including vocational ones;
- curators of vocational education groups.
- social educators / educational psychologists, including vocational education groups;
- enterprises of the economic sectors operating in the Yaroslavl region included into the implementation of the Federal Project;

- federal and regional mass media.

Supplementary participants of the Program:

- educational organizations implementing higher education programs;
- centres for children and youth additional education;
- career centres;
- children's activity centres;
- children's health centres / camps of the Yaroslavl region;
- other commercial and non-profit organizations:
- HR agencies of the Yaroslavl region;
- institutes of upbringing, family and childhood¹².

In the Ivanovo region, colleges training qualified personnel for textile, clothing and footwear industry sectors, are as follows:

- College of textile, clothing and footwear industry, Ivanovo, Russia;
- Industrial and Economic College, Ivanovo, Russia;
- Polytechnic College, Kineshma, Russia;
- multidisciplinary college, Teikovo, Russia;
- multidisciplinary college, Vichuga, Russia;
- multidisciplinary college, Rodniki, Russia;
- Technical college, Furmanov, Russia;
- technological college, Yuzha, Russia¹³.

The project provides training at: sewing equipment operator, tailor, knitting and sewing equipment operator, textile technology (by type), design, modelling and technology of sewing products, economics and accounting (by industry), commerce (by industry).

Eight enterprises participate in the "Professionalism" project and invest in the development of vocational education and training, provide a base for the formation of students' practical skills: Tekstilnaya Kompaniya Russkiy Dom, Ivanovo, Russia; Shuiskiye Sitsi, Shuya, Russia; TDL Textile, Ivanovo, Russia; Krasnaya vetka, Ivanovo, Russia; Lidertex, Ivanovo, Russia; Faberlik Fashion Factory, Furmanov, Russia; Biser, Ivanovo, Russia; Athelera, Ivanovo, Russia [5].

For instance, the Ivanovo Industrial and Economic College (IvIEC) implements 25 programs for training middle-level specialists and programs for training qualified workers and employees (21 in Ivanovo and 4 in the Shuisky branch of IvIEC). They are as follows: Computer Systems and Complexes (basic training), Computer Networks (basic training), Programming in Computer Systems (basic training), Applied Computer Science (by industry) (basic training), Network and System Administration, Information Systems and Programming, Mechanical Engineering Technology (basic training), Maintenance and Repair of Motor Vehicles (basic training), Design, Modelling and Technology of Sewing Products (basic training), Car Repair and Maintenance Master, Economics and Accounting (by industry) (advanced training), Commerce (by industry) (basic training), Finance (basic training), Master of Finishing Construction Works, Radio Mechanic, Car mechanic, Welder (manual and partially mechanized welding), Crane Operator, Cook, Confectioner, Plasterer, Construction Carpenter, etc.

Our research concerns with the program "Professionalism" implemented in the Ivanovo Polytechnic College, Ivanovo, Russia (see Table 3).

¹² The program of popularization of the federal project «Professionalism» of the Yaroslavl region. Yaroslavl, 2023. 64 p. Available at: <https://resurs-yar.ru/upload/medialibrary/1d1/twat15n0mm7p0kp3cumjcdlflxx97sbo.pdf> (Accessed 18.11.2023).

¹³ The list of educational and production centres (clusters) participating in the Federal project «Professionalism» in 2023 Available at: <https://docs.edu.gov.ru/document/d86fca6aeaaa6023ea81ca7677f432db/> (Accessed 18.11.2023)

Table 3 – Admissions of students enrolled in "Professionalism" program at the Ivanovo Polytechnic College, Ivanovo, Russia, 2023-2024

Future profession	Basic education	Form of study / Duration of study	The number of budget places, 2023-2024	The number of contract places, 2023-2024
Sewing machine operator	11 Grades	intramural form of study 1 0 months.	20	25
A design technologist with extra skills in fashion design	9 Grades	intramural form of study 2 years 10 months.	25	-
Technologist, textile quality controller, textile equipment operator	9 Grades	intramural form of study 2 years 10 months.	20	-
Purchasing agent, manager, merchandiser, seller, entrepreneur	9 Grades	intramural form of study 2 years 7 months.	-	-
Accountant, tax specialist, cashier, cost estimator, tax inspector	9 Grades	intramural form of study 2 years 10 months.		20
Designer	9 Grades	intramural form of study 2 years 9 months.		20

