
CHALLENGES AND POLICY OF SPATIAL DEVELOPMENT OF POST-SOVIET RUSSIA

Regional Differentiation of the Human Potential in Russia¹

L. A. Migranov^{a, *} and M. S. Toksanbayeva^{a, **}

^a *Institute of Socioeconomic Problems of the Population, Federal Research Sociological Center, Russian Academy of Sciences, Moscow, 117218 Russia*

**e-mail: lmigranova@mail.ru*

***e-mail: matoksan@gmail.com*

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Abstract—The study assessed the readiness of federal subjects for modernization processes in the Russian economy based on the qualitative characteristics of human potential. The relevance of these processes had escalated even before the epidemiological crisis of COVID-19 and modern geopolitical challenges. At present, it continues to increase due to a serious change in the structure of social needs for modernization transformations, and, accordingly, requests for quality human potential. Since this varies significantly across federal subjects, it should also be assessed in the regional context. This article focuses on methods for assessing the quality of human potential by region, including dynamics, which make it possible to perform assessments in a changing socioeconomic environment. At the interregional level, these were done by comparison, using characteristics common to regions, including demography, health, education, and sociocultural behavior. The demographic component is included as a qualitative characteristic of the population's ability to reproduce. For the comparison, the index method was chosen, which involves calculating the composite index for indicators for each characteristic and an integral one for federal subjects. The results of the calculations are applied to rank regions based on the average Russian integral index (at, above, and below the average level); thus, the adequacy of the human potential of federal subjects for modernization was assessed. With a general increase in readiness in the period under review, a high level was detected in only 19 regions, an average level in 23 regions, and a low level in 43 regions. According to the composite indices, the demographic problem remains the most urgent, which is currently expressed in the depopulation that began in 2018.

Keywords: human potential, region, modernization, demography, health, education, sociocultural behavior, composite and integral index

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THEORETICAL AND METHODOLOGICAL APPROACHES TO ASSESSING HUMAN POTENTIAL

The concept of human potential in Russia has firmly entered scientific circulation, along with its synonym human development. Approaches to studying their content are sometimes explained by borrowing foreign achievements during the period of market reforms, when Russia became a member of the United Nations Development Program (UNDP). In the authors' opinion, this is not entirely correct. Domestic science, long before these reforms, was prepared for the creative perception and use of these concepts.

Among the prerequisites, one should name studies of the same problems the analysis of which abroad led

to the category of human potential. This pertains to substantiation of the insufficient characteristics of growth rates for assessing economic and social progress (Anchishkin, 1973), as well as the concept of labor potential developed during the planned economy years, including the system of its qualitative parameters (Maslova, 1987).

A more serious problem should be considered: overcoming the paradigm that considers a person mainly as a production resource. This paradigm, either explicitly or implicitly, dominated the theory of both planned and market economies. An alternative human-developing paradigm puts a person at the center of the reproductive process, in which the possibilities of self-realization expand, the content of labor is enriched, and production itself produces human development (Soboleva, 2006). In domestic research, the resource approach to a person was revised when, based on the generalized achievements of domestic and foreign science, human potential was acknowledged by scientists (unlike practitioners) as the goal

¹ The article was written in 2020 based on the results of research carried out in 2009–2019 (see Glezer, O.B., Shvetsov, A.N., and Kotlyakov, V.M., *Reg. Res. Russ.*, 2023, vol. 13, no. 1, pp. 1–5) and does not reflect the impact on the subject matter considered therein from the latest events stemming from two global crises that erupted suddenly: the COVID-19 pandemic and aggravation of the military–political situation with Ukraine in 2022.

and criterion of social progress, and its research fit the global trajectory (Rimashevskaya, 2009).

A question was further raised as to whether human potential and human development are synonymous. Specialists who prefer the term human development rely on A. Sen's concept of development as the empowerment of a person and interpret it not as well-being, but as the freedom people have due to a particular set of available choices (Chelovecheskoe ..., 2008). Accordingly, the difference between human development and human potential is that the first is not a means (resource) of socioeconomic progress, but its goal. This understanding is reflected in the 2015 Human Development Report, subtitled "Work for Human Development" (Human ..., 2015).

The term human potential is used by specialists who consider it both as a goal and a means (not contradicting the goal) of social progress. This dialectical understanding corresponds to the following definition of human potential: "The accumulated stock of physical and moral health, general cultural and professional competence, creative, entrepreneurial and civic activity accumulated by the population, implemented in various fields of activity, as well as in the level and structure of needs" (Soboleva, 2007, p. 12). Clearly, with a fairly complete set of features, the emphasis is on the realization of human potential, but its area is not limited to labor, which is characteristic of production resources, while human needs go beyond economic needs. Therefore, its study requires interdisciplinary research, which in the future can become organic parts of integral scientific ideas about a person (Martsinkevich and Soboleva, 1995).

In addition, there is a long tradition of uncertainty about these concepts, going back to the UNDP, in the framework of which the integral human development index (HDI) is determined, which is used for inter-country comparisons. The comparative approach is due not only to the UN's mission to identify countries in need of development assistance, but also because absolute estimates (whatever indicators are used) are not easy to interpret. Therefore, comparison is used, which makes it possible for you to determine which countries lead or lag behind others and due to which basic components. The rating approach is also used for intracountry comparisons.

Currently, the basic components of the HDI are reflected through indicators of such human development components as health (life expectancy), education (number of years of education), and material well-being (GDP per capita, and since 2011, GNI per capita). Whereas life expectancy can be considered an indicator of human development in its target understanding, then other indicators—education and material well-being—instead characterize the means of ensuring it. In addition, the inclusion of indicators in the HDI composition as alternatives to the indicators of well-being made it possible to obtain country ranks that differ from the ranks in terms of GDP per capita

and thereby refute the persistent notion that a person's capabilities are mainly determined by income (Chelovecheskoe ..., 2008).

This study considers the qualitative characteristics of human potential within the human development paradigm, abstracting from resource aspects, and compares federal subjects according to their indicators. The regional perspective is important for such a spatially large-scale country as Russia. In territory and population, many federal subjects outrank a large number of sovereign states. Moreover, differentiation of regions in terms of socioeconomic parameters has acquired a scope that sometimes exceeds the differences between individual countries.

The authors have set the task of a comparative interregional analysis of the quality of the human potential of federal subjects in terms of dynamics. First, we proceeded from the fact that the object of analysis should be precisely the population, not its access to certain benefits. Then, the main (basic) components of human potential were determined, based on available developments and regional statistics. Among them the following should be highlighted: the studies of the Institute of Socioeconomic Problems of the Population, Russian Academy of Sciences, where an expanded set of basic components was presented: health, intellectual potential, and sociocultural activity (Rimashevskaya, 2009). Then, the demographic component was included in their composition (Rimashevskaya et al., 2013). Many specialists also include the migration component in their analysis (Tyulicheva, 2007).

Whereas health, intellectual, and partially, sociocultural components are taken into account in most interregional studies of human potential, a more skeptical attitude has developed towards the demographic component, which is estimated by population indicators. Many works consider it a quantitative characteristic and, in this aspect, include it in studies of both labor and human potential. However, in our opinion, the demographic component contains significant qualitative aspects. Thus, humanitarian value is not only the duration of earthly existence, but also the constant renewal of life, which can be interpreted as the right of a person to be born due to the human need for procreation. As a result, reproductive ability is inherent to a person in order to replenish and augment his/her own kind, so there are grounds to attribute this ability as a qualitative characteristic of human potential.

Thus, the following basic components of the human potential of the population are included in the analysis: the demographic component, health, education, and sociocultural behavior.

The basic components of the quality of human potential were operationalized, i.e., conversion to statistics. When selecting them, problems were solved that are well known to specialists in similar subjects. First, it is almost impossible to find one universal sta-

tistical indicator that characterizes a particular component. Therefore, several indicators were used. Second, some statistical problems (regional in particular) limit the choice of suitable indicators.

For the *demographic component*, characterizing the ability of the population to reproduce, the main indicator is natural increase. However, this ability is influenced not only by the processes of natural reproduction (birth and death rates), but also by external and internal migration flows, which affect both the number of inhabitants and their qualitative characteristics. These processes are widespread in Russia. Due to large-scale external migration, Russia is a net importer of human resources, while external flows are many times inferior to movements within regions, which in a number of federal subjects have become the main cause of population decrease. Therefore, the indicator of natural increase/decrease is supplemented by total migration increase/decrease.

The *health component*, just like in the HDI, is estimated using the indicator of life expectancy at birth (LE). A more correct assessment could be yielded by the indicator of healthy life expectancy proposed by experts of the World Health Organization (WHO), with correction of life expectancy for a period of ill health. However, in Russia this is not calculated in official statistics. Therefore, this study also included indicators reflecting health problems: disability and general primary morbidity (the number of newly registered diseases in patients).

Education is included in the *intellectual component*, but due to the lack of statistics, as in other studies, it is reflected only in education indicators and is therefore called *education*. Study of the quality of human potential does not use the indicator of availability of education (as in the HDI), but more adequate indicators of the proportion of the population with a particular education level. Many experts prefer to calculate them for people 15 years and older with higher and secondary vocational education, since schooling (at least at the basic general level) in Russia has long been compulsory.

This analysis uses an alternative approach based on education system scores. Each of its levels—three levels of complete general (school) and three levels of professional—receives a certain rank (the higher the education level, the higher the rank). Expert assessments assign a certain number of points to each rank. Their average value for a region is calculated from the proportion of people aged 15 and older with a particular education level (Rimashevskaya et al., 2013). Let us note right away that both of these approaches, first, do not “capture” the qualitative aspects of the education received by the population (and its quality does not remain unchanged), and second, the use of one or another method does not make a significant difference in the final result.

For operationalization *sociocultural component* two groups of indicators have been selected that characterize the consumption of services provided by cultural institutions and social behavior, which is assessed by the method “from the contrary”, namely, indicators of asocial (deviant) behavior. Due to their substantive differences, they are presented as two components: *cultural activity of the population* and his *social behavior*. For a more complete assessment of the sociocultural component, it should be supplemented with a sociopolitical characteristic (participation in elections, parties and other public organizations, etc.); however, it was not possible to find such information for all Russian regions.

The cultural activity of the population is expressed through the attendance rates of museums and theaters and the number of users of public libraries; social behavior, through the number of men and women who have committed crimes and the number of people registered in medical institutions for alcoholism, drug addiction, and other types of substance abuse.

The information base of the study was Rosstat data for 83 federal subjects for 2010 and 85 for 2015.² The index method was used to include individual indicators in the integral assessment of human potential, in which statistical indicators are converted into indices, which were calculated by the minimax normalization procedure, often used to assess social indicators (Aivazyan, 2012; Modelirovanie ..., 2001).

To reflect the dynamics of statistical indicators, when calculating the indices, the same minimum and maximum values of indicators for 2010 and 2015 were used. A composite index was calculated for each component, then, on their basis, an integral human potential index was determined as the arithmetic mean of five components. The additive formula for calculating the integral index was chosen mainly because it can be used to evaluate the contribution of each component to the overall characteristic. In addition, not all regions have the necessary indicators, and the use of a multiplicative formula yields a zero value of the component. For example, in the cultural activity of the population in the Nenets, Yamalo-Nenets, and Chukotka autonomous okrugs, there is no indicator of theater attendance due to the lack of theaters.

DYNAMICS OF THE MAIN CHARACTERISTICS OF THE HUMAN POTENTIAL OF THE RUSSIAN REGIONS IN 2010–2015

Demographic Component

The dynamics of the population is, as noted, represents not only its quantitative characteristics, but

² Regions of Russia. Socioeconomic indicators – 2016, Federal State Statistics Service. http://www.gks.ru/bgd/regl/B16_14p/Main.htm.

also its qualitative characteristics—the ability of the population to reproduce—and depends on the magnitude of natural and migration increase/decrease.

Natural population increase depends on the birth/death ratio. In the past five years, the pace of increase in the birth rate has slowed sharply, which is explained, among other things, by the fact that payment of maternity capital incentivized planned childbirth. Once this need is satisfied, the birth rate ceases to increase and the natural dynamics of demographic processes resumes. In addition, the proportion of women of reproductive age (15–49 years) has decreased. According to Rosstat, at the beginning of 2010, the proportion of women of this age in the country was 49.3% of the total number of women, while as of January 1, 2015, it was 45.3%.

The birth rate (the number of births per 1000 people) on average in the country in 2010 was 12.5‰; in 2015, 13.3‰. Over the years, the number of regions with a birth rate above the national average (42) has not changed. The overall mortality rate (the number of deaths per 1000 population) decreased from 14.2‰ in 2010 to 13‰ in 2015. In 2010, in 35 Russian regions, mortality was below the national average. In 2015, the number of such regions decreased to 32.

