Labor Potential of the Northern Economic Region of Russia and Vocational Education Issues

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Abstract. The modern state of the education system in the Republic of Komi has been analyzed to identify the vocational and qualification structure of manpower in the Northern Economic Region. The evolution of the vocational education system was studied beginning from 1959. It is shown that the education system is developing in line with the catchup pattern, which implies universal na-

ture of higher vocational education. The non-diversified structure of production in the Republic of Komi makes the vocational education system solve two contradicting problems: performance of the 2020 Strategy focused mainly on translating the region to innovative development, on one hand, and overcoming the labor market imbalance on the other. Two educational clusters are evolving in the region today, associated with the forest and oil & gas industries. Ultimately, the personnel training system should be brought in line with the economic structure of the region in need of manpower. Keywords: vocational education, northern regions, the Republic of Komi, production diversification, labor potential of population, population's education level.

The importance of the human factor has grown in all economic and social spheres over the last decades, which requires intensification of researchers' attention to quality and development of the population's labor potential. The Republic of Komi experiences serious problems in terms of the demographic situation and providing national economy sectors with labor resources. After the fall of the Soviet Union, labor resources in the republic shrank due to the specifics of the living environment in the Northern Economic Region. Difficulty adapting to the local climate maintains a high migration turnover and low acclimation. Besides, the republic has a lower level of education than other regions of the North [Fauzer 2013:33–40]. The 2020 Strategy envisages innovative ways of regional development, focusing on modernization of the vocational education system of Komi, so that the republic could cover the needs of the knowledge-based economy for a skilled and hard-working labor force.

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In this paper, we analyze the efficiency of the vocational education system of the Republic of Komi and its opportunities on the innovative path of development. We observe changes in the level of vocational education and in the educational structure of the employed population in Komi from 1959–2010, identifying defects in the regional labor resources caused by the specifics of the education system.

Development of the Vocational Education System in the Republic of Komi

The competitive power of a region is determined by a competent labor force [Yakunin et al., 2008. P. 5–7]. The labor potential of population is characterized by indicators both quantitative (the proportion of employable and gainfully employed in a population) and qualitative (health, physical working capacity, education level, skills).

The Republic of Komi is a northern region with a non-diversified, resource-based economy where most municipalities are single-industry towns. According to census reports, 17.2% of the employed population had acquired a higher education in 2002 as compared to 24.8% in 2010 [Komistat, 2012. P. 144]. The increase in the level of education is explained by the transition to a self-sufficient workforce supply in the 1990s, i. e. to training of specialists for the local economy by the regional vocational education system. This is proved by the analysis of the vocational education system in the Republic of Komi presented below.

In 1970–1990, Komi witnessed an increase in the number of initial vocational education institutions (from 34 in 1970 to 53 in 1990) and students enrolled in them (from 10,400 to 18,500, respectively). In the 1990s, the number of such institutions in Komi plummeted (from 53 in 1990 to 44 in 2000), while the student population remained almost unchanged (18,500 and 18,200, respectively), which means that initial vocational education institutions were merging.

In the 2000s, the number of initial vocational education institutions continued decreasing (from 44 to 34) to return to the level of 1970 in 2012. Unlike in the 1990s, however, the population of students shrank by almost half (Table 1). It was largely due to the considerable decline in the birth rate between the late 1980s and 1999, the effects of which have not yet dissipated and will linger for years to come. However, the drop in the number of students also indicates the decreased enrolment in vocational education institutions in the 2000s.

In the 1970s-80s, the number of intermediate vocational education institutions in Komi didn't show significant growth as compared to initial vocational education institutions (16 in 1970, 18 in 1980, 19 in 1990). However, the growth continued in the 1990s. Meanwhile, the number of students enrolled in intermediate vocational education institutions experienced a stable decline throughout the three decades (from 18,100 in 1970 to 15,300 in 2000), which was mainly related to demographic processes in the country.

