

# SOCIAL DEVELOPMENT

DOI: 10.15838/esc/2015.3.39.9

UDC 338.24(1-2/-3):316.42, LBC 65.04

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## Typology of Regions by Level and Dynamics of the Quality of Life



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**Abstract.** The paper considers the methodology and algorithm for the construction of typologies of regions in a two-dimensional space “level of development – dynamics of development” taking into account the quality of life, which is one of the most relevant competitiveness factors at the present stage of Russia’s development. The authors analyze the concept of “quality of life” and propose their own variant of the concept, on the basis of which they make a list of indicators for measuring and assessing the “quality of life” factor. In the implementation of the algorithm it is proposed to transform specific indicators, which assess the level and dynamics of the quality of life, into nonmetric numerical scores, normalized to the weighted average values of indicators for the Russian regions. The method of transformation of indicators into scores was tested on the example of the Northwestern Federal District regions, and the typologies in a two-dimensional space “level – dynamics” of the quality of life were made for 80 regions of Russia; the level of the quality of life was assessed according to official statistics for 2013, and the dynamics of the quality of life was assessed with the use of official statistics for 2011–2013. A detailed analysis is provided for each of the proposed typological groups and characteristics of this typology are highlighted. The proposed

methodology and algorithm make it possible to compare and analyze not only the level and dynamics of development of different factors promoting competitive attractiveness, but also the interaction between the factors, for example, such as economy and the quality of life, economy and innovation, innovation and human resources, quality of life and innovation, etc. The typology provides a better understanding of advantages and disadvantages of both federal and local social policy for regional strategic development and helps justify the need and the focus of territorial development programs and projects taking into account the necessity to ensure competitive attractiveness of regions by the quality of life.

**Key words:** typology of regions, competitive potential, quality of life, dynamics of the quality of life.

The regions are developing in the complex macro system of the country and the world and the degree of competitive attractiveness of a region depends not only on positive changes in the socio-economic environment, but also on the speed and vectors of change in the totality of regions participating in competitive interaction.

This work is aimed at:

- proposing methods to assess the development and construction of typologies of regions in function of two interdependent variables – level of development and growth dynamics;

- testing the method and identify patterns in the spatial development of Russian regions in terms of their competitive attractiveness for residents on the example of the life quality factor.

In accordance with the given objectives the study tries to solve the following tasks:

1. Offer the algorithm for two-dimensional analysis and construction of typologies of regions by life quality in the function of two variables – level of life quality and dynamics of its change;

2. Create the system of indicators to assess the life quality level and dynamics in the regions, which is adequate to social development vectors in Russia;

3. Offer the method to translate different private indicators of life quality into generalized assessments;

4. Assess the feasibility and practical value of constructing typologies of regions in terms of their competitive attractiveness on the example of life quality.

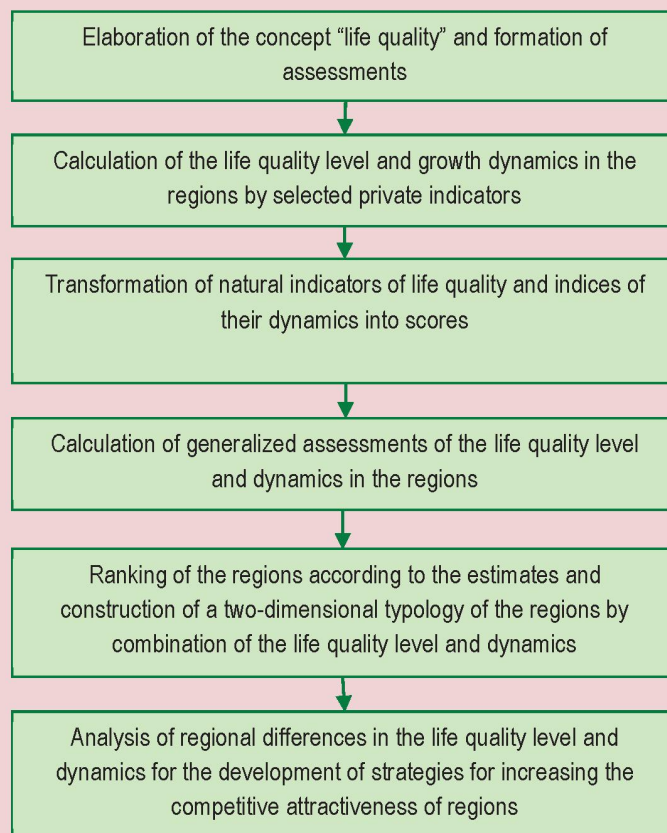
Most often the economy dynamics is estimated by the index method applied to private and general indicators. However, it considers only the dynamics of development, but ignores the achieved level of economic indicators and their interactions. When the index method is used, the objects with lower more dynamic values of the initial indicators look more attractive. For example, developing countries have an advantage over developed ones by growth indices. “The index number is a widely prevalent disease in modern life... Many of...index numbers... lose their practical value immediately after calculation”, the well-known researcher of economic indices R. Allen quotes the statement of M.D. Maroki [1, p. 9].