In 2010, the negative natural increase, or natural population decrease, was 1.7‰ for the entire country. At the same time, positive population increase was recorded in 24 federal subjects: the birth rate exceeded the national average (12.5‰), and mortality rate was lower (14.2‰) than the average Russian level. The exception was Irkutsk oblast, where the mortality rate was 14.4‰.

In 2015, a slight increase was recorded (0.3‰), and the number of federal subjects with increase rose to 41. However, in 4 of these 41 regions (Moscow, Murmansk oblast, and Kamchatka and Stavropol krais) the birth rate was lower, and in 5 (the Republic of Mari El, Perm krai, and Sakhalin, Sverdlovsk and Orenburg oblasts), the mortality rate was higher than the national average. In addition, zero increase in 2015 was recorded in Chelyabinsk and Magadan oblasts.

In the ten leading regions, natural population increase in 2010 exceeded 4.7‰, and in 2015, 5.8‰. The composition of the group characterized by a high birth rate and relatively low mortality rate remained 90% unchanged during these years: the republics of Chechnya, Ingushetia, Tyva, Dagestan, Sakha (Yakutia), Altai; the Yamalo-Nenets, Khanty-Mansi, and Nenets autonomous okrugs; Kabardino-Balkaria replaced Buryatia.

In 2010, in 11 federal subjects, the natural population decrease was more than 7‰, and in 2015, 4.6‰. They included mainly the regions of the Central Federal District and the Northwestern Federal District with a high mortality rate. In 2015, Nizhny Novgorod oblast left this group, while Kursk oblast entered.

Regional values of natural population increase varied in 2010 from 24.3 (Chechen Republic) to –10.7‰ (Pskov oblast); in 2015, from 18.2 to –7.2‰, respectively.

Migration flows of the population. Migration of the population outside a federal subject, including travel abroad and entry for permanent residence from other regions and countries, is characterized by the migration rate (persons per 10000, ‰). Its dynamics depends on many factors, including the level of socioeconomic development of regions, the situation in the labor markets, the migration policy of the federal center and regional administration, the mentality of the population, etc. In Russia, with the underdevelopment of its rental housing market, internal migration is significantly constrained.

Migration outflow decreases and inflow increases the demographic potential of the population. In 2010, the national average migration increase rate was 19‰. It had a positive value in 26 federal subjects, in 14 of which, it was above the average level, and in Moscow and Leningrad oblasts and St. Petersburg and Moscow it exceeded 100‰ mainly due to migrants from other regions of the country. In regions such as the republics of Komi, Tyva, and Ingushetia; Magadan oblast; and the Chukotka Autonomous Okrug, the negative rate was –100‰ or more.

In 2015, the migration increase rate for the entire country fell to 17‰, while in 32 federal subjects, it was positive, and in 19 it exceeded the average Russian level. The leaders were Sevastopol (439‰), as well as Tyumen (without autonomous okrugs) and Moscow oblasts and Krasnodar krai.

Compared to 2010, the composition of the group with the highest population outflow (–100‰) also changed significantly. The Komi Republic, Chukotka Autonomous Okrug, and Magadan oblast remained in it; the republics of Ingushetia and Tyva left it; the Republic of Kalmykia, the Jewish Autonomous Oblast, and Yamalo-Nenets Autonomous Okrug entered it.

Population Change. To assess population change in regions, the specific indicators of natural and migration increase were brought to a single basis, per 1000 people (‰). The recalculation clearly showed that migration movements in the country as a whole played a more prominent role in population change than natural reproduction. In regions, these processes took place in different directions and with different intensity, changing the ranks (places) of regions in the hierarchy according to the value of the given indicator (Table 1).

In 2010, population increase in the entire country was only 0.2‰, varying from 19.9‰ in the Chechen Republic to 16.5‰ in the Chukotka Autonomous Okrug. Population increase was observed in 25 regions and was zero in Voronezh oblast; 61.4 million people, or 43% of the total population of the country, lived in

Table 1. Increase/decrease in population in federal subjects and their ranks in 2015 and 2010

Federal subject	Population change, (+, -), ‰		Rank		Federal subject	Population change, (+, -), ‰		Rank	
	2015	2010	2015	2010		2015	2010	2015	2010
Russian Federation	2.0	0.2			Samara oblast	-2.0	-1.7	43	32
Sevastopol	42.5		1		Republic of North Ossetia-Alania	-2.2	1.1	44	20
Republic of Ingushetia	19.0	6.8	2	11	Saratov oblast	-2.2	-6.4	45	57
Tyumen oblast ¹	17.6	7.2	3	10	Primorsky krai	-2.2	-6	46	56
Chechen Republic	17.4	19.9	4	1	Sakhalin oblast	-2.3	-9.1	47	69
Moscow oblast	11.9	19.9	5	5	Republic of Mari El	-2.4	-5.6	48	48
Krasnodar krai	11.0	11.6	6	14	Astrakhan oblast	-2.7	-1.3	49	30
Moscow	10.9	13.8	7	3	Karachay-Cherkessia Republic	-2.7	7.5	50	9
Nenets Autonomous Okrug	10.7	-0.3	8	28	Kemerovo oblast	-2.7	-4.3	51	43
Khanty-Mansi Autonomous Okrug	9.1	10.4	9	6	Volgograd oblast	-2.8	-5.9	52	53
Republic of Dagestan	8.4	15.7	10	2	Khabarovsk krai	-2.8	-4.8	53	45
Kaliningrad oblast	7.7	3.4	11	13	Nizhny Novgorod oblast	-3	-5.9	54	54
Republic of Altai	6.9	5.5	12	12	Orenburg oblast	-3.1	-5.2	55	47
St. Petersburg	6.6	13.7	13	4	Altai krai	-3.4	-5.6	56	49
Republic of Crimea	5.9		14		Kamchatka krai	-3.7	-4.7	57	44
Tyva Republic	5.9	2.6	15	16	Ulyanovsk oblast	-3.9	-8.6	58	66
Novosibirsk oblast	5.6	1.9	16	18	Zabaykalsky krai	-4.1	-2.5	59	35
Republic of Adygea	5.1	0.3	17	24	Republic of Karelia	-4.3	-9.5	60	71
Republic of Buryatia	3.9	1.9	18	17	Kostroma oblast	-4.5	-9.8	61	73
Republic of Tatarstan	3.6	1.5	19	22	Volgograd oblast	-4.5	-2.6	62	36
Republic of Sakha (Yakutia)	3.0	-0.1	20	27	Ryazan oblast	-4.7	-8.6	63	65
Krasnoyarsk krai	2.7	-1.4	21	31	Tula oblast	-4.7	-9.2	64	70
Kursk oblast	2.3	-8.3	22	64	Novgorod oblast	-4.9	-10.8	65	78
Tomsk oblast	2.2	7.9	23	8	Penza oblast	-5.1	-6	66	55
Republic of Khakassia	1.9	-0.9	24	29	Kirov oblast	-5.3	-10.4	67	75
Leningrad oblast	1.8	8.0	25	7	Amur oblast	-5.3	-7.5	68	63
Kabardino-Balkaria Republic	1.7	0.2	26	25	Murmansk oblast	-5.4	-7.1	69	59
Belgorod oblast	1.4	0.4	27	23	Bryansk oblast	-5.9	-8.7	70	67
Voronezh oblast	1.0	0.0	28	26	Vladimir oblast	-6	-5.9	71	52
Chelyabinsk oblast	1.0	-1.8	29	33	Smolensk oblast	-6.4	-10.3	72	74
Stavropol krai	0.8	1.9	30	15	Republic of Kalmykia	-6.5	-2.7	73	38
Sverdlovsk oblast	0.7	-2.6	31	37	Ivanovo oblast	-6.8	-7.2	74	61
Yaroslavl oblast	0.3	-7.2	32	62	Oryol oblast	-7.3	-9.6	75	72
Omsk oblast	0.1	-3.8	33	40	Pskov oblast	-7.3	-15.7	76	82
Udmurt Republic	-0.2	-3.2	34	39	Chukotka Autonomous Okrug	-7.6	-16.5	77	83
Republic of Bashkortostan	-0.3	0.8	35	21	Tver oblast	-7.9	-11.2	78	79
Kaluga oblast	-0.7	-5.7	36	50	Arkhangelsk oblast ¹	-8.6	-10.6	79	76
Irkutsk oblast	-0.8	-5.1	37	46	Komi Republic	-8.9	-14.1	80	80
Perm krai	-1.0	-5.8	38	51	Kurgan oblast	-9.1	-10.7	81	77
Chuvash Republic	-1.2	-4.3	39	42	Yamalo-Nenets Autonomous Okrug	-11.0	1.5	82	19
Rostov oblast	-1.4	-2.2	40	34	Tambov oblast	-11.5	-9.0	83	68
Lipetsk oblast	-1.5	-4.3	41	41	Magadan oblast	-11.8	-15.6	84	81
Republic of Mordovia	-1.8	-7.1	42	60	Jewish Autonomous Oblast	-13.4	-6.8	85	58

¹ Hereinafter, Arkhangelsk and Tyumen oblasts without autonomous okrugs.

Regions marked in color are where population decrease in 2015 grew compared to 2010 or where increase was replaced by a decrease.

these regions. Decrease was recorded in 57 federal subjects; in 25, the decrease was above 7‰; in 10, it exceeded 10‰.

In 2015, the total population increase (2‰) was also accompanied by significant regional differences: from 42.5‰ in Sevastopol to –13.4‰ in the Jewish Autonomous Oblast. Increase was recorded in 33 Russian regions, including 23 regions where it was higher than the average Russian level. In 12 regions, the number of inhabitants increased due to natural and migration increase; in 11, only due to migration increase; and in 10, to natural increase. In total, about 77 mln people lived in these regions, or 52.6% of the total population.

Population decrease, as in 2010, was observed in most regions (52). In 19, a slight natural increase was noted (with the exception of the Yamalo-Nenets Autonomous Okrug, where it amounted to 11.3‰). In Magadan oblast, the reduction in numbers occurred due to a negative migration balance, while in Ryazan oblast, mainly due to natural population decrease. In eight regions, the natural decrease was partially offset by a positive migration balance. In the remaining 23 federal subjects, it was accompanied by migration to other regions and abroad. In seven regions where the population decreased, the value was more than 7‰, and in four regions, more than 10‰.

Health of the Population

The main indicator reflecting the state of health of the population is life expectancy at birth (LE).

At the end of the 20th century, to assess the state of health of the population, WHO experts proposed an indicator of healthy life expectancy (HLE), which in Russia is not calculated in the official statistics. In this study, health of the population is assessed with three indicators: LE (years), disability (number of disabled people per 1000), and overall morbidity (number of registered diseases in patients with diagnosis established for the first time, per 1000 people).

Life Expectancy. In 1990, i.e., on the eve of radical economic reforms, the LE of the Russian population was 69.2 years. Four years later (1994), the average LE for the population decreased to 63.8 years. Such dynamics is the result of ongoing market reforms without the necessary social shock absorbers.

By 1998, the situation had somewhat stabilized: The average LE in the country increased to 67.1 years, but the financial crisis of the same year again changed the dynamics of this indicator, which by 2003 had dropped to 64.8 years. Since 2004, an increase in LE again began in Russia, and in 2010, it averaged 68.9 years; a year later, it reached the 1990 level of 69.8 years.

LE indicators vary markedly by federal subjects. In 2010, in 25 regions, LE was higher than the average Russian indicator, of which in 7 regions it exceeded

72 years (the republics of Ingushetia, Dagestan, Karachay-Cherkessia, North Ossetia, Kabardino-Balkaria, and Moscow and St. Petersburg) and in 3 regions, more than 71 years (Chechen Republic, Belgorod oblast, and Stavropol krai). In half of federal subjects, LE was less than 68.2 years, of which in ten regions it was 65.1 or less (Pskov, Novgorod, and Magadan oblasts; Zabaykalsky krai; Amur oblast; Jewish Autonomous Oblast; Nenets Autonomous Okrug; Sakhalin oblast; Chukotka Autonomous Okrug; the Tyva Republic). The maximum regional differences in LE in 2010 were 1.3 times, between the Republic of Ingushetia (74.7 years) and Chukotka Autonomous Okrug (57.5 years).

In 2015, LE in all federal subjects increased and the national average was 71.4 years. In 25 federal subjects, it was higher than the average Russian level; in eight of them (the North Caucasian republics, Moscow and St. Petersburg) it exceeded 74 years. Whereas in the republics of the North Caucasus, in addition to the genetic factor, the LE indicator can also be influenced by the statistical factor (reliability of data); in the two Russian capitals, social living conditions and, primarily, the availability of qualified medical care for the population play an important role.