The number of intermediate vocational education institutions in the republic increased essentially in the first half of the 2000s to make

	1970	1980	1990	2000	2005	2010	2012
Number of initial vocational education institutions	34	45	53	44	35	44	34
Number of students enrolled in them, ths.	10.4	18.2	18.5	18.2	17.5	12.3	9.3
Number of intermediate vocational education institutions	16	18	19	21	36	34	31
Number of students enrolled in them, ths.	18.1	17.1	15.9	15.3	16.6	15.1	14.3
Number of higher vocational education institutions	2	3	5	11	27	20	19
Including: public private	2 —	3	5 —	7 5	19 8	14 6	13 6
Number of students enrolled in them, ths.	7.9	12.6	10.6	19.8	35.8	33.8	30.3
Including: in public institutions, ths. in private institutions, ths.	7.9 —	12.6 —	10.6 —	18.1 1.6	30.8 5.0	30.1 3.7	27.6 2.8
Number of graduates from higher vocational education institutions, ths.	0.7	1.7	1.7	2.7	5.2	6.0	5.8
Including: from public institutions, ths. from private institutions, ths.	0.7 —	1.7 —	1.7 —	2.4 207	4.6 631	5.3 784	4.9 838

Table 1. The major indicators of development of the vocationaleducation system in the Republic of Komi

Source: <u>http://komi.gks.ru/wps/wcm/connect/rosstat_ts/komi/ru/publications/official_publications/</u> electronic versions/

36 in 2005. That is, fifteen new technical colleges were founded in Komi in five years, according to the statistics. Yet, the number of students didn't increase sharply. We can suggest that the boom of intermediate vocational education institutions was produced by formal splits. Lately, the number of intermediate vocational education institutions in Komi has been diminishing (from 36 in 2005 to 31 in 2012), and so has the number of students (14,300 in 2012), as an effect of the demographic situation in the republic in the 1990s.

Nowadays, the number of initial and intermediate vocational education institutions is being reduced to optimize the network of educational institutions in the republic. This is done as part of the special program "Modernization of the vocational education system in the Republic of Komi (2012–15) in order to ensure compliance of the regional education system structure with the local market requirements and to provide demand of the regional economy for the specialists to come. The number of higher vocational education institutions in the republic increased from two in 1970 to five in 1990, with the number of students increasing from 7,900 to 10,600. In the 1990s, the number of higher education institutions in Komi doubled again, from five in 1990 to eleven in 2000. The student body also nearly doubled (from 10,600 to 19,800). There was a sharp rise in the number of higher vocational education institutions in the first half of the 2000s (27 universities in 2005). 12 out of 16 new universities were public. The number of students also almost doubled, from 19,800 in 2000 to 35,800 in 2005. Student population in public universities increased 1.7 times, from 18,100 to 30,800, while non-public universities tripled, increasing from 1,600 to 5,000.

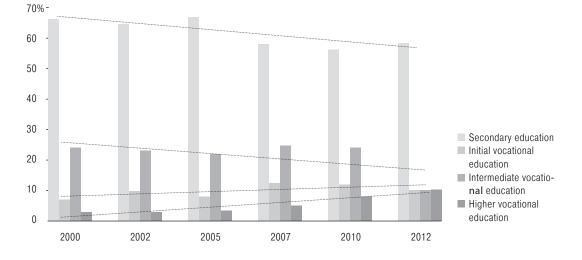
Considerable progress of higher education was provided by changes in the legal basis and in the financing of the Russian education system.

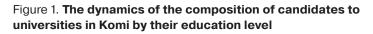
Laws of the Russian Federation No. 3266–1 "On Education" of July 10, 1992 and No. 125 "On Higher and Post-University Vocational Education" of August 22, 1996 granted academic autonomy to higher vocational education institutions, assured diversity of education al institutions and development of the non-public education sector. The number of non-public institutions of higher vocational education in Komi increased in 2000–05, and the number of students enrolled in them doubled (Table 1). The law "On Education" provided for the development of tuition-based education in Russia, which helped improve the accessibility of higher education for young people. By 2010, over 50 percent of students in the republic studied on a full-compensation basis [Komistat, 2013c. P. 28].

From 1995, budgetary financing of higher education was reduced, which increased the inflow of students on the tuition basis. There was also an increase in the number of specializations in higher vocational education. Universities, especially public institutions, began opening branches actively. The increased number of universities, together with the reduced tuition fees, resulted in the growth of the student population, which, in its turn, promoted the establishment of new universities and their branches [Klyachko, 2013. P. 35–42].

The second half of the 2000s saw a decrease in the number of higher education institutions in the Republic of Komi, from 27 in 2005 to 19 in 2012. At the same time, the number of students diminished from 35,800 in 2005 to 30,300 in 2012. Many branches of universities were forced out of the education market.

As the proportion of high school graduates admitted to universities decreased, the number of candidates with initial vocational education doubled in 2001–07 (Table 1). The number of students willing to get a second graduate degree is also growing, as a lot of people in a situation of job-education mismatch need additional skills to build a successful career. This way, they are stimulated to receive a second graduate degree, while low tuition fees don't create insurmountable barriers.