Source: Ivanovo Polytechnic University¹⁴

The Ministry of Education of the Russian Federation ensures accessibility of vocational education for the people with disabilities. Currently, the Federal project "Professionalism" includes the Abilimpix championships. In May 2023 in Furmanov, Russia on the basis of 6 educational organizations of the Ivanovo region was held the VII regional Abilimpix championship of the presidential platform "Russia – the Land of Opportunities" in 14 competencies in Ivanovo, Kineshma, Kohma, Shuya. However, Ivanovo Industrial and Economic College (IvIEC) was the main competition location. 24 educational institutions of the Ivanovo region took part at the championship¹⁵.

The most important factor in the growth of labour productivity and wages is the increase in the level of employees' qualification.

In the Russian Federation has adopted a Strategy for the Development of the National Qualifications System up to 2030. It defines the goals, priorities, directions, objectives of the national state policy for the formation and strengthening of the human resources, implementation mechanisms, stages, expected results, etc.

The National Qualifications System of the Russian Federation (NQS) is a complex of interrelated regulatory legal and methodological documents, state and public institutions and measures ensuring the improvement of labour resources quality, labour processes optimization, interaction between the vocational

¹⁴ The website of Emperor Alexander I St. Petersburg State Transport University, Yaroslavl branch, Yaroslavl, Russia. Available at: https://yarpzugs.ru/?page_id=21797 (Accessed 18.11.2023)

¹⁵ Department of Education of the Ivanovo region. The press centre. Available at: <https://iv-edu.ru/info/news/3241/> (Accessed: 09/28/2023)

education and manufacturing to improve the quality of employee training and their competitiveness in the national and international labour markets. The purpose of NQS development of the Russian Federation is the formation of a modern flexible mechanism for staffing solutions to priority tasks of scientific, technological, and socio-economic development¹⁶.

The stages of NQS development of the Russian Federation are presented in Table 4.

Table 4 – Stages of National Qualifications System development in the Russian Federation

Period	Adopted normative legal acts	Changes and innovations introduced
2012	Decree of the President of the Russian Federation on May 07, 2012 No. 597 "On measures to implement the state social policy"	The basis of the modern national qualifications system of the Russian Federation is defined
2012	Federal Law "On Amendments to the Labour Code of the Russian Federation and Article 1 of the Federal Law "On Technical Regulation" on 03.12.2012 N 236-FZ	Article 195.1 was introduced into The Labour Code. It enshrines the concepts of "professional standard" and "qualification"
2012	Federal Law on December 29, 2012 No. 273-FZ "On Education in the Russian Federation"	The legal basis of national qualifications system application for vocational education has been established: the development of federal state educational standards based on the requirements of professional standards, professional and public accreditation of professional educational programs for compliance with professional standards, etc.
2014	Decree of the President of the Russian Federation on April 16, 2014 No. 249 "On the National Council for Professional Qualifications at the President of the Russian Federation"	The National Council for Professional Qualifications at the President of the Russian Federation has been established
2016	Federal Law on July 03, 2016 No. 238-FZ "On independent assessment of qualifications"; Resolution of the Government of the Russian Federation on November 16, 2016 No. 1204 "On approval of the Rules for conducting an independent qualification assessment by the Qualifications Assessment centre in the form of a professional exam"	Regulatory framework for independent assessment of qualifications has been developed

Source: composed by the authors according to "The strategy for the development of the national qualifications system of the Russian Federation for the period up to 2030"¹⁷

A regulatory framework for the independent assessment of qualifications is being developed. "An independent qualification assessment (IQS) is a procedure for confirming the compliance of applicant's

¹⁶ The strategy for the development of the national qualifications system of the Russian Federation for the period up to 2030 (approved by the National Council for Professional Qualifications under the President of the Russian Federation (protocol of March 12, 2021. N 51). Available at: <https://www.garant.ru/products/ipo/prime/doc/400621537/> (Accessed 26.09.2023)

¹⁷ The strategy for the development of the national qualifications system of the Russian Federation for the period up to 2030 (approved

qualifications with the provisions of professional standards or other qualification requirements. IQS is conducted by authorized qualification assessment centres; the exam itself includes of theoretical and practical parts. Successful completion of IQS allows the applicants to confirm their qualifications regardless of the method of obtaining it, expand employment opportunities, and obtain admission to certain types of work".