In half the regions, LE was below 70.5 years; in ten, less than 68.5. The composition of this outsider group remained 70% unchanged. Pskov and Novgorod oblasts and the Nenets Autonomous Okrug left this group, while Kemerovo and Irkutsk oblasts and the Republic of Altai entered. The reasons for the low LE in these regions differ: harsh natural and climatic conditions in Magadan oblast and in the Chukotka Autonomous Okrug, environmental problems in the Kemerovo oblast, Chukotka Autonomous Okrug, Zabaykalsky krai, low availability of qualified medical care (high infant mortality serves as an indicator) in Chukotka Autonomous Okrug, Jewish Autonomous Oblast, Republics of Tuva and Altai. The maximum regional differences in LE in 2015 somewhat decreased, 1.25 times (between the republics of Ingushetia (80 years) and Tyva (63.5 years)).

Number of disabled among the population. After a significant increase in the number of disabled people, recorded in 2005–2006 in connection with monetization of benefits, their number continued to increase until the end of 2010 (13 209 000 people). Since 2012, it began to gradually decrease, and by the end of 2015, it amounted to 12 751 000 people. There is no information in the statistics for Moscow and Leningrad oblasts; the number of disabled people living in these regions is included in the figures for Moscow and St. Petersburg. Therefore, in this study, the published number of disabled people in both capitals is distributed between them and adjacent regions in proportion to the number of residents.

The average annual specific number of disabled people in the Russian Federation in 2010 (per

1000 people) was 92.5. In 48 regions, it was lower than the average Russian indicator, and in the 10 leading regions (with a low proportion of disabled people), it was less than 56 people (Yamalo-Nenets and Khanty-Mansi Autonomous Okrugs, Moscow and Leningrad oblasts, Chukotka Autonomous Okrug, Magadan, Murmansk, and Astrakhan oblasts, Kamchatka krai, and Moscow). The group of 10 regions with the highest specific number of disabled (more than 117 people) in 2010 included Orenburg oblast; the Republic of Karelia; Tula, Kostroma, Novgorod, Lipetsk, Tambov, Ryazan, and Belgorod oblasts; and the Altai Republic—regions with a high proportion of people older than working age. The maximum regional differences were 6.4 times between Belgorod oblast (181.9) and the Yamalo-Nenets Autonomous Okrug (28.6).

In 2015, the average annual number of persons with disabilities decreased to 87.7. However, in 26 federal subjects, an increase in the number of disabled people was recorded. In half the regions, it was below the national average. The composition of the ten leading regions (53 or fewer people) remained 90% the same; Kamchatka krai left this group, while Sevastopol krai entered.

The group of ten federal subjects with the highest proportion of disabled people (over 115 people) has changed more in terms of composition compared to 2010. Orenburg, Tula, and Kostroma oblasts left the group, while Kursk oblast and the republics of Chechnya and Ingushetia entered. The maximum regional differences in the proportion of persons with disabilities in 2015 compared to 2010 decreased, amounting to 5.2 times between Belgorod (159.8) and Moscow (30.8) oblasts.

Overall morbidity of the population it is represented in statistics by the number of registered diseases in patients with a diagnosis established for the first time, per 1000 people. The dynamics of this indicator on average countrywide in recent years demonstrated no clear trend: by 2013 it increased to 799.4 versus 780 in 2010, then gradually decreased, and in 2015 amounted to 778.2.

In 2010, the overall primary morbidity in 36 federal subjects was below the national average. This group was headed by the ten leading regions (with a specific number of diseases up to 650). Half of them are the territories of the North Caucasus Federal District, as well as Leningrad, Voronezh and Kursk oblasts, Krasnodar krai, and the Tyva Republic. This composition indicates a certain dependence of the state of health on the ethnic factor, the effectiveness of which was manifested in regions of the North Caucasus and Tyva. The 10 outsider regions (with the highest specific morbidity) included 11 federal subjects (the Nenets, Chukotka and Yamalo-Nenets autonomous okrugs; the republics of Karelia, Komi, Udmurtia, and Sakha (Yakutia); Altai krai; Arkhangelsk and Samara oblasts). Most of them belong to the northern regions,

which indicates another factor of ill health—living in difficult natural and climatic conditions. This is primarily reflected by the high morbidity of respiratory organs, as well as diseases of the nervous and endocrine systems and digestive organs. In the Nenets, Yamalo-Nenets, and Chukotka autonomous okrugs, and the Republic of Karelia, the morbidity rate of these diseases is highest.

The maximum regional differences in the specific primary morbidity of the population in 2010 were 4.5 times between the Nenets Autonomous Okrug (1813.8) and Kabardino-Balkaria (399.8).

In 2015, as noted above, the specific indicator of primary morbidity on average in the country decreased and in half of federal subjects it became less than the national average. For 5 years, the composition of the ten leading regions has changed significantly (with a low indicator, up to 621 diseases) due to the replacement of Karachay-Cherkessia, North Ossetia, and Tyva with Sevastopol and the Republic of Crimea³ and Buryatia.

At the same time, an increase in overall morbidity was revealed in 36 regions. In the composition of ten federal subjects with the highest specific morbidity (over 980 diseases), the changes are minimal: Udmurtia replaced Chuvashia. The maximum regional differences in the specific morbidity of the population decreased up to three times between the same regions with extreme values as in 2010: the Nenets Autonomous Okrug (1421.5) and Kabardino-Balkaria (466.2).

The composite health index is calculated based on three indices determined by normalizing each of the three considered indicators. The LE index in assessing health was given a more important role than others characterizing “ill health” in a given period of time: disability and primary morbidity of the population, which only slightly correct the LE value.

The composite health index (I_h) is carried out according to the following formula:

$$I_h = [I_{LE} + (I_d + I_{pm})/4]/2,$$

where I_{LE} is the LE index; I_d is disability index; and I_{pm} is the primary morbidity index.

The distribution of federal subjects by value of the composite health index in 2015 is presented in Table 2, which also shows the rank of region for this indicator in 2010, which makes it possible to see the shifts that have taken place over this period.

In 2010, the country's average composite health index was 0.41503, and the LE index was 0.49786. Muscovites have the highest health index, 0.54321, and Chukotka residents, the lowest, 0.21452. The group with relatively good health included 31 federal

³ In the article the territory of Russia is considered within the boundaries stated in the Constitution of the Russian Federation, adopted by a popular vote on December 12, 1993, with changes approved during an all-Russian vote of July 1, 2020.

Table 2. Composite index of population health in federal subjects in 2015 and their ranks in 2015 and 2010

Federal subject	Health index, 2015	Rank		Federal subject	Health index, 2015	Rank	
		2015	2010			2015	2010
Russian Federation	0.46259			Republic of Bashkortostan	0.44182	43	32
Moscow	0.59827	1	1	Kirov oblast	0.44170	44	50
Republic of Ingushetia	0.58078	2	3	Republic of Sakha (Yakutia)	0.44133	45	53
Kabardino-Balkaria Republic	0.55540	3	2	Lipetsk oblast	0.44098	46	46
Republic of Dagestan	0.54063	4	4	Republic of Buryatia	0.44064	47	57
Moscow oblast	0.52731	5	11	Ivanovo oblast	0.43923	48	58
Stavropol krai	0.51864	6	9	Udmurt Republic	0.43774	49	39
Leningrad oblast	0.51627	7	12	Smolensk oblast	0.43731	50	60
Khanty-Mansi Autonomous Okrug	0.51413	8	10	Yaroslavl oblast	0.43708	51	55
Sevastopol	0.50575	9		Ryazan oblast	0.43678	52	64
Karachay-Cherkessia Republic	0.50462	10	5	Bryansk oblast	0.43651	53	48
Republic of North Ossetia–Alania	0.50438	11	6	Belgorod oblast	0.43581	54	42
Astrakhan oblast	0.50195	12	14	Kamchatka krai	0.43454	55	49
St. Petersburg	0.50051	13	13	Samara oblast	0.43027	56	40
Krasnodar krai	0.49835	14	8	Arkhangelsk oblast	0.42919	57	54
Republic of Adygea	0.49176	15	16	Kostroma oblast	0.42685	58	62
Volgograd oblast	0.49011	16	18	Republic of Khakassia	0.42683	59	38
Republic of Tatarstan	0.48894	17	19	Vologda oblast	0.42552	60	66
Tomsk oblast	0.48759	18	17	Ulyanovsk oblast	0.42495	61	44
Republic of Crimea	0.48611	19		Tula oblast	0.42472	62	61
Saratov oblast	0.48535	20	20	Sakhalin oblast	0.42367	63	68
Republic of Kalmykia	0.48359	21	22	Pskov oblast	0.42170	64	74
Penza oblast	0.48295	22	25	Altai krai	0.42082	65	52
Yamalo-Nenets Autonomous Okrug	0.48262	23	15	Oryol oblast	0.41940	66	47
Voronezh oblast	0.47601	24	26	Nizhny Novgorod oblast	0.41792	67	67
Chechen Republic	0.47600	25	7	Orenburg oblast	0.41123	68	59
Republic of Mordovia	0.47501	26	29	Tver oblast	0.40990	69	70
Tyumen oblast	0.47037	27	28	Nenets Autonomous Okrug	0.40989	70	82
Murmansk oblast	0.46989	28	24	Republic of Mari El	0.40978	71	63
Rostov oblast	0.46800	29	23	Vladimir oblast	0.40601	72	71
Novosibirsk oblast	0.46583	30	21	Komi Republic	0.40389	73	65
Kaluga oblast	0.45619	31	37	Kurgan oblast	0.40209	74	45
Chuvash Republic	0.45581	32	35	Perm krai	0.40165	75	69
Kaliningrad oblast	0.45565	33	33	Zabaykalsky krai	0.39735	76	73
Tambov oblast	0.45081	34	41	Kemerovo oblast	0.39370	77	72
Kursk oblast	0.44990	35	34	Novgorod oblast	0.38267	78	80
Sverdlovsk oblast	0.44777	36	27	Republic of Altai	0.37628	79	79
Primorsky krai	0.44693	37	43	Amur oblast	0.37584	80	76
Krasnoyarsk krai	0.44574	38	36	Republic of Karelia	0.37103	81	77
Chelyabinsk oblast	0.44452	39	31	Irkutsk oblast	0.36756	82	75
Magadan oblast	0.44410	40	51	Jewish Autonomous Oblast	0.35308	83	78
Omsk oblast	0.44269	41	30	Chukotka Autonomous Okrug	0.34571	84	83
Khabarovsk krai	0.44190	42	56	Tyva Republic	0.33469	85	81

Highlighted in color are federal subjects in which, despite positive dynamics of health index, rank has decreased by ten positions or more.
Source. Authors' calculations.

subjects with an index above the national average. In addition to Moscow, the top ten federal subjects with the highest health scores included six North Caucasian republics, Krasnodar and Stavropol krais, and the Khanty-Mansi Autonomous Okrug. Most had the highest LE in the country, with the exception of Krasnodar krai and Khanty-Mansi Autonomous Okrug.

In half the regions, the composite health index was less than 0.392, of which the group of ten outsider regions (index below 0.345) included regions with the lowest LE: Pskov, Novgorod, and Amur oblasts; the Jewish Autonomous Oblast; the Tyva Republic; and the Nenets and Chukotka autonomous okrugs. In the republics of Karelia and Altai, health assessment was affected by high disability of the population; in Irkutsk oblast, by primary morbidity.

Five years later, in 2015, the composite health index on average for the country increased to 0.46259. A similar trend was observed in all federal subjects. The group with relatively good health (composite index above the national average) included 30 regions. At the same time, the composition of the ten leading regions changed by a third: Sevastopol, Moscow, and Leningrad oblasts entered the group. Chechnya, Krasnodar krai, and the Republic of North Ossetia lost their positions, where morbidity increased markedly; in addition, in Chechnya and Krasnodar krai, disability of the population increased.

In half the federal subjects, the composite health index was less than 0.442, and in the ten outsider regions, it was below 0.4. The outsider regions were basically the same as in 2010, except for Pskov oblast and the Nenets Autonomous Okrug. They were replaced by the Zabaykalsky krai and Kemerovo oblast. Thus, with overall improvement in the health of the population in all regions, the rank of 31 federal subjects in the distribution of the composite health index decreased versus 2010, including due to the inclusion of Crimea in the calculations (Sevastopol occupied 10th place; the Republic of Crimea, 19th).

Education of the Population

As a result of reform of the education system, its usual classification, primarily vocational education, changed. Two new levels appeared in higher education: bachelor and master degrees. According to the 2010 All-Russian census (VPN-2010), the proportion of people with these new forms of education was insignificant (bachelor, 1%; master, 0.5%). Together with specialists, the share of all persons with higher education was 22.8%, and taking into account postgraduate education, 23.4%. In the 2015 microcensus (MPN-2015), new forms of higher education, such as postgraduate education, were not covered. Primary and secondary vocational education were also reformed; they were merged into secondary vocational education, and its institutions began to train both mid-level

specialists and skilled workers (employees). Despite these changes, the data of VPN-2010 and MPN-2015 for secondary vocational (in 2010 together with primary) and higher education are comparable.