The massification of higher education resulted in the degradation of its quality [Bedenko, 2011. P. 99–104]. Thus, the 2003 Monitoring of the Ministry of Education and Science of the Russian Federation recognized the efficiency of only two universities: Ukhta State Technical University and the Komi Republic Academy of State Service and Administration. Among university branches, the highest performance was demonstrated by the Syktyvkar Forest Institute.¹

At the current stage of economic development, the republic needs workers who are able to promote its innovative development. This situation increases the role of classical public universities, which integrate vocational education, science and regional culture.

Two territorial clusters were created on the basis of the leading Komi universities to engage in innovative education activities, which became a strategic stage of development of the vocational education system. In 2011–12, an oil-and-gas education cluster was created on the basis of Ukhta State Technical University, and a forest education cluster on the basis of Syktyvkar State University. The latter is also going to be used as a basis for a social education cluster.

The level of vocational education of a population is one of the most important indicators of the power and performance of its vocational education system.

Dynamics of the Level of Vocational Education in the Republic of Komi

¹ See the official website of the Ministry of Education and Science of the Russian Federation: <u>http://минобрнауки.pф/новости/2874</u>

	People who had vocational education:						
Year	Postgraduate	higher* incomplete higher		intermediate			
1959		20	9	66			
1970		31	8	88			
1979		56	10	145			
1989		80	11	193			
2002	2	113	22	288			
2010	5	170	33	327			

Table 2. The distribution of population aged 10 and above by their education level according to censuses, per 1,000 people

* Including post-university education received between 1959 and 1989 *Source:* [Komistat 2012:62–63].

A census-based comparison of the education level of the population in Komi reveals a steady increase (Table 2).

The highest rate of increase in the number of people with higher (80.6%) and intermediate (64.8%) vocational education was observed between 1970 and 1979. The lowest rate of increase in the number of specialists with higher vocational education (41.3%, twice as little as the highest rate) was observed in Komi in 1989–2002. Perhaps, it was caused by the massive outflow of specialists to other regions, as well as by the considerably reduced inflow of graduates from Moscow universities and institutions in other regions.

The lowest rate of increase in the number of people with intermediate vocational education was observed in 2002–10 (13.5%, which is 4.8 times lower than the highest rate of increase from 1970 to 1979). There are two reasons for this. First, the number of intermediate vocational education institutions and, hence, relevant experts has been decreasing in the republic since the mid-2000s. Second, recent years have witnessed a transition to continuing education: after graduation from a technical school or college, young people prefer going to other educational institutions instead of getting a job.

Obvious shifts were observed in the educational structure of the republic's population in the last intercensal period, from 2002 to 2010 (Table 3).

A comparison of data obtained in the censuses of 2002 and 2010 shows that the level of education among the republic's population is basically growing. In 2010, there were 181 people with a higher education per 1,000 people aged 15 and above, as compared to 160 in 2002. The number of people with intermediate vocational education was 347 per 1,000 people in 2010, as compared to 272 in 2002. Within the eight years that passed between the two censuses, the

Level of	Overall population		Men		Women		Urban		Rural	
education	2002	2010	2002	2010	2002	2010	2002	2010	2002	2010
Postgraduate	2	5	2	5	2	5	2	6	0	2
Higher	160	181	106	152	134	206	140	209	59	90
Incomplete higher	31	35	22	34	25	36	28	42	10	15
Intermediate	272	347	287	326	340	366	340	363	234	298
Initial	127	83	200	105	127	65	143	73	215	117

Table 3. The distribution of the population of the Republic of Komi by the level of vocational education in 2002 and 2010 (for population aged 15 and above, per 1,000 people)

Source: [Komistat, 2012. P. 63].

number of people with higher and intermediate vocational education per 1,000 people aged 15 and above increased by 96 in the Republic of Komi; consequently, the proportion of people with lower levels of vocational education dropped. Thus, the number of people with initial vocational education decreased from 127 to 83 per 1,000 people. Obviously, the demand for higher education in Komi is consistently growing, while initial vocational education is losing its popularity.

The educational structure of the female population in Komi was improving much faster than that of the male population in 2002–10. In 2002, the proportion of women with higher education already was higher than that of men: 106 men per 1,000 vs. 134 women per 1,000. The gap increased to 54 by 2010. However, despite the traditionally higher level of education among women, they are less likely to use their education in their career to the fullest extent possible. The widening gender gap is apparently largely associated with the overall rise of the formal educational level of the employed population in the republic.