Our model to measure the properties of competitive attractiveness of the territorial space takes into account changes in primary and general indicators of regions’ competitive potential by level and dynamics

of life quality. The dynamics of regions' competitive potential changes over time both by absolute values of private generalized assessments and relative to other regions. These changes depend on the growth rate of competitive properties indicators in the region and the average dynamics of analyzed indicators of Russia's competitive attractiveness [4, 5, 9, 13]. The general algorithm of the two-dimensional analysis method and the construction of typologies of regions by a competitive potential factor are presented below (fig. 1).

The starting point of the algorithm to evaluate and analyze the increase in the attractiveness of regions by life quality is to define the term "life quality" relative to current time and identify the indicators. Enhancement of life quality is a critical challenge and a key goal of the strategic development of Russia and many foreign countries. The most common definition of "life quality" is given in the Encyclopedic sociological dictionary: this is a category that expresses the quality of satisfaction of material and cultural needs of people

Figure 1. Algorithm of the two-dimensional analysis method and construction of typologies of regions by quality of life



(quality of food, clothing, comfort of home, quality of health, education, service sector, environment, etc.) [14, p. 265].

According to I.I. Sigova, the category of life quality is rather vague and this complicates its use in the practice of social management [11, p. 117]. V.E. Rokhchin and S.F. Zhilkin interpret this category as comprehensively characterizing the level and degree of well-being, freedoms, social and spiritual development [12, c. 35]. But this definition is also wide enough and does not take into account the differences in priorities with respect to countries at different levels of economic development. Considering the latter, we believe that in relation to the Russian regions' development this category should be currently interpreted in the narrower sense of satisfaction of human needs in food, housing, safety, education, sustainable heat, power and water supply, operation of housing and utilities services. These requirements are obvious priorities in the strategic development of most regions; the degree of their satisfaction is still insufficient for most population [8, 10]. It can be confirmed by the fact that many strategic plans of Russian cities define the quality of life as a set of most urgent needs of the residents: wages exceeding the subsistence minimum, social security for the disabled population, quality housing and utilities services and protection from violence, corruption, extortion, etc. As for more developed countries, such as the European Union, people's needs are a bit different: operation and security of public and private transport, a new level of infrastructure, energy and water saving

and minimization of the harmful effects of waste. This caused by fact that many of the tasks concerning welfare and housing sectors are solved in these countries and the priorities are shifted to new problems and challenges. At the same time, there are many countries where the standard of living is much lower than in Russia. The assessment of life quality is focused on the satisfaction of most urgent necessities (food availability, protection from epidemics, primary education, reduction in child mortality, etc.).

With that said, we believe that the competitive attractiveness of Russian regions by life quality can be evaluated quite satisfactorily by the following partial indices (*tab. 1*) [3, p. 115-119]. These figures are provided by official statistics in the Russian regions or easily calculated by means of interrelated statistical data [7]. This is equally true both for the assessment of the level of indicators and indicators of growth.

To obtain a generalized assessment of life quality it is necessary to reduce private indicators (for example, wages in rubles, construction of housing in meters per year per 1000 inhabitants, population per doctor, etc.) to a dimensionless form. The same is true for the assessment of life quality by the index of particular indicators. Due to the fact that by one set of indicators indices vary by 1–2%, by another – 8–15%, by the third – they can even be lower, simple averaging out of these indices decreases the value of the final assessment. As these indicators values are significantly uneven, we propose to divide the operational range of each level