Analysis of the distribution of the population at least 15 years old in 2010 and 2015 showed that the proportion of people with higher education (including postgraduate) slightly increased, from 23.4 to 25.8%, and the proportion of those trained as mid-level specialists over 5 years remained almost the same (31.2 and 31.3%, respectively). Only the proportion of those trained as skilled workers changed more significantly, from 5.6 to 9.2%. For other education levels, the share of those who completed training decreased: with incomplete higher education, from 4.6 to 2.8%; with complete general education, from 18.2 to 17.9%; with basic general education, from 11 to 9.7%; and those without a general or primary education, from 6 to 3.5%.

It should be noted that Rosstat's current education statistics (Labor Force Survey) cover only the population of working age (15–72 years). According to this survey for 2015, the proportion of people with higher education increased to 26.4 versus 22.3% in 2010; it remained virtually unchanged, with secondary vocational education (40.1 and 40.5%), respectively; shares with other education levels slightly decreased.

To assess the education level of the population as a whole and in the regions, a point-based method was used, when each level is assigned a certain score: 1, initial; basic, 3; complete basic, 4; primary vocational, 4.5; secondary vocational, 5.5; incomplete higher, 6; higher, 7.

The average assessment of education level depends on gender, age, and social composition (employed, unemployed, pensioners), and place of residence (urban, rural). A detailed analysis of education level assessments for different categories of the population in 2010 for the Russian Federation as a whole is presented in (Rimashevskaya et al., 2013).

The average score for the education of Russia's entire population aged 15 years and over was, according to the MPN-2010 data, 4.994' according to the MPN-2015 data, 5.138 points; i.e., it increased by 2.7%. However, only the Republic of Crimea is included in the MPN-2015 materials; there are no data for Sevastopol nor the Nenets Autonomous Okrug (like in the VPN-2010 data). However, the missing information for Sevastopol and the Nenets Autonomous Okrug in this study was covered by Labor Force Survey data. Recall that the average estimates of education level, calculated from the current statistics, are slightly lower than according to census data for the age group 15–72 years. Thus, the average assessment of education of the population of the Russian Federation at the same age according to MPN-2015 was 4.758, and according to the Labor Force Survey, 4.553.

The average education level of the population in all federal subjects also increased over the course of 5 years, but the rates varied significantly from 100.6% in Karelia to 112.1% in Chechnya, which affected the rank of most regions (Table 3)

In 2010, in 18 regions, the average assessment of education was higher than the average for the Russian Federation, and after 5 years, this increased to 25 regions. In half the federal subjects in 2010, this estimate was below 4.867, and in 2015, 5.062. The composition of the ten leading regions remained 70% unchanged. In 2015, this group included the city of Sevastopol, the Republic of Crimea, and Tomsk oblast with growth rates of this indicator above the average Russian level of 104.2%. The group of leaders saw the departure of Kamchatka krai and Kaliningrad and Murmansk oblasts, where the average estimate for education increased by only 1%.

The composition of the ten federal subjects with the lowest average estimates in education (below 4.927) did change much either. In 2015, having increased their rank, Tyva, Tambov oblast, and Ingushetia left the group. In the first two regions, the average estimate increased by 7%, and in Ingushetia, by 9.6%. In the Chechen Republic, with growth of this indicator by 12.1% as a result of a twofold increase in the proportion of people with higher education (from 11.8% to 23.1%), the rank did not increase. In addition, Altai krai, the Jewish Autonomous Oblast, Zabaykalsky krai, Kurgan and Kirov oblasts, and Dagestan remained in this group. Only in Zabaykalsky krai was growth of the average estimate somewhat inferior to the national average, 2.5%, while in other regions, it varied from 3.2% in Kirov oblast to 5.2% in the Jewish Autonomous Oblast. Among the new members of the group, Karelia stands out, the rating of which fell from 36 to 77 as a result of the lowest growth rate of this indicator among all regions, mainly due to a decrease in the share of people with higher and postgraduate education, from 19.7 to 18.4%.

In total, in 2015, in addition to Karelia, 14 federal subjects decreased in rank by ten or more positions (in Table 3 they are highlighted in color). Among them are such regions with well-known scientific centers as Kaluga, Novosibirsk, Sverdlovsk, and Voronezh oblasts, the Republic of Tatarstan, and a number of others. The low growth rates of the average estimate in these regions, despite the increase in the share of those who received higher education, are mainly explained by an increase (by 1.5–2 times or more) in the share of people trained in programs for skilled workers and a decrease in programs for training secondary specialists.

The distribution of regions according to the average assessment of education of the population, in comparison with other qualitative characteristics, is characterized by low interregional differentiation. The maximum differences in 2010 were 1.37 times (between

Moscow and the Chechen Republic), and in 2015, 1.27 times. The main reason for the low regional inequality is compulsory secondary (school) education for younger generations back in the Soviet period, as well as the availability of vocational education.

Cultural Activity of the Population

The cultural activity of the population, which characterizes its level of cultural development, can be assessed by statistical indicators: attendance at theaters and museums (number of visits per 1000 people) and the number of readers of public libraries (thous. people). The latter is most important for federal subjects in which the number of theaters and museums is limited. Libraries in district centers are cultural centers where art exhibitions, festive events, meetings with writers, children's circles, etc., are held.

Attendance at theaters and museums. In general, in the Russian Federation, the number of professional theaters increased by 10% within 5 years (from 604 to 665), and the specific attendance, by 20.3% (from 217 to 261 visits per 1000 people). In most regions (68), there was a positive dynamics in theater attendance, and it grew at the highest rate in Chechnya (5.5 times), Ingushetia (2.9 times), Altai (2.2 times), Tyva (2 times). This indicator slightly decreased in 11 federal subjects: Oryol, Pskov, Leningrad, Murmansk, Kirov, Penza, Saratov, Novosibirsk, Omsk, and Sakhalin oblasts and the Republic of Kalmykia. During the period under review, there were no theaters in the Chukotka, Nenets and Yamalo-Nenets okrugs.

The largest number of theatrical spectators in 2010 and 2015 was observed in the cultural capitals: Moscow (respectively, 527 and 612 visits) and St. Petersburg (517 and 780). In third place in 2010 was Omsk oblast (360), and in 2015, the Republic of Mari El (374). The top ten regions in theater attendance in 2010 and 2015 included Magadan and Novosibirsk oblasts, in addition to the two capitals, the Republic of Mari El, and Omsk oblast. In these regions, the specific attendance of theaters increased, with the exception of Omsk and Novosibirsk oblasts, but even in them, it remained at a relatively high level (352 and 328). In 2015, this group included Sevastopol, Astrakhan and Kostroma oblasts, Perm krai; departures were Krasnoyarsk krai, the Chuvash Republic, Tomsk and Saratov oblasts, and only in the latter was there a decrease in attendance (from 264 to 239).

In 2010, in 11 federal subjects, the specific theater attendance was less than 100, and the minimum level was observed in Tyva (48), Altai (39), and Chechnya (28). After 5 years, only five such federal subjects remained: Tyva (98), Stavropol krai (86), Altai (84), and the Jewish Autonomous Oblast (73).

As a result, the maximum regional differences in specific theater attendance over 5 years decreased from 18.8 times (between Moscow and Chechnya) to

Table 3. Education level (average score) of population in federal subjects and their ranks in 2015 and 2010

Federal subject	Average score		Rank		Federal subject	Average score		Rank	
	2015	2010	2015	2010		2015	2010	2015	2010
Russian Federation	5.138	4.994			Chuvash Republic	5.059	4.813	43	63
Moscow	5.981	5.759	1	1	Tyva Republic	5.052	4.705	44	76
St. Petersburg	5.921	5.632	2	2	Tambov oblast	5.051	4.717	45	74
Sevastopol	5.723		3		Vologda oblast	5.050	4.819	46	60
Yamalo-Nenets Autonomous Okrug	5.600	5.270	4	4	Omsk oblast	5.048	4.832	47	54
Moscow oblast	5.569	5.323	5	3	Volgograd oblast	5.042	4.917	48	31
Republic of North Ossetia–Alania	5.380	5.121	6	10	Krasnoyarsk krai	5.042	4.881	49	37
Khanty-Mansi Autonomous Okrug	5.303	5.260	7	5	Komi Republic	5.032	4.896	50	34
Republic of Crimea	5.291		8		Tula oblast	5.028	4.856	51	45
Tomsk oblast	5.274	5.070	9	14	Karachay-Cherkessia Republic	5.027	4.952	52	22
Magadan oblast	5.267	5.160	10	7	Smolensk oblast	5.022	4.879	53	38
Samara oblast	5.250	5.085	11	13	Tver oblast	5.020	4.828	54	55
Kamchatka krai	5.249	5.198	12	6	Republic of Tatarstan	5.016	4.942	55	27
Republic of Adygea	5.232	4.837	13	52	Orenburg oblast	5.015	4.804	56	67
Republic of Sakha (Yakutia)	5.217	5.039	14	15	Amur oblast	5.012	4, 819	57	61
Kaliningrad oblast	5.214	5.148	15	8	Kostroma oblast	5.011	4826	58	57
Primorsky krai	5.211	5.011	16	17	Yaroslavl oblast	5.007	4.959	59	21
Kabardino-Balkaria Republic	5.203	4, 942	17	26	Sverdlovsk oblast	5.007	4.896	60	35
Murmansk oblast	5.199	5.129	18	9	Bryansk oblast	5.003	4.747	61	72
Khabarovsk krai	5.180	5.099	19	12	Kursk oblast	4.998	4.774	62	69
Leningrad oblast	5.176	5.022	20	16	Voronezh oblast	4.997	4.844	63	47
Belgorod oblast	5.171	4.975	21	19	Kemerovo oblast	4.996	4.827	64	56
Republic of Kalmykia	5.165	4.838	22	51	Republic of Bashkortostan	4.991	4.815	65	62
Udmurt Republic	5.163	4.835	23	53	Arkhangelsk oblast	4.980	4.844	66	48
Tyumen oblast	5.152	5.112	24	11	Irkutsk oblast	4.972	4.859	67	44
Republic of Buryatia	5.142	4.917	25	30	Oryol oblast	4.964	4.867	68	41
Krasnodar krai	5.136	4.859	26	43	Pskov oblast	4.963	4.774	69	70
Chukotka Autonomous Okrug	5.131	4.949	27	24	Perm krai	4.952	4.752	70	71
Nizhny Novgorod oblast	5.121	4.926	28	28	Stavropol krai	4.945	4.812	71	64
Saratov oblast	5.109	4.924	29	29	Republic of Ingushetia	4.944	4.513	72	82
Chelyabinsk oblast	5.104	4.950	30	23	Novgorod oblast	4.940	4.809	73	65
Rostov oblast	5.103	4.906	31	32	Republic of Khakassia	4.935	4.806	74	66
Republic of Mordovia	5.101	4.870	32	40	Ivanovo oblast	4.927	4.824	75	58
Lipetsk oblast	5.100	4.865	33	42	Altai krai	4.926	4.706	76	75
Vladimir oblast	5.092	4.849	34	49	Republic of Karelia	4.924	4.894	77	36
Republic of Altai	5.092	4.730	35	73	Ulyanovsk oblast	4.921	4.820	78	59
Kaluga oblast	5.085	5.009	36	18	Penza oblast	4.919	4.784	79	68
Nenets Autonomous Okrug	5.082	4.900	37	33	Jewish Autonomous Oblast	4.858	4.619	80	78
Astrakhan oblast	5.074	4.844	38	48	Kirov oblast	4.846	4.694	81	77
Novosibirsk oblast	5.071	4.970	39	20	Murmansk oblast	4.754	4.559	82	81
Sakhalin oblast	5.069	4.948	40	25	Republic of Dagestan	4.740	4.573	83	80
Ryazan oblast	5.064	4.874	41	39	Zabaykalsky krai	4.712	4.596	84	79
Republic of Mari El	5.062	4.841	42	50	Chechen Republic	4.699	4.191	85	83

Highlighted in color are federal subjects in which, despite positive dynamics of population index, rank has decreased by ten positions or more.

10.7 times (between St. Petersburg and the Jewish Autonomous Oblast). If we exclude the two Russian capitals, which made a significant contribution, including the tourism factor, then the maximum regional difference in 2010 was 12.9, and in 2015, 5.1 times.