Therefore, institutional environment in terms of IQS is actively developing. The main subjects involved in IQS activities in the Russian Federation are as follows:

- The National Council for Professional Qualifications at the President of the Russian Federation. It allows representatives of ministries and departments, business associations, trade unions, and leading expert organizations to cooperate.

- The National Agency for the Development of Qualifications (services for IQS participants are available on its website).

- Establishment of professional qualifications councils on the basis of employers' associations in accordance with industrial and professional characteristics. Their functions: e labour market monitoring, development and updating of professional standards, independent assessment of qualifications, examination of educational standards and programs.

- The Russian Tripartite Commission for the Regulation of Social and Labour Relations, employers' associations, federal sectoral regulators – adopted separate decisions to expand the use of professional standards and independent qualification assessment.

- coordinating authorities and regional methodological centres are available in 45 subjects of the Russian Federation in all federal districts (they are determined by the heads of regions for development of the national qualifications system infrastructure).

Currently, more than 1 300 professional standards and more than 2 300 new qualifications are introduced; there are operating 40 industry councils on professional qualifications. The tools and mechanisms of the national qualifications system have become widespread in many sectors of the Russian economy (banking and financial, physical culture and sports, elevator industry and vertical transport, housing and communal services, electric power, construction, folk crafts, textile industry, etc.)¹⁸.

The NQS development trends are presented in Table 5.

Table 5 – Trends of National Qualifications System development in the Russian Federation

Challenges and problems in qualifications development	Trends of NQS development
- introduction of modern technologies, emergence of new industries, professions and jobs are not provided with the necessary number of qualified personnel;	Ensuring the availability of high-demand qualifications for citizens and employers, including those related to the emergence of breakthrough technologies, professions of the future.
- mechanism for updating the nomenclature and content of professions and qualifications does not correspond to the needs of the economy in personnel;	Integration of institutions aimed at obtaining and recognizing qualifications into the unified national qualifications system of the Russian Federation.
- main program mechanisms of national socio-economic development, implemented by national, federal, regional and departmental projects, state programs, etc. are not provided for the necessary staffing tasks decision;	Updating procedures and requirements for admission to professional activities associated with increased threats of harm to the life and health of citizens and (or) significant damage to organizations and the environment.

by the National Council for Professional Qualifications under the President of the Russian Federation (protocol of March 12, 2021, N 51). Available at: <https://www.garant.ru/products/ipo/prime/doc/400621537/> (Accessed 26.09.2023)

¹⁸ Interactive portal of the Ivanovo Region Committee on Labour, Employment Promotion and Labor Migration. On the possibilities of using the mechanisms of the national qualifications system. Available at: <https://ivzan.ru/News/Detail/?id=dae25621-4c97-427e-8347-64d90fc34a32> (Accessed 18.11.2023)

Challenges and problems in qualifications development	Trends of NQS development
- digitalization processes of labour and vocational education are not synchronized;	Ensuring timely response of the personnel training system to changes in labour market requirements.
- accelerated digitalization of economic and social life has exacerbated the demand for employees digital competencies;	Creating conditions for international comparability of qualifications and improving mechanisms for the recognition of Russian qualifications abroad and foreign qualifications in the Russian Federation.
- in the context of globalization, there is a unification of requirements for the skills and qualifications of personnel on an international scale;	Formation of mechanisms to encourage citizens and employers to master and use modern qualifications.
- the participation of employers in assessing the results of student training in secondary vocational education institutions is often formal; there is no possibility of assigning qualifications to students of higher education institutions based on the results of mastering individual modules of the educational program;	
- confirmation by employees of qualifications obtained informally is not regulated and associated with high costs for applicants; etc.	

Source: composed by the authors according to "The strategy for the development of the national qualifications system of the Russian Federation for the period up to 2030"¹⁹

Currently, the tasks are to improve the regulatory legal regulation of the application of professional standards in the development and implementation of educational programs aimed at obtaining qualifications; determining the powers of the regions for its development; the use by employers of tools of the national qualifications system in the field of personnel management (e.g. in the organization of the employee remuneration system); the development and introduction of legal norms ensuring recognition qualifications in attracting qualified labour, international comparability of qualifications and improvement of mechanisms for recognizing Russian qualifications abroad and foreign qualifications in the Russian Federation, etc.