Needless to say, the educational structure of a population depends on the type of settlement. In 2010, the proportion of people with higher and intermediate vocational education was 2.3 and 1.2 times (respectively) higher among urban populations of the republic than among rural populations (per 1,000 people). Conversely, the main body of the population with lower levels of education is concentrated around rural settlements. Such an educational structure of the population may translate the stagnant unemployment in the countryside to economic inactivity [Popova 2012:146–154], as people with lower levels of education are more likely to stay unemployed and less likely to be demanded in the labor market. In addition, the rural concentration of the population with a lower education level is explained

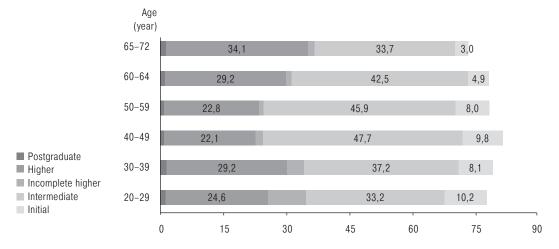


Figure 2. The distribution of the main age cohorts in the Republic of Komi by the level of education in 2010

by the traditional demand for manual labor in the rural labor market, which doesn't require a high level of education.

The educational structure of the population varies a lot across age cohorts (Figure 2).

People with intermediate vocational education prevail in all the age cohorts presented in Figure 2, except for senior citizen (those aged 65–72 years). However, the 20–29-year-old cohort includes a large proportion of people with incomplete higher education, and the overall number of young people under 30 with postgraduate, higher and incomplete higher education is greater than the number of young people with intermediate vocational education (34.4% vs. 33.2%).

People aged between 30 and 39 with postgraduate, higher and incomplete higher vocational education are less numerous in Komi than people with intermediate vocational education (33.9% vs. 37.2%), but their proportion is still tangible, comprising almost one third of the age cohort. Less than one fourth of people aged 40–60 are reported to have a higher education. These age cohorts show the highest concentration of people with intermediate vocational education: 47.7% among people aged 40–49 and 45.9% among those aged 50– 59. This proportion is reduced to 42.5% among people aged 60–64, making a dramatic drop to 33.7% in the 65–72-year-old cohort. The proportion of people with postgraduate, higher and incomplete higher education in the eldest cohort of the gainfully employed population is even higher than among young people under 30 (36.5% vs. 34.4% among those aged 20–29).

Source: [Komistat, 2012: 64-65].

These differences in the level of education across age cohorts reflect the living conditions of different generations. The higher level of education among people under 40 and particularly under 30 can largely be explained by the rise in popularity of getting education as such in the 2000s. At that time, many were craving for a higher education diploma because the labor market had developed a demand for workers with higher levels of education than required for actual jobs, and the population had lowered the demand for physically demanding jobs. At the same time, the obvious predominance of intermediate vocational education diplomas among the population aged 40-60 reflects the educational attitudes of those who were born in the 1950s-60s. During the following two decades, higher education was not considered indispensable, since most jobs were filled by specialists with adequate levels of professional expertise, and intermediate vocational education was in high demand. The large proportion of people with higher education among the eldest cohort of the gainfully employed population can be explained by the higher life expectancy of well-educated people.

The educational structure of labor resources across types of economic activity is described in Tables 4 and 5. The economic activities in the republic with the highest demand for university-educated specialists in 2012 included public administration, education, finance, and real estate services. Agriculture and forestry had the smallest proportion of employees with a higher education (9.0%), which was due to lower wages and the specifics of labor in these industries.

The highest proportion of the employed population with an intermediate vocational education in 2012 was observed in healthcare (45%). Between 2004 and 2012, this industry showed a 5 percentage-point increase in the number of employees with an intermediate vocational education (whereas other industries demonstrated a decrease). Obviously, the demand for specialists with intermediate vocational education dictated by the specifics of labor in healthcare was provided by the developed system of intermediate vocational education.

In 2012, a large proportion of employed population with intermediate vocational education was also observed in such economic sectors as public utility, social, and other services (29%), wholesale and retail trade; repair of automobiles, motorcycles, household goods, and personal appliances; hotels and restaurants (24.2%), which was provided by the active development of services industries in the region.