The specific attendance of museums in the entire Russian Federation over 5 years increased even more (by 43.4%): from 567 to 813, including as a result of an increase in the number of museums from 2578 to 2758 (7%). In the vast majority of federal subjects (75), a similar trend was observed, and the leaders in growth of museum attendance were Chechnya (14.2 times), Altai (by 9 times), Tatarstan (2.5 times), and the Jewish Autonomous Oblast (3 times). The largest decrease in museum attendance in 2015 was recorded in Leningrad oblast: by more than 40% (from 731 to 429), as a result of the annexation of Peterhof to St. Petersburg. Similar trends were observed in Primorsky and Altai krais (a decrease by 25 and 19%, respectively), Ingushetia (by 20%), Astrakhan oblast (by 16%), Buryatia (less than 5%), Saratov oblast, and Perm krai (about 1%).

In 2010, the group of leading regions with a high proportion of museum attendance (more than 1200) was headed by St. Petersburg (3669) and Yaroslavl and Vladimir oblasts (1402 and 1372, respectively). In 2015, St. Petersburg, the most attractive to tourists, retained its lead (4860); Sevastopol took second place (3468), and Moscow, third (more than 2100). In addition, the Republic of Crimea (1383) entered the top ten. As a result, Vologda and Bryansk oblasts left this group. It still has regions with cities that are part of the touristic Golden Ring of Russia (Yaroslavl and Vladimir oblasts), as well as Novgorod, Pskov, Volgograd, and Kaliningrad oblasts with a large number of historical sites.

In half the federal subjects, the specific attendance of museums in 2010 was below 389, and in 2015, below 454. The group of ten regions with the lowest attendance (less than 150) was headed by Adygea; Chechnya was last (13). In 2015, this group (less than 200) still included Adygea, Chechnya, North Ossetia, Karachay-Cherkessia, Kalmykia, and Magadan oblast. Bashkortostan, Kabardino-Balkaria, and Altai left the group. They were replaced by Altai krai and the republics of Dagestan and Tyva. In the regions that remained in or entered the group, the specific attendance of museums increased.

The tourist factor in museum attendance plays a larger role than in theater attendance, so regional differences are also higher. In 2010, the maximum gap in museum attendance was 282.2 times (between St. Petersburg and the Chechen Republic), and after 5 years, it decreased, but remained still high, 86.8 times (between St. Petersburg and Karachay-Cherkessia). With the exception of St. Petersburg in

2010, and in 2015 also Sevastopol, the differences decreased to 107.8 and 38 times, respectively.

Number of Users of Public Libraries. In the last decade, the number of users of public libraries has been steadily declining, also due to the intensive development of the Internet, which has led to the closure of libraries and reduction of library fund. These processes occurred almost at the same rates in cities and rural areas. The number of public libraries within 5 years decreased from 46 200 to 39 000, and the library fund has decreased from 6459 to 5726 copies per 1000 people.

In 2010, the total number of users of public libraries was about 56 mln, and in 2015, 52 mln (392 and 355, respectively, per 1000 people). However, in 17 federal subjects, there was an increase in the specific number of users. Small (from 0.1 to 5%) growth was noted in the Belgorod, Kemerovo, Penza, and Chelyabinsk oblasts, and in Tyva; it somewhat higher (6–7%) in Sakhalin and Novosibirsk oblasts and in Kabardino-Balkaria. In Khabarovsk krai, Sverdlovsk and Yaroslavl oblasts, and Chechnya, the specific indicator increased by more than 10%; in the Nenets Autonomous Okrug and Leningrad and Vologda oblasts, by more than 20%. In Novgorod oblast, the growth was 30.8%, and in the Yamalo-Nenets Autonomous Okrug, 93.3%. In seven federal subjects, the positive dynamics of this indicator is partly due to a decrease in population (Kemerovo, Penza, Novgorod, Sakhalin, and Vologda oblasts, Khabarovsk krai, and the Yamalo-Nenets Autonomous Okrug).

Despite the reduction in the specific number of library users, in 2015, the Chukotka Autonomous Okrug; Smolensk, Murmansk, and Magadan oblasts; and the republics of Mordovia, Chuvashia, and Mari El remained in the 11 leading regions; Novgorod, Sakhalin, and Vologda oblasts were included, where an increase in users was recorded libraries, and Mari El, which retained a relatively high number. In 2010, the leaders were federal subjects with a specific number of users greater than 552; in 2015, greater than 535. This indicator was higher than the average Russian level in 55 regions in 2010 and in 54 regions in 2015.

The group of ten regions with the lowest specific number of library users (less than 300 in 2010 and 260 in 2015) remained 60% unchanged. The regions where the attendance of libraries has decreased—the Khanty-Mansi Autonomous Okrug, St. Petersburg, Moscow oblast, and Primorsky krai, as well as Leningrad oblast and Chechnya—have retained their positions, where this indicator has grown by 21 and 12%, respectively. In 2015, Sverdlovsk oblast, the Yamalo-Nenets Autonomous Okrug, Kabardino-Balkaria, and North Ossetia left the group, while Moscow, Volgograd and Voronezh oblasts, and Ingushetia entered, each demonstrating a decrease in this number by 30–80%.

As a result of multidirectional dynamics of the specific number of users of public libraries, the maximum regional differences between the Chukotka Autonomous Okrug and Chechen Republic decreased from 6 times in 2010 to 3.4 times in 2015.

The composite index of cultural activity of the population was calculated as the average of three indices: specific theater attendance (I_t), museums (I_m) and library users (I_l): $I_c = (I_t + I_m + I_l) / 3$ (Table 4).

For five years, the composite index of cultural activity on average in Russia increased by 9.3%, from 0.21115 to 0.23087. A similar positive trend was observed in 53 regions. In half the federal subjects in 2010, this index was more than 0.207, and in 2015, 0.214, but the number of regions with an index higher than the Russian average decreased from 39 to 28. The composition of the leading regions also remained 70% unchanged. In 2010, the Chukotka Autonomous Okrug and Karelia and Omsk oblast were among the leaders, but in 2015, they were replaced by Sevastopol, Novgorod and Yaroslavl oblasts. The composition of the regions with the lowest cultural activity of the population, as well as the group of leaders, did not change significantly over five years. The group of outsiders included Dagestan, Kabardino-Balkaria, and Chechnya (despite the fact that in these republics, growth was recorded in all three cultural development indicators, and in Chechnya, it was significant); Krasnodar krai, Moscow oblast, and the Khanty-Mansi Autonomous Okrug (where the number of library users decreased); and Leningrad oblast, where the attendance of theaters and museums decreased, which affected their rating (in theaters it decreased from 55 to 73 and in museums from 11 to 44). The low cultural activity of the inhabitants of Leningrad and Moscow oblasts is largely due to the proximity of metropolitan cities.

Social Behavior of the Population

The social behavior of the population was estimated by the number of citizens with antisocial (deviant) behavior. These entail not only persons who have committed crimes, but also those registered at medical institutions (MI)—patients suffering from drug addiction, alcoholism, and other types of substance abuse. In health care, these deviations are considered diseases, but the state of health of these citizens is associated with an antisocial lifestyle.

Crime. In official statistics, the main indicator making it possible to judge the scale and dynamics of crime is the total number of reported crimes per 100 000 people. In addition, there are Rosstat data on the total number of women and men who have committed crimes (thous. people). The first indicator is significantly higher than the second, which is apparently because the same person simultaneously commits different types of crimes. Both indicators,

according to official statistics, have shown a positive trend in recent years: the number of crimes has decreased.

In 2015, in the Russian Federation, the number of persons (women and men per 100 000 people) who committed crimes was 734. However, this indicator is published in a regional context for odd years. Therefore, to assess the scale of antisocial behavior associated with crime, the study used the indicator of the total number of people who committed a crime per 100 000 people in 2009 and 2015.

The total number of persons who committed crimes in Russia in 2009 was 1 220 000; in 2015, 1 075 000; per 100 000 people, 860 and 734 people, respectively. Whereas the country's average specific indicator of persons who committed crimes decreased by 14.6%, a multidirectional dynamics was recorded in the regions. In most federal subjects (62), this indicator decreased: in 24 regions, the decrease was greater than in the country as a whole, and Moscow, the Nenets Autonomous Okrug, and Astrakhan and Novosibirsk oblasts were the leaders (a decrease of more than a third).

Among the 21 federal subjects with an increase in the specific number of persons who committed crimes, Vologda oblast, Kamchatka krai (by 13.1%), Kabardino-Balkaria (by 16.9%), and Dagestan (by 18.3%) had the highest growth rates.

In 2015, the number of federal subjects with an indicator below the Russian average remained almost unchanged: 39 versus 40 in 2009. The composition of the group of leaders—with a low number of those who committed crimes: in 2010 less than 575, and in 2015, less than 502 per 100 000—remained 70% the same. Despite the growth of this indicator in Ingushetia (from 168 to 186) and Dagestan (from 263 to 311), they retained their positions in this group: first and fourth. It also included the republics of Chechnya, Kabardino-Balkaria, and Karachay-Cherkessia, and Moscow and St. Petersburg. In 2015, the group included Tula and Belgorod oblasts and Sevastopol, which replaced Ryazan oblast, Adygea, and North Ossetia.

The group of ten outsider regions (with the highest specific number of persons who committed crimes—in 2010 more than 1 280, and in 2015, 1 130 per 100 000) retained, like the leader, 70% of the composition (Magadan oblast, Komi, Tyva, Khakassia, Altai, Buryatia, and Zabaykalsky krai). Whereas in Komi and Zabaykalsky krai a 5.2 and 6.8% increase in this indicator was recorded, respectively, in other regions of the group, there was a decrease from 4.7% in Buryatia to 14.7% in Altai. In 2009, it also included the Nenets Autonomous Okrug and Amur and Astrakhan oblasts, and in 2015, the Jewish Autonomous Oblast and Sakhalin and Kemerovo oblasts. The maximum regional differences decreased from 10.1 times (between the republics of Buryatia and Ingushetia) in

Table 4. Composite index of cultural activity of population in federal subjects in 2015 and their ranks in 2015 and 2010

Federal subject	Index 2015	Rank		Federal subject	Index 2015	Rank	
		2015	2010			2015	2010
Russian Federation	0.23087			Komi Republic	0.21213	43	42
St. Petersburg	0.66615	1	1	Tver oblast	0.21056	44	47
Sevastopol	0.42153	2		Khabarovsk krai	0.20990	45	59
Moscow	0.41673	3	4	Republic of Karelia	0.20671	46	3
Novgorod oblast	0.35401	4	25	Chelyabinsk oblast	0.20565	47	51
Republic of Mari El	0.34699	5	5	Tyumen oblast	0.20447	48	50
Yaroslavl oblast	0.32313	6	11	Zabaykalsky krai	0.20133	49	43
Pskov oblast	0.30442	7	9	Tomsk oblast	0.20072	50	52
Magadan oblast	0.30201	8	7	Arkhangelsk oblast	0.19696	51	62
Chuvash Republic	0.29231	9	8	Kemerovo oblast	0.19582	52	60
Krasnoyarsk krai	0.28448	10	10	Ulyanovsk oblast	0.19372	53	49
Vologda oblast	0.27983	11	22	Oryol oblast	0.19186	54	39
Republic of Tatarstan	0.27368	12	38	Republic of Buryatia	0.19144	55	46
Kostroma oblast	0.27067	13	19	Ivanovo oblast	0.19132	56	26
Sakhalin oblast	0.26500	14	17	Volgograd oblast	0.18803	57	21
Republic of Mordovia	0.26481	15	16	Republic of Kalmykia	0.17902	58	55
Omsk oblast	0.26395	16	6	Tyva Republic	0.17816	59	70
Murmansk oblast	0.25762	17	13	Amur oblast	0.17811	60	66
Kirov oblast	0.25016	18	14	Kurgan oblast	0.17593	61	37
Republic of Khakassia	0.24780	19	12	Yamalo-Nenets Autonomous Okrug	0.17064	62	82
Republic of Sakha (Yakutia)	0.24475	20	18	Republic of Altai	0.16977	63	57
Chukotka Autonomous Okrug	0.24470	21	2	Lipetsk oblast	0.16966	64	56
Ryazan oblast	0.24009	22	33	Rostov oblast	0.16932	65	65
Smolensk oblast	0.23993	23	15	Samara oblast	0.16802	66	69
Tambov oblast	0.23924	24	35	Irkutsk oblast	0.16015	67	53
Vladimir oblast	0.23922	25	27	Primorsky krai	0.15700	68	73
Kamchatka krai	0.23695	26	29	Altai krai	0.15520	69	54
Tula oblast	0.23381	27	41	Nenets Autonomous Okrug	0.14456	70	79
Bryansk oblast	0.23196	28	24	Republic of Ingushetia	0.14417	71	58
Novosibirsk oblast	0.22883	29	23	Republic of North Ossetia–Alania	0.14335	72	75
Astrakhan oblast	0.22637	30	45	Republic of Adygea	0.14323	73	67
Udmurt Republic	0.22632	31	30	Orenburg oblast	0.13773	74	63
Nizhny Novgorod oblast	0.22594	32	31	Stavropol krai	0.13591	75	72
Kaliningrad oblast	0.22455	33	36	Karachay-Cherkessia Republic	0.12541	76	71
Perm krai	0.22314	34	34	Krasnodar krai	0.11938	77	74
Kaluga oblast	0.22265	35	40	Kabardino-Balkaria Republic	0.11864	78	80
Republic of Bashkortostan	0.21954	36	32	Jewish Autonomous Oblast	0.11820	79	62
Belgorod oblast	0.21685	37	48	Voronezh oblast	0.11693	80	68
Saratov oblast	0.21635	38	20	Khanty-Mansi Autonomous Okrug	0.11554	81	78
Sverdlovsk oblast	0.21442	39	61	Moscow oblast	0.11348	82	81
Penza oblast	0.21412	40	44	Leningrad oblast	0.11031	83	77
Republic of Crimea	0.21412	41		Republic of Dagestan	0.10482	84	76
Kursk oblast	0.21396	42	28	Chechen Republic	0.08038	85	83

Federal subjects in which, despite positive dynamics of cultural activity of population, rank of region has decreased by 10 or more positions are highlighted in color.