Table 1. Private indicators of the life quality factor

Symbolic notation	Indicators
$I_{lqf1}$	Accrued salary, thousand rubles per month per person employed in the economy
$I_{lqf2}$	Average per capita incomes, commensurate with subsistence minimum
$I_{lqf3}$	Decline in the share of population with incomes below subsistence minimum (index of effectiveness in reducing the share of population with incomes below subsistence minimum), %
$I_{lqf4}$	Improvement of the housing stock
$I_{lqf5}$	Construction of housing per 1,000 population
$I_{lqf6}$	Population number per doctor
$I_{lqf7}$	Theatre spectators number per 1000 urban population
$I_{lqf8}$	Reduction of wastewater discharge, m <sup>3</sup> per person per year (index of effectiveness in reducing wastewater discharge, m <sup>3</sup> per person per year)
$I_{lqf9}$	Reduction of pollutants emissions into the air, commensurate with the number of urban population (index of effectiveness in reducing pollutants emissions into the air, commensurate with the number of urban population)
$I_{lqf10}$	Decline in the number of crimes involving violence against person, per million people per year (index of effectiveness in reducing the number of crimes involving violence against person, per million people per year)

and index indicator by 100 sub-ranges, with each being equal to 1 point. The scoring of life quality by a selected indicator depends on the *i*-th indicator for the *j*-th region. The conversion of natural indicators into scores is carried out according to the following formulas:

$$LQ_{ij}^p = \frac{LQ_i^n - LQ_{iavr}^n}{LQ_{imax}^n - LQ_{iavr}^n} \times 50 + 50, \quad (1)$$

if  $LQ_{ij}^n > LQ_{iavr}^n$

$$LQ_{ij}^p = \frac{LQ_i^n - LQ_{iavr}^n}{LQ_{iavr}^n - LQ_{imin}^n} \times 50, \quad (2)$$

if  $LQ_{ij}^n < LQ_{iavr}^n$

where  $LQ_{ij}^p$  – is a scoring value of the *i*-th indicator of life quality for the *j*-th region;

$LQ_{ij}^n$  – is a natural value of the *i*-th indicator of life quality for the *j*-th region;

$LQ_{iavr}^n$  – weighted average estimation of the *i*-th indicator of life quality all regions;

$LQ_{imax}^n; LQ_{imin}^n$  – maximum and minimum natural values of the *i*-th indicator of life quality for all regions;

50 – a reference point of the scale to the weighted average estimation of a natural value for all regions.

The use of both formulas (1) and (2) allows us to divide the total 100-point range of the estimates by each indicator into two sub-ranges by 50 points. This is caused by the fact that the overall 100-point range scale is non-linear for most indicators, as the upper part of the scale in relation to the national average includes major developed regions, which number is substantially less than in the lower sub-range of the scale. We propose to approximate the nonlinearity of the scale by 2 linear sections below and above average values of the indicator. This improves the accuracy of the calculations both for individual indicators and when they are totaled to obtain a generalized

assessment. According to the same formulas converted index estimates of the dynamics [6] improve the quality of life. Generalized measurement of quality of life we offer to carry out on the basis of aggregated point estimates of the dynamics of particular indices. This is due to the fact that the average percentage increase or decrease in private indicators is not entirely correct, as some indicators can vary by 5–10% or more per year, others – only by 1–2% or less. Hence, the average value of the life quality indicator shifts towards most dynamic indicators, artificially raising their importance. The use of scores helps avoid it.

To make the situation clear, let us consider the calculation results for 10 regions of the Northwestern Federal district (*tab. 2*). For each region of the district we present 2 summative assessments – by level and dynamics of life quality growth. As already noted, the average values of both estimates (level and dynamics) are equal to 50 points. Saint Petersburg and the Kaliningrad Oblast were characterized by a higher life quality in 2013, comparing with other regions. Eight regions of the NWFD have the level of life quality below 50 points, with the lowest values being observed in the Vologda Oblast (30.2 points) and the Arkhangelsk Oblast (31.3 points), the Komi Republic (33.1 points), the Republic of Karelia (34.5 points) and the Pskov Oblast (34.7 points). The generalized assessments can be compared with private indicators for each region. For example, in 2013 of 10 private indicators Saint Petersburg had only one

indicator less than the Russian average – 32 points by wastewater discharge. By this indicator 3 regions of the Northwestern Federal district (the Republic of Karelia, the Arkhangelsk Oblast and the Murmansk Oblast) have the lowest scoring<sup>1</sup>. If, for example, we do not include an environmental indicator in the generalized assessment, these regions receive significantly higher scores. However, this factor is becoming more relevant every day, that is why it is taken into account along with other indicators of well-being of the population. The second row in *Table 2* describes the adjustment of life quality in each region for three years – from 2011 to 2013. By this indicator only one region in the Northwestern Federal district (the Arkhangelsk Oblast) received a score above the national average (56.6 points). Other regions, including Saint Petersburg, were characterized by lower dynamics of improving the quality of life than in Russia on average. It is especially evident in the Pskov Oblast, where of 10 private indicators only by 2 – housing improvements and wastewater treatment – the situation was bettering faster than in other regions.