The steepest decline in the proportion of the employed population with intermediate vocational education in 2004–12 was observed in such sectors as: wholesale and retail trade; repair of automobiles, motorcycles, household goods, and personal appliances; hotels and restaurants (by 18 percent); agriculture, forestry, and hunting Educational Structure of Labor Resources in the Republic of Komi

	Vocational education						
	Postgra Higher	aduate/	Intermediate		Ini	tial	
Type of economic activity	2004 2012		2004	2012	2004	2012	
Total	19.0	24.0	30.0	22.0	22.0	33.0	
Agriculture, hunting, and forestry	8.0	9.0	26.0	12.0	18.0	36.0	
Mining	20.0	21.0	20.0	18.0	25.0	43.0	
Manufacturing; production and distribution of power, gas, and water	6.6	18.5	23.5	12.9	15.6	44.6	
Construction	22.0	18.0	19.0	17.0	28.0	40.0	
Wholesale and retail trade, repair of auto- mobiles, motorcycles, household goods, and personal appliances, hotels and restaurants	6.3	16.8	42.1	24.2	22.6	34.5	
Transport and communications	17.0	17.0	27.0	21.0	27.0	41.0	
Finance, real estate operations, leasing, and services	40.5	34.9	22.3	19.3	18.0	29.3	
Public administration and defense, social insurance	20.0	40.0	30.0	22.0	19.0	23.0	
Education	38.0	37.0	36.0	26.0	13.0	22.0	
Healthcare and social services	11.0	25.0	41.0	45.0	24.0	15.0	
Other public utility, social services, etc.	15.0	19.0	40.0	29.0	9.0	25.0	

Table 4. The distribution of the gainfully employed population byeconomic activities and education levels in 2004 and 2012

Sources: [Komistat 2005:19-20; Komistat 2013a:19-20].

(by 14 percent). At the same time, these industries witnessed an increase in the proportion of the employed population with an initial vocational education: by 18 percent in agriculture, forestry, and hunting; by 12 percent in wholesale and retail trade; and by 29 percent in manufacturing, production and distribution of power, gas, and water.

The increase in the proportion of the employed population with initial vocational education in 2004–12 was common for the whole republic. As we have already mentioned above, the highest proportion of people with an initial vocational education in 2012 was observed in manufacturing—production and distribution of power, gas, and water (44.6%), and also in mining (43%), transport and communications (41%), and construction (40%). The specifics of labor in these industries make initial vocational education the prevailing trend and provide, moreover, for a large proportion of the employed population with no vocational education. The highest proportion of the employed population without vocational education in 2012 was meas-

	Vocational education			
Type of economic activity	Postgraduate / Higher	Intermediate	Initial	
Total	5	-8	11	
Agriculture, hunting, and forestry	1	-14	18	
Mining	1	-2	18	
Manufacturing; production and distribution of power, gas, and water	12	-11	29	
Construction	-4	-2	12	
Wholesale and retail trade; repair of automobiles, motorcycles, household goods, and personal appliances; hotels and restaurants	11	-18	12	
Transport and communications	0	-6	14	
Finance; real estate operations, leasing, and services	-6	-3	11	
Public administration and defense; social insurance	20	-8	4	
Education	-1	-10	9	
Healthcare and social services	14	4	-9	
Other public utility, social services, etc.	8	-11	16	

Table 5. The dynamics of the gainfully employed population by economic activities and education levels in 2004–2012,%

Source: calculated on the basis of Table 4.

ured in agriculture and forestry (44%); manufacturing and delivery of public utility, social, and personal services (27%); construction (26%); wholesale and retail trade; repair of automobiles, motorcycles, household goods, and personal appliances; hotels and restaurants (25%); transport and communications (21%); and mining (18%).

Analysis of the 2004–12 dynamics of the employed population by the level of vocational education in the Republic of Komi demonstrated the highest increase in the proportion of people with higher and postgraduate vocational education in the public administration sector (by 20 percent) (Table 5), followed by healthcare and social services (14 percent). A considerable inflow of specialists with higher education is also observed in manufacturing and distribution of power, water, and gas (12 percent).

Negative rates of increase in the proportion of the employed population with higher and postgraduate vocational education in 2004–12 were observed in finance, real estate operations, leasing and services (– 6 percent), construction (– 4 percent), and education (– 1 percent).

Meanwhile, only healthcare and social services showed a positive rate of increase (4 percent) in the proportion of the employed population with intermediate vocational education in 2004–12. The most significant reduction in the proportion of workers with intermediate vocational education was measured in trade and consumer services (– 18 percent).

Thus, the snowballing of the higher education system essentially improved the educational structure of labor resources, mostly in socially significant sectors (public administration, medicine, energy development), manufacturing, trade, and services. However, the massification of higher education means that vocational education has been developing in line with a "catch-up" pattern (higher education has become universal). An innovative model of development suggests that accelerating the spread of innovations should increase the demand for rare skills [Didenko, 2009. P. 300–345].