Source. Authors' calculations.

2009 to 7.9 times (between the republics of Altai and Ingushetia) in 2015.

The contingent of persons registered in health care facilities for alcoholism and alcoholic psychosis, drug addiction, and other types of substance abuse in the country as a whole in 2010 was 1607 per 100000, of which 85.1% were alcoholics, 14.4% were drug addicts, and 0.5% other types of substance abusers. In 32 federal subjects, this specific indicator was below the national average.

After 5 years, the total specific number of the contingent registered in health care facilities for these reasons decreased in the country as a whole to 1278.8, or by 20.4%. Moreover, the contingent has changed little. A reduction in their number occurred in all federal subjects with the exception of Buryatia (growth by 2%) and the Jewish Autonomous Oblast (by 7.6%). The number of regions with an indicator below the national average remained almost the same, 33.

There were no significant changes in the composition of the ten regions with the lowest specific indicators: less than 1153 in 2010 and 868 in 2015. This group included five North Caucasian republics, Moscow, St. Petersburg, and Buryatia. In 2010, Belgorod and Orenburg oblasts were also among the leaders, and in 2015, they were replaced by Tomsk oblast and Krasnodar krai, where the contingent of those registered in health care facilities decreased by two times.

No major changes were recorded in the composition of the ten outsider regions (with the largest specific number of people registered in health care facilities—more than 2460 in 2010 and 1925 in 2015). In addition to the Chukotka Autonomous Okrug, the group included Kostroma, Nizhny Novgorod, Novgorod, Sakhalin, Ivanovo, and Magadan oblasts; Karelia and the Nenets Autonomous Okrug departed the group—there, the specific number of registered persons decreased by 1.5 and 3 times, respectively. They were replaced by Tambov and Bryansk oblasts, where the rate of decrease in this indicator was significantly lower. The maximum regional differences also decreased slightly: 53.4 times in 2010 between the Nenets Autonomous Okrug and Ingushetia versus 50.8 times in 2015 between the Chukotka Autonomous Okrug and Ingushetia.

The total number of persons with antisocial behavior was calculated as the sum of the absolute values of the considered indicators (Table 5).

The number of people with antisocial behavior in the period under review in the country as a whole decreased from 2467.2 to 2012.8 per 100 000, or by 18.4%. Similar dynamics was observed in all federal subjects, but its pace was different. As a result, most of the regions changed their rank: in 20 federal subjects, it increased, since the rate of decrease in the value of the specific population was higher. The maximum regional difference decreased from 24.7 between the Nenets Autonomous Okrug and Ingushetia in 2010 to

18 times between the Chukotka Autonomous Okrug and Ingushetia in 2015. As well, the composition of people with deviant behavior did not change as significantly. The share of those registered in health care facilities decreased from 65.1 to 63.5%, including more than half the contingent with alcoholism: in 2010 55.4%, and in 2015, 53.5%.

The number of regions with a specific number of people with antisocial behavior below the national average in 2015 decreased to 28 compared to 33 in 2010. As in the distribution of regions by level of crime and specific number of the contingent registered in health care facilities, as part of the group of ten, in addition to the two Russian capitals, the majority of the leading regions were represented by the North Caucasian republics. In 2010, it also included Tatarstan. Five years later, Karachay-Cherkessia and Tatarstan were replaced by Krasnodar krai and Leningrad oblast, where the proportion of people who committed crimes significantly decreased, and the contingent of those registered at health care facilities decreased by 50%.

As for the group of regions with the highest rates of antisocial behavior (in 2010, over 3500, in 2015, over 2900 per 100000), the Far Eastern regions predominated. In addition, the group of outsiders included Novgorod and Ivanovo oblasts with a high number of people registered at health care facilities, and the Republic of Khakassia with a high crime rate. In 2010, this group included Perm krai, Karelia, and the Nenets Autonomous Okrug; after 5 years, Nizhny Novgorod and Bryansk oblasts, and the Jewish Autonomous Oblast, which lowered its rating compared to 2010 by 22 positions (from 54 to 76). Significant shifts (by ten or more positions) occurred in another 15 federal subjects (Table 1; 5 highlighted in color).

To include this indicator in the integral assessment of human potential, its index was calculated. Moreover, the higher the index, the fewer the people with antisocial behavior live in a given territory; in other words, it characterizes, to a greater extent, socially normal rather than deviant behavior.

HUMAN POTENTIAL OF THE POPULATION OF RUSSIAN REGIONS

The human potential index (HPI) of Russia and its regions was calculated as the arithmetic mean of the indices of its five components. In the Russian Federation as a whole, it has increased over 5 years by 12.7%, from 0.39622 to 0.44636. All components of the HPI had a positive trend, but the growth rates varied from 109.3% in cultural activity to 114.4% in education. Therefore, the share of each of the components in the average Russian HPI did not undergo major changes over the period under review: the share of the demographic component and the health of the population decreased from 14 to 13.7% and from 20.9 to 20.7%,

Table 5. Number of people with antisocial behavior (persons per 100 000) in federal subjects in 2015 and their ranks in 2015 and 2010

Federal subject	Number of persons with antisocial behavior		Rank		Federal subject	Number of persons with antisocial behavior		Rank	
	2015	2010	2015	2010		2015	2010	2015	2010
Russian Federation	2013	2467			Tula oblast	2222	2696	43	43
Republic of Ingushetia	256	263	1	1	Kemerovo oblast	2245	2507	44	24
Chechen Republic	598	670	2	2	Republic of Buryatia	2249	2303	45	25
Republic of Dagestan	722	787	3	3	Oryol oblast	2265	2585	46	37
St. Petersburg	1170	1392	4	6	Republic of Sakha (Yakutia)	2296	2788	47	49
Moscow	1196	1453	5	7	Pskov oblast	2303	2718	48	44
Kabardino-Balkaria Republic	1325	1354	6	5	Republic of Mari El	2366	2733	49	47
Republic of North Ossetia–Alania	1349	1345	7	4	Kirov oblast	2376	3075	50	62
Belgorod oblast	1389	1779	8	8	Arkhangelsk oblast	2398	2338	51	30
Krasnodar krai	14456	2336	9	29	Chuvash Republic	2429	2605	52	38
Leningrad oblast	1536	2679	10	40	Chelyabinsk oblast	2437	2835	53	51
Sevastopol	1562		11		Udmurt Republic	2461	2625	54	39
Republic of Tatarstan	1587	1938	12	10	Tver oblast	2480	2856	55	53
Karachay-Cherkessia Republic	1664	1900	13	9	Republic of Adygea	2480	2725	56	45
Stavropol krai	1703	1990	14	11	Republic of Altai	2485	3481	57	73
Sverdlovsk oblast	1735	2154	15	13	Primorsky krai	2499	3180	58	66
Volgograd oblast	1739	2220	16	17	Lipetsk oblast	2509	2906	59	55
Tomsk oblast	1744	3087	17	65	Smolensk oblast	2512	2743	60	48
Orenburg oblast	1763	2049	18	12	Yamalo-Nenets Autonomous Okrug	2516	2847	61	25
Novosibirsk oblast	1788.1	3031	19	58	Vladimir oblast	2525	2689	62	42
Murmansk oblast	1863	2159	20	14	Nenets Autonomous Okrug	2562	6499	63	83
Khanty-Mansi Autonomous Okrug	1886	2826	21	50	Kurgan oblast	2571	2729	64	46
Republic of Kalmykia	1903	2230	22	20	Tambov oblast	2630	2922	65	56
Republic of Crimea	1924		23		Altai krai	2632	3086	66	64
Republic of Bashkortostan	1941	2307	24	26	Irkutsk oblast	2658	3062	67	60
Rostov oblast	1947	2226	25	19	Amur oblast	2691	3472	68	72
Kaliningrad oblast	1955	2181	26	15	Kostroma oblast	2696	3286	69	69
Samara oblast	1969	3059	27	59	Khabarovsk krai	2707	3072	70	61
Yaroslavl oblast	1985	2286	28	22	Komi Republic	2737	3030	71	57
Saratov oblast	2014	2234	29	21	Perm krai	2757	3547	72	75
Moscow oblast	2015	2334	30	28	Zabaykalsky krai	2773	3079	73	63
Republic of Mordovia	2022	2210	31	16	Republic of Karelia	2814	3624	74	76
Kaluga oblast	2042	2297	32	24	Tyva Republic	2837	3242	75	67
Krasnoyarsk krai	2052	2531	33	35	Jewish Autonomous Oblast	2943	2858	76	54
Omsk oblast	2056	2409	34	33	Republic of Khakassia	2946	3528	77	74
Penza oblast	2059	2223	35	18	Novgorod oblast	3015	3719	78	77
Tyumen oblast	2122	2395	36	32	Nizhny Novgorod oblast	3048	3379	79	71
Ryazan oblast	2156	2297	37	23	Bryansk oblast	3101	3339	80	70
Ulyanovsk oblast	2175	2572	38	36	Ivanovo oblast	3746	4336	81	80
Kursk oblast	2179	2683	39	41	Sakhalin oblast	3767	4119	82	79
Astrakhan oblast	2186	3282	40	68	Kamchatka krai	3959	4101	83	78
Voronezh oblast	2188	2326	41	27	Magadan oblast	4052	5610	84	82
Vologda oblast	2203.7	2220	42	17	Chukotka Autonomous Okrug	4611	5357	85	81

Regions that have lowered their rank by ten or more positions are highlighted in color.

Source: authors' calculations.

respectively; the components of cultural activity of the population, from 10.7% in 2010 to 10.3% in 2015; the role of education and social behavior in the formation of HPI slightly increased, from 25.1 to 25.5%, respectively, and from 29.3 to 29.7%.

In federal subjects, the HPI also improved, with the exception of two republics of the North Caucasus Federal District (the integral index decreased in Dagestan to 99.8% and in Karachay-Cherkessia to 95.5%) and the Jewish Autonomous Oblast, 99% compared to 2010. In all three regions, the demographic situation and cultural activity of the population deteriorated. In the Jewish Autonomous Oblast in 2015, in addition to the largest emigration in the country and a decrease in the number of users of public libraries to 61.7%, the share of people with antisocial behavior increased. In the remaining 80 regions (except for the Republic of Crimea and Sevastopol), the growth rate of the HPI ranged from 105.2% in North Ossetia to 192% in the Nenets Autonomous Okrug and in 47 federal subjects, it was higher than the national average.

By HPI value, all federal subjects can be divided into three types: (a) those with a relatively high human potential (the HPI is higher than the average Russian level), among which is the group of ten leading regions; (b) those with an average level of human potential (the HPI is below the Russian average, but not below the median level); (c) those with human potential below the average level (HPI is less than the median level), with indication of the ten regions with the lowest HPI (Table 6). In the number of federal subjects included in each type, there were practically no changes over 5 years, except for the fact that the median level shifted by one position in 2015 due to an increase in the number of regions from 83 to 85.

The *group with relatively high development of human potential* in 2010 and 2015 included Its composition did not change significantly in 5 years. Murmansk oblast, Stavropol krai, Volgograd oblast, where the HPI increased by only 6–7%, and Karachay-Cherkessia, where the HPI decreased, entered the group with an average HPI. They were replaced by Sevastopol, the Republic of Crimea, Krasnodar krai, and Novosibirsk oblast. In the last two regions, the growth rate of the HPI significantly exceeded the average Russian level (22 and 18.7, respectively). More significant shifts in this type occurred in the population: in 5 years it increased from 48.1 to 54 mln people, or from 33.7 to 36.7% of Russia's total population. This increase is not so much the result of a change in the composition of the group, but an increase in the populations of regions.