The main tasks of the state for the effective functioning of the NQS are as follows:

- establishment of various channels for obtaining in-demand qualifications and ensuring their accessibility for citizens and employers;
- development of a personnel training system responding to changes in the labour market;
- support (legal, organizational, informational, financial, etc.) for employers and employees whose economic interests are primarily related to the availability of in-demand qualifications, related to the emergence of new technologies, STEM professions [5; 6]. Therefore, it is relevant to develop incentive mechanisms for both citizens and employers to master and use modern qualifications;
- monitoring and forecasting the economy needs for qualification (by regions, municipalities, industries, and spheres, taking into account the graduation of specialists in institutions of secondary and higher vocational education), including STEM professions, and using modern digital technologies, etc.

In 2023 the final of the High-Tech Championship was held in Veliky Novgorod, Russia. The championship's competencies are as follows: Geospatial Digital engineering, Neural Networks, Flying

¹⁹ The strategy for the development of the national qualifications system of the Russian Federation for the period up to 2030 (approved by the National Council for Professional Qualifications under the President of the Russian Federation (protocol of March 12, 2021. N 51). Available at: <https://www.garant.ru/products/ipo/prime/doc/400621537/> (Accessed 26.09.2023)

Robotics, Bioprosthesis, Organization and Management of ESG projects, Technology for Cities and Territories Development, etc.²⁰.

In the regions of Russia, engineering classes are already being created at the school level (a combination of "school – university – enterprise"), agroclasses (a combination of "school – college, university – enterprise"). For instance, the agroclass project started in the Ivanovo region in 2022 and was continued in 2023 for students 5-10 Grades in Kineshensky, Shuisky, Ivanovsky, Teikovskiy districts (Ivanovo region) and school No. 42, Ivanovo, Russia.

The system of national ratings of educational organizations is being developed. It takes into account the employment of the graduates.

Quantoriums are being established in the regions. In Ivanovo, in 2018, on the basis of the Ivanovo Regional Centres enter for the Development of Additional Education for Children, Regional centres for the identification and support of gifted children "Solaris" was established. On its basis in 2023 were implemented the following projects "Bilet v budushee" (Ticket to the Future), "Bolshie vizovi" (Big Challenges), "Grani" (Edges), "Kazhdiy den – tvoy" (Every day – yours), etc. Moreover, participation in the project "Vrachi budushego" (Doctors of the Future) allows free of charge participants accommodation in the modern campus²¹.

Indeed, investment projects of state corporations and private companies, urban development projects aimed at preserving and creating jobs, and staff training play an important role along with the programs implemented in the VE system. A lot of vacancies in the Ivanovo region are being created within the territories of advanced socio-economic development (TASED) in Navoloki, Yuzha, the special economic zone "Ivanovo".

Conclusion

In conditions of labour shortage in the Russian economy, it is important to develop effective measures of state support for the Education – Labour Market system, to reduce the imbalance between supply and demand in terms of quantitative and qualitative characteristics. The Russian Federation currently uses both traditional measures to support the labour market and new institutional measures. Most of them are aimed at developing the vocational education system, both in the medium and long term. There are following governmental initiatives at the federal level: 42 initiatives of the President of the country, state programs, national projects, federal projects "Abilimpics", "Professional", "Young Professionals", the National Qualifications System of the Russian Federation and Independent assessment of qualifications, high-tech championships, etc. There are following governmental initiatives at the regional level: support and development centres for gifted children, quantoriums, engineering classes, agroclasses, and establishment of educational and production centres (clusters) taking into account the needs of the regional labour market.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHORS' CONTRIBUTION

Alla B. Berendeeva – conceptualization, project administration, writing – original draft.

Olga S. Berendeeva – data curation, investigation.

²⁰ *The High-tech Championship. Available at: <https://uchm.pyc> (Accessed 18.11.2023)*

²¹ *The website of the Regional Centre for the identification and support of gifted children «Solaris». Available at: <https://solaris37.ru/news> (Accessed 18.11.2023)*

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