The educational structure of the population has naturally been improved through the extension of the array of services in higher vocational education in recent years. Yet, it's not the number of diplomas received that determines the educational potential of labor resources but whether workers have the opportunity to apply the acquired knowledge in practice and how efficient they are in using their skills in the process of public production. Many specialists with a high level of education have to work outside their field of study. Table 6 shows that job-education mismatch in Komi is typical of 55% of leaders at all levels, 34% of top-level specialists, and 44% of specialists with intermediate level of education.

Job-education mismatch affects not only a specific person's quality of work but also the regional economy as a whole, impeding the growth of human capital and slowing down the modernization of social institutions [Zubarevich, 2010. P. 13–14].

However, even graduates poorly demanded in the labor market find ways to apply their knowledge and skills. Many employers have lately preferred hiring candidates with a good level of vocational education, especially to managerial jobs [Klyachko, Krasnova, 2006]. Such specialists deal with complex organizational tasks that require strategic systems thinking better than those with a management education, for example. That is, the regional economy is seeking highly competent specialists.

Summarizing our analysis of the vocational education system of the Republic of Komi, we can represent its evolution throughout the last fifty years in the following way. Up to the 1990s, the republic had been actively developing the system of initial vocational education, which was demanded by the command-and-control management style. The 1990s-2000s saw the trend toward curtailing initial vocational education. Intermediate and higher vocational education continued developing up to the mid-2000s. Since then, cuts to public investments in education and reforms in vocational education have been reducing the number of intermediate and higher vocational education institutions. The adoption of an innovative economy develop-

	Work in their field of study			
	Total	Men	Women	
Total	44.0	46.0	42.0	
Leaders at all levels including heads of organizations, companies, and enterprises	45.0	44.0	46.0	
Top-level specialists	66.0	64.0	66.0	
Medium-level specialists	56.0	35.0	64.0	
Employees responsible for preparation of information, execution of documents, and accounting	31.0	68.0	29.0	
Pink-collar workers, people employed in the housing and utilities sector, trade, and related types of activity	31.0	19.0	34.0	
Skilled laborers in forestry, agricultural, hunting, fish farming, and fishing industries	5.0	9.0	1.0	
Skilled laborers of large and small enterprises in construction, transport, communications, geology and exploration, and artisan craftwork	54.0	56.0	46.0	
Operators of equipment, machines, and installations, fitters	51.0	57.0	23.0	
Unskilled laborers	2.0	2.0	2.0	

Table 6. The job-education match among employed population of the	Э
Republic of Komi	

Source: [Komistat, 2013a. P. 19-20].

ment policy has launched the clusterization of the vocational education system, which is typical of regions with a self-sufficient workforce supply.

The level of education among the republic's population grew many times from 1959 to 2010. The educational structure varies across different socio-demographic categories: men and rural people have lower levels of vocational education than women and urban citizens. As overall in Russia, the industries with the highest demand for specialists with high levels of vocational education in the Republic of Komi include finance, public administration, education and science, real estate and leasing services; the lowest demand is observed in agriculture, forestry, and hunting.

Many workers with higher vocational education have to work outside their fields of study. As a result, the competencies acquired in the process of learning become irrelevant, and labor potential is not realized to the full.

Diversification of production in the Republic of Komi is long overdue, so the vocational education system is facing two contradicting challenges at once: on the one hand, it has to implement the program stipulated in the 2020 Strategy, where the focus is laid upon reorientation of the regional economy to an innovative type of development; on the other hand, it has to solve the labor market imbalance problem.

The innovative model suggests an intensive development of educational space, but expansion is also possible [Didenko, 2013. P. 183–204]. The Republic of Komi has already been developing a common educational space. The crucial goal of clusterization in the education system is to ensure efficient integration between educational institutions and the labor market, according to the pattern "initial vocational education institution-college/technical school-university-enterprise." Two education clusters, forestry and oil & gas, have been created; a social cluster is being designed for socially significant industries. So far, the educational clusters in Komi only connect three stages: initial vocational education institution—college/ technical school—university. No relations with enterprises have yet been established. In the future, development of clusterization should contribute to the best possible match between the specialist training system and the economic structure of the region, which is first of all seeking a regular labor force. This analysis of the educational system of Komi allows for a conclusion that the vocational education reforms that are being undertaken in the republic may promote support for and development of innovative economic trends.

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