The average HPI in this group in 2010 was 0.44665; in 2015, it increased to 0.50940 (by 14%). In relation to the average Russian index, it was higher in 2010 by 12.7% and in 2015 by 14.1%, and the indices of its components, with the exception of cultural activity,

were also higher than in the country as a whole (Table 7). The education component grew at the highest rate (123.6%) (from 0.51016 to 0.63055), and its share on average in the group in the HPI increased from 22.7 to 24.8%. The social behavior component continued to play the largest role in the formation of the index, despite the relatively low growth rates of its index (109.9%) and decrease in the share in the structure of the average-group HPI from 31.4 to 30.5%. The average health index grew at an even slower pace (108.5%), and its share decreased from 21.1 to 20.1%. The indices of the demographic component (113.6%) and cultural activity (118.5%) increased at a relatively high pace; however, the share of the former in the structure of the average HPI for the group decreased slightly (from 16.9 to 16.7%), and the former increased only from 8 to 8.1%.

The maximum regional differences in the HPI in this group (including its leaders) did not change: by 1.5 times in 2010 between St. Petersburg and Volgograd oblast and in 2015 between Sevastopol and Leningrad oblast.

The group of ten leading regions differs by the highest values of all HPI components. Its average HPI in 2015 increased by 14.6% and was 7.6% higher than the group average (0.54836 versus 0.50940). In relation to the average Russian HPI in 2010, the average HPI of the leading regions was 120.7%, in 2015, it was 122.9% (see Table 7).

The composition of the group of leaders over 5 years changed by 40%; the republics of Dagestan, Karachay-Cherkessia, and North Ossetia–Alania and Kaliningrad oblast left it, and whereas the first two, as noted above, the HPI decreased slightly, the latter, on the contrary, witnessed growth by 5 and 9%, respectively. With the exception of Karachay-Cherkessia, all three regions in 2015 remained in the group with a relatively high HPI. The group of leaders in 2015 included Krasnodar krai and the Chechen Republic, where the HPI increased by 22 and 14%, respectively, as well as Sevastopol and the Republic of Crimea. The population in the leading regions grew at a higher rate than in the group as a whole (118 versus 112%) and increased from 31.7 to 37.4 mln people over 5 years.

Six permanent members of the group of leaders are distinguished by relatively low (below the Russian average) growth rates in HPI, with the exception of Ingushetia (19.1%) and Tyumen oblast without autonomous okrugs (13.8%). Each of the ten regions in 2015, as in 2010, was also distinguished by a number of high values of the HPI components. Thus, for all, the index of the demographic component was higher than the average Russian level, and the first three places were occupied by Sevastopol (due to migration increase), Ingushetia, and Tyumen oblast (without autonomous okrugs), where natural and migration population increase was recorded simultaneously.

Table 6. Human potential index (HPI), growth rate of HPI (2015/2010) in federal subjects, and their ranks in 2015 and 2010

Federal subject	2015			Rank 2010	Federal subject	2015			Rank 2010
	index	growth rate, %	rank			index	growth rate, %	rank	
Russian Federation	0.44636	112.7			Udmurt Republic	0.41964	115.8	43	41
<i>Type 1. Regions with a relatively high HPI (above national average)</i>					<i>Type 3. Regions with below-average HPI (below median)</i>				
Sevastopol	0.69872		1		Republic of Kalmykia	0.41952	110.4	44	32
St. Petersburg	0.66485	109.9	2	1	Vologda oblast	0.41756	117.4	45	45
Moscow	0.65343	108.3	3	2	Chelyabinsk oblast	0.41564	112.9	46	37
Republic of Ingushetia	0.55204	119.1	4	4	Republic of Altai	0.41096	126.3	47	61
Moscow oblast	0.51082	111.4	5	5	Ryazan oblast	0.40887	115.8	48	46
Tyumen oblast	0.49038	113.8	6	10	Primorsky krai	0.40452	121.8	49	59
Krasnodar krai	0.48072	122.0	7	23	Voronezh oblast	0.40261	106.5	50	34
Republic of Crimea	0.47883		8		Khbarovsk krai	0.40150	112.8	51	44
Khanty-Mansi Autonomous Okrug	0.47765	109.6	9	8	Penza oblast	0.40059	109.6	52	39
Chechen Republic	0.47620	114.0	10	12	Tula oblast	0.39913	119.8	53	58
Kabardino-Balkaria Republic	0.47307	110.2	11	11	Orenburg oblast	0.39784	111.2	54	43
Republik of North Ossetia–Alania	0.47201	105.2	12	6	Lipetsk oblast	0.39671	115.7	55	55
Kaliningrad oblast	0.47184	109.2	13	9	Pskov oblast	0.39489	126.4	56	69
Tomsk oblast	0.46935	115.1	14	17	Kostroma oblast	0.38866	124.4	57	68
Republic of Tatarstan	0.46867	112.3	15	13	Republic of Khakassia	0.38810	114.1	58	53
Republic of Dagestan	0.46460	99.8	16	3	Kemerovo oblast	0.38774	113.0	59	49
Belgorod oblast	0.46224	112.0	17	14	Vladimir oblast	0.38773	112.5	60	48
Novosibirsk oblast	0.45973	118.7	18	24	Smolensk oblast	0.38628	114.4	61	55
Leningrad oblast	0.45346	111.2	19	16	Ulyanovsk oblast	0.38476	113	62	56
<i>Type 2. Regions with an average level of HDI</i>					Tyva Republic	0.38096	123.1	63	70
Republic of Sakha (Yakutia)	0.44572	115.2	20	25	Nizhny Novgorod oblast	0.38096	116.3	64	60
Krasnoyarsk krai	0.44495	114.8	21	23	Kirov oblast	0.38013	121.6	65	67
Yaroslavl oblast	0.44220	116.7	22	33	Perm krai	0.37729	124.8	66	75
Astrakhan oblast	0.44134	125.2	23	47	Novgorod oblast	0.37651	134.8	67	80
Murmansk oblast	0.44089	107.7	24	15	Oryol oblast	0.37336	109.1	68	51
Republic of Mordovia	0.43932	116.7	25	35	Tver oblast	0.37104	118.0	69	66
Republic of Adygea	0.43713	118.8	26	38	Tambov oblast	0.37103	116.5	70	64
Sverdlovsk oblast	0.43296	112.9	27	29	Arkhangelsk oblast	0.36896	109.9	71	57
Omsk oblast	0.43229	112.3	28	28	Irkutsk oblast	0.36416	112.5	72	62
Republic of Buryatia	0.43206	110.6	29	22	Kamchatka krai	0.36391	107.5	73	54
Saratov oblast	0.43152	111.7	30	27	Bryansk oblast	0.36285	117.3	74	72
Kaluga oblast	0.42835	112.2	31	30	Altai krai	0.3617	114.7	75	65
Samara oblast	0.42726	117.8	32	40	Sakhalin oblast	0.36085	121.9	76	76
Stavropol krai	0.42668	106.0	33	18	Komi Republic	0.35879	116.2	77	73
Republic of Mari El	0.42439	117.3	34	42	Amur oblast	0.35763	123.6	78	78
Yamalo-Nenets Autonomous Okrug	0.42434	108.2	35	21	Republic of Karelia	0.35235	109.6	79	63
Chuvash Republic	0.42395	114.5	36	36	Magadan oblast	0.35116	137.3	80	81
Rostov oblast	0.42305	110.8	37	31	Zabaykalsky krai	0.33753	108.7	81	71
Volgograd oblast	0.42270	106.2	38	19	Kurgan oblast	0.32883	108.5	82	74
Kursk oblast	0.42138	123.7	39	52	Ivanovo oblast	0.32130	113.5	83	79
Nenets Autonomous Okrug	0.42108	192.2	40	83	Chukotka Autonomous Okrug	0.29960	132.2	84	82
Republic of Bashkortostan	0.42043	108.7	41	26	Jewish Autonomous Oblast	0.29041	98.9	85	77
Karachay-Cherkessia Republic	0.42011	95.4	42	7					

Regions whose ranks decreased by ten or more positions in 2015 compared to 2010 are highlighted in color.

Source. Authors' calculations.

Table 7. Average value of human potential index (HPI), its growth rate and structure in federal subjects of various types in 2010 and 2015

Year	Indicator	Components of HPI					Total, average and %
		demographic	health	education	cultural activity	social behavior	
Russian Federation							
2010	HPI	0.27742	0.41503	0.49700	0.21115	0.58051	0.39622
	Structure of HPI index	14.0	20.9	25.1	10.7	29.3	100
2015	HPI	0.30645	0.46259	0.56875	0.23087	0.66313	0.44636
	Growth rate 2015/2010, %	110.5	111.3	114.4	109.3	114.2	112.7
	Index structure, %	13.7	20.7	25.5	10.3	29.7	100
Type 1. Federal subjects with a relatively high HPI (above average Russian level) (19)							
2010	HPI	0.37742	0.46625	0.51016	0.18289	0.69653	0.44665
	Same in % versus RF	136	112.3	102.6	86.6	120	112.7
	Structure of HPI index	16.9	21.1	22.7	8.0	31.4	100
2015	Average HPI index	0.42878	0.50569	0.63055	0.21672	0.76526	0.50940
	Same in % versus RF	139.9	109.3	110.9	93.9	115.4	114.1
	Growth rate, %	113.6	108.5	123.6	118.5	109.9	114.0
	Index structure, %	16.7	20.1	24.6	8.1	30.5	100
Including leading regions (10)							
2010	HPI	0.42129	0.47712	0.56948	0.20187	0.72222	0.47839
	Same in % versus Russian Federation	151.9	115	114.6	95.6	124.4	120.7
	Structure of HPI index	17.7	20.2	23.6	8.1	30.4	100
2015	Average HPI index	0.51919	0.51576	0.68590	0.24959	0.77137	0.54836
	Same in % versus RF	169.4	111.5	120.6	108.1	116.3	122.9
	Growth rate, %	123.2	108.1	120.4	123.6	106.8	114.6
	Index structure, %	19.0	19.1	24.8	8.5	28.6	100
Type 2. Federal subjects with an average HDI (2010, 23; 2015, 24)							
2010	PE Index	0.23752	0.41661	0.45584	0.20878	0.57596	0.37894
	Same in % versus RF	85.6	100.4	91.1	98.9	99.2	95.6
	Index structure, %	12.5	22.0	24.1	11.0	30.4	100
2015	Average HPI index	0.27151	0.45977	0.55371	0.21893	0.64687	0.43016
	Same in % versus RF	88.6	99.4	97.4	94.8	97.5	96.4
	Growth rate, %	114.3	110.4	121.5	104.8	112.3	113.5
	Index structure, %	12.6	21.4	25.8	10.2	30.1	100
Type 3. Federal subjects with a HPI below median level (2010, 41; 2015, 42)							
2010	Average HPI index	0.15688	0.35988	0.41779	0.21428	0.43851	0.31747
	Same in % versus RF	56.5	86.7	84.1	101.5	75.5	80.1
	Index structure, %	9.9	22.7	26.7	13.7	27.0	100
2015	Average HPI index	0.20338	0.41743	0.50733	0.21321	0.53820	0.37591
	Same in % versus RF	66.4	90.2	89.9	92.4	81.2	82.2
	Growth rate, %	129.6	116.0	121.4	99.5	122.7	118.4
	Index structure, %	10.8	22.2	27.0	11.3	28.6	100
Including outsider regions (10)							
2010	Average HPI index	0.12855	0.33045	0.41680	0.22199	0.27627	0.27481
	Same in % versus RF	46.4	79.6	83.3	105.1	47.6	69.4
	Index structure, %	9.4	24.0	30.3	16.2	20.1	100
2015	Average HPI	0.15548	0.39560	0.48415	0.20954	0.43445	0.33584
	Same in % versus RF	50.7	85.5	85.1	90.8	65.5	75.2
	Growth rate, %	120.9	119.7	116.2	94.9	157.3	122.2
	Index structure, %	9.3	23.6	28.8	12.5	25.9	100

Source. Authors' calculations.

The assessment of the health of the population in all federal subjects of the group of leaders is also higher than the national average, but its growth rate was very modest (108.1%), and the first three places were occupied by Moscow (due to relatively high LE and low morbidity), Ingushetia (with the highest LE), and Moscow oblast (with relatively high LE and low disability). As for education of the population, Ingushetia and Chechnya remain problematic in this group, even though the average education level (in points) increased by 10 and 12%, respectively, versus 2.7% on average in the country. The first three places not only in this group, but also among all federal subjects in terms of education level are occupied by Moscow, St. Petersburg, and Sevastopol. The same regions are also first in cultural activity of the population, while in Moscow oblast, Krasnodar krai, and the Khanty-Mansi Autonomous Okrug, this index in 2015 was two times lower than the national average. The situation is not much better in Chechnya.

The regions in the group of leaders are distinguished by a high social behavior index; only in Moscow and Tyumen oblasts is it slightly lower than the average Russian one; the top places are occupied by Ingushetia, Chechnya, and St. Petersburg.

In the structure of the average HPI of the leading regions, as well as overall for 19 federal subjects, no significant changes are observed. The difference in the role of various components in formation of the HPI decreased on average for this group. However, the maximum regional differences in the HPI slightly increased from 1.4 to 1.47 times, as well as in the group as a whole, from 1.52 to 1.54 times.

The second group (with an average level of development of human potential) in 2015 included 24 federal subjects; in 2010, 23. Its composition changed by almost a third: in addition to the four regions that departed the first group, it included Mari El, the Nenets Autonomous Okrug, and Kursk and Astrakhan oblasts. The population decreased over 5 years from 48.1 to 41.4 mln people (from 33.7 to 28.3% of the total number of Russians). The average HPI for the group increased from 0.37894 to 0.43016 (by 13.5%) and in relation to the average Russian index, in 2010 it was 95.6%, and in 2015 it was 96.4%. All components of HPI were, on average, slightly lower than the national average. The maximum regional differences in the HPI index decreased from 1.16 to 1.13 times.

The index of the education component grew at the highest rate (121.5%), and its ratio with the average Russian indicator increased from 91.7 to 97.4%, and its share in the structure of the average HPI increased from 24.1 to 25.8%. In 2015, the population of the Yamalo-Nenets Autonomous Okrug, Samara oblast, the republics of Sakha (Yakutia) and Adygea had a relatively high education level, and the population of the Stavropol krai had a low education level. Cultural activity increased at the lowest rate (104.8%). At the

same time, in the level and share in the structure of the HPI index, it remained somewhat higher than the average in the group with a relatively high HPI. According to the level of cultural activity in 2015, on the one hand, Yaroslavl oblast, Krasnoyarsk krai, and Chuvashia and Mari El were distinguished, while on the other, Karachay-Cherkessia, the Nenets Autonomous Okrug, and Stavropol krai. The health of the population in the group improved, but not at a fast rate (110.4%); as a result, in 2015, its average group index became slightly lower than the average for the Russian Federation (0.45977 versus 0.46259). Good health in the group is particularly demonstrated by residents of Stavropol krai, Karachay-Cherkessia, and Astrakhan oblast; serious problems with the health of the population are mainly noted only in the Nenets Autonomous Okrug.

The demographic component on average in the group increased at a higher rate than in the Russian Federation (114.3 versus 110.5%). As a result, its lag behind the national average decreased from 14.4 to 11.4%. Problematic in this regard are still Murmansk and Volgograd oblasts and, in particular, the Yamalo-Nenets Autonomous Okrug, where the demographic component was 0.09677, and in the structure of the HPI it accounted for only 4.6%. The largest share in its structure in this type of regions, like the first, is occupied by the social behavior component, and by region in 2015 it varied from 34.6% in Karachay-Cherkessia to 26.9% in the Yamalo-Nenets Autonomous Okrug. Over 5 years, its value increased by 12.3% (from 0.57596 to 0.64687), but the ratio with the average Russian level decreased from 99.2 to 97.5%. Relatively low values (less than 0.6) of this component remain in the Yamalo-Nenets Autonomous Okrug, the Nenets Autonomous Okrug, and the republics of Adygea, Mari El, and Chuvashia.

The third type regions with development of human potential below the average level is the most numerous: in 2010 it included 41 federal subjects; in 2015, 42; and its composition has not changed much. In 2015, there was an exchange with regions of the second type: four federal subjects left, replaced by Kalmykia and Chelyabinsk, Voronezh, and Penza oblasts. In the third group, the total population increased from 46.7 to 51 mln people, or from 32.7 to 34.8% of the total number of Russians.

The average HPI increased by 18.4% over 5 years (from 0.31747 to 0.37591). In 2010, it was below 0.3 in eight federal subjects; 5 years later, only 2 remained: the Jewish Autonomous Oblast and Chukotka Autonomous Okrug. This type of regions is distinguished, first, not only by the highest growth rate of the average HPI, but also by the high average growth rates of its four components: demographic (129.6%), health (116%), education (121.4%), and social behavior (122.7%); there has also been slight decrease in the average value of the cultural activity component (by

0.5% from 0.21893 to 0.21321). Second, the average HPI index in this type of regions and the average indices of all five of its components remain, as in 2010, the lowest. The most problematic are the characteristics of demography and social behavior. The average index of the first component, even as a result of its increase in 2015, remained 1.5 times lower than the Russian average (0.20338 versus 0.30645), and social behavior, 1.2 times lower (0.53820 versus 0.66313). Whereas problems with demography are more the result of departure of residents to other regions, with social behavior, they are the result of a high proportion of deviants.

Due to the urgency of the problem of integrated spatial development and reduction of interregional differences, including in human development, the situation that has developed in the ten federal subjects with the lowest HPI (outsider regions), which are included in the third type of regions, requires special attention. Seven million people lived in these ten regions in 2010; in 2015, 6.1 mln, or 4.9 and 4.2% of the total population of the country, respectively. After 5 years, the composition of this group remained 70% unchanged; its permanent members were five regions of the Far Eastern Federal District, as well as Kurgan and Ivanovo oblasts. In 2015, Perm krai, Novgorod oblast, and the Nenets Autonomous Okrug left the group; in each, all components of the HPI demonstrated significant positive changes. The index of the demographic component in the Nenets Autonomous Okrug significantly (1.5 times) exceeded the average Russian indicator, but the main shift was recorded in the characteristics of social behavior, the index of which in 2010 was slightly higher than zero and in 2015 reached 0.563182 (outrageous specific indicators for alcohol dependence of the population decreased by 3.2 times, but at the same time, they remained 1.5 times higher than the average for the Russian Federation). Novgorod oblast reached high positive shifts in the cultural sphere.

In 2015, the group of outsiders included Zabaykalsky krai and the republics of Komi and Karelia. Only in Komi was the growth rate of the HPI higher than the national average (16.2%), while in the other two territories, the increase was less than 10%. In Komi, all components of the HPI had a positive trend; in Karelia, the index of cultural activity of the population decreased by 1.7 times. In Zabaykalsky krai, a decrease was recorded in two characteristics: demographic (the result of emigration) and cultural activity (the number of library users decreased). In 2010, only Karelia was relatively far from the majority of outsiders in HPI level (63rd place among Russian).

The average HPI among outsiders grew at the highest rate (122.2%). Among the seven permanent members of the group in 2015, the HPI decreased only in the Jewish Autonomous Oblast, while in all the rest it increased, and the highest growth rates were noted in

Magadan oblast (137%), the Chukotka Autonomous Okrug (132.2%), and Amur and Sakhalin oblasts (123.6 and 121.9%, respectively). In all ten regions, there are serious problems with the demographic component due to the active departure of the population. The average index of this component in 2015 remained almost two times lower than the Russian average and varied from 0.23710 in Sakhalin oblast to 0.08387 in Magadan oblast and 0.05806 in the Jewish Autonomous Oblast. The average health index (0.39560) in 2015 was 85.5% of the average for the Russian Federation. Health problems are still most acute among residents of Amur oblast, the Jewish Autonomous Oblast, Chukotka Autonomous Okrug, and the Republic of Karelia, despite the fact that in all four regions, the health index has increased, but remains significantly below the national average (0.346–0.375 versus 0.463 for the RF). The average group value of the education component remained almost in the same ratio with the average Russian level, and in Zabaykalsky krai, and Kurgan oblast, this index was less than 0.38.

The indicator of cultural activity of the population in 2010 was 5% higher than the national average, and after 5 years, it dropped to 90.8%; the Jewish Autonomous Oblast and Kurgan and Amur oblasts were the most problematic in this area. Problems with the social behavior of the population remain particularly relevant in the Chukotka Autonomous Okrug and Magadan oblast. On the whole, in the ten regions, the growth rates of the social behavior component were the highest (157.3%); however, in relation to the average Russian level, it was 65.5% (in 2010, only 47.6%). The average structure of the integrated HPI of outsider regions in 2015 became much closer to the average structure of all regions of the third type than in 2010.

The maximum regional differences in the HPI in regions of the third type decreased over 5 years from 1.63 times (between Orenburg oblast and the Nenets Autonomous Okrug) to 1.44 times (between Kalmykia and the Jewish Autonomous Oblast), including in outsider regions: 1.38 times (between Kurgan oblast and the Nenets Autonomous Okrug) to 1.24 times (between Sakhalin oblast and the Jewish Autonomous Oblast), and in the entire Russian Federation, from 2.76 times (between St. Petersburg and the Nenets Autonomous Okrug) to 2.41 times (between Sevastopol and the Jewish Autonomous Oblast).

CONCLUSIONS

One of the factors of socioeconomic development and, at the same time, its goal is the human potential of the population of the country and its regions. Modernization of the economy is impossible without proper quality of human potential. In Russia, with its vast territory, which includes 85 federal subjects, and the multinational composition of the population, an important task is to overcome spatial differentiation,

including quality of human potential. In this study, assessment of HPI included five of its components: demographic, health, education, cultural activity, and social behavior of the population. It was determined by the index method. Rosstat data for 2010 and 2015 served as the information base.

The study showed that over 5 years, the quality of human potential of the Russian population has improved. The HPI for the whole country increased by 12.7%, the value of each of its components increased from 9.3% in cultural activity to 14.4% in social behavior. The same processes were observed in federal subjects, except for the Jewish Autonomous Oblast and two republics of the North Caucasian Federal District—Dagestan and Karachay-Cherkessia—but they also did not show a significant decrease in the quality of human potential. The dynamics of the HPI and its individual components in regions differed sharply from the national average. Thus, the growth rate of HPI varied in a fairly wide range: from 105.2% in North Ossetia to 192.2% in the Nenets Autonomous Okrug; cultural activity, from 59.6% in Karelia to 770% in Chechnya.

According to the value of the integral index, all federal subjects are grouped into three types: (1) those with human potential above the average Russian level; (2) those with average human potential; and (3) those with human potential below the average level. In the two extreme groups, ten federal subjects were additionally distinguished with the highest and lowest HPI, the so-called leaders and outsiders. For five years, the composition of the three types of regions has not undergone major changes, and in terms of leaders and outsiders, 70% remained the same as in 2010. However, as a result of different growth rates of HPI, the rank of regions in the distribution of this indicator in most of them has changed. At the same time, the inequality between federal subjects in the quality of human potential has slightly decreased: from 2.76 to 2.41 times.

Since the ultimate goal of the study is to assess the readiness of federal subjects to participate in economic modernization, the average Russian level was used as a criterion by which, from this viewpoint, regional human potential and its individual characteristics were assessed.

In 2010 and 2015, the HPI was higher than the national average in only 19 regions: 48 mln people resided in this group in 2010 and 54 mln in 2015. In 2010, only two regions with a total population of 16.3 mln people (11.4%)—Moscow and St. Petersburg—met this criterion for all five HPI characteristics. In 2015, Sevastopol joined them, increasing the number to 17.9 mln people (12.2%). Another five regions—Tyumen oblast without autonomous okrugs, the republics of Crimea and Tatarstan, the Khanty-Mansi Autonomous Okrug, and Kaliningrad oblast—in 2015 did not reach the average Russian level of one

characteristic. Moscow and Leningrad oblasts had two such characteristics, and one of them was cultural activity of the population. However, their proximity to two Russian capitals makes up for this shortcoming. All of the above regions, which are home to 18.8 mln people (12.9%), have a chance to rectify the situation relatively quickly.

In 2015, the regions of the first type included four North Caucasian republics. The quality of the HPI of these republics is explained by the high birth rate and LE, as well as by national sociocultural traditions. However, in Chechnya and Ingushetia, serious problems have been identified with education of the population, which does not allow us to consider them even conditionally ready for the implementation of the modernization process.

The analysis showed that in most federal subjects, demographic problems remain the most pressing, manifested as a low natural increase in and high migration decrease of the population. Their solution is one of the most difficult tasks. Improving health is particularly important for regions with harsh natural and climatic conditions, poor environmental conditions, and a high proportion of rural settlements remote from administrative centers. A number of regions lag behind the Russian average in education level of the population. The social and cultural component of the HPI also requires serious attention. And whereas cultural activity of the population living in a given territory largely depends on the presence of cultural institutions, the decrease in the number of people with antisocial behavior depends on many factors, above all, on the increase in demand for labor and its qualitative balance with labor supply.

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CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

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