According to the method of conversion of natural values into points and calculation of generalized assessments, we perform calculations of the level and dynamics of life quality for all regions of Russia. For this work we use the statistical data for 80 Russian regions, did not separate Nenets, Khanty-Mansi and Yamal-Nenets

<sup>1</sup> In 2014 Saint Petersburg launched a new stage of treatment facilities. Now 98% of wastewater is treated.

Table 2. Scoring of the level and growth dynamics of private and generalized assessments of life quality in the NWF D regions\*

Region		Generalized assessment	$I_{lq1}$	$I_{lq2}$	$I_{lq3}$	$I_{lq4}$	$I_{lq5}$	$I_{lq6}$	$I_{lq7}$	$I_{lq8}$	$I_{lq9}$	$I_{lq10}$
Saint Petersburg	level	<b>81.9</b>	81	100	94	100	53	100	100	32	98	62
	dynamics	<b>47.4</b>	28	62	44	43	25	63	59	52	45	53
Kaliningrad Oblast	level	<b>54.2</b>	33	35	45	83	75	40	33	52	94	52
	dynamics	<b>41.7</b>	38	53	26	46	51	1	36	37	80	48
Murmansk Oblast	level	<b>46.1</b>	71	46	50	100	1	72	21	1	36	62
	dynamics	<b>47.6</b>	24	75	63	54	47	39	12	43	41	79
Arkhangelsk Oblast	level	<b>31.3</b>	32	13	39	22	22	66	32	1	43	43
	dynamics	<b>56.6</b>	63	нд	26	60	52	47	57	51	100	53
Leningrad Oblast	level	<b>43.1</b>	48	32	55	36	91	12	13	28	47	69
	dynamics	<b>40.9</b>	38	54	59	31	54	32	13	32	35	62
Novgorod Oblast	level	<b>39.4</b>	27	29	46	21	54	36	15	45	71	51
	dynamics	<b>42.3</b>	38	28	60	44	52	23	35	59	38	47
Komi Republic	level	<b>33.1</b>	47	30	40	39	8	50	30	47	1	39
	dynamics	<b>44.6</b>	59	53	53	41	55	27	50	57	36	15
Vologda Oblast	level	<b>30.2</b>	21	22	43	17	47	13	29	43	21	47
	dynamics	<b>45.2</b>	22	58	71	1	56	35	58	50	40	62
Republic of Karelia	level	<b>34.5</b>	24	15	39	37	31	59	42	1	46	50
	dynamics	<b>38.8</b>	21	39	40	53	54	24	41	28	27	60
Pskov Oblast	level	<b>34.7</b>	13	10	33	24	23	16	14	72	84	59
	dynamics	<b>36.3</b>	34	32	29	54	41	34	2	54	47	36

\* The average value of each indicator is equal to 50 points. The life quality level is given for 2013. The growth dynamics is given for 2013 relative to 2011.  
The regions are ranked by half-sum of generalized assessments of the level and growth dynamics of life quality.

Autonomous okrugs, as some statistical data were absent. The results are presented in *Table 3*, where the regions are simply ranked by the half-sum of assessments of these two indicators. According to the table, Saint Petersburg and Moscow are in the lead by life quality level. The gap between these regions and the Republic of Tatarstan, the Belgorod Oblast and the Moscow Oblast amounts to almost 20 points. Then we single out a group of regions (the Kursk Oblast, the Voronezh Oblast and the Nizhny Novgorod Oblast), characterized by the high life quality level and dynamics. This is followed by the regions, where either the

level or dynamics of life quality is higher than 50 points. Exceptions occur in five areas – the Ryazan Oblast, the Astrakhan Oblast, the Penza Oblast, the Yaroslavl Oblast and the Samara Oblast.

It is necessary to find a tool that would allow us to build a typology of regions on the basis of a more interesting indicator than, for example, the sum of level and dynamics estimates. We suggest carrying out graphic construction of typologies, corresponding to the four squares in the coordinate system where the life quality dynamics is indicated by the abscissa axis and the life quality level – by the ordinate

Table 3. Scoring of generalized assessments of the life quality level and dynamics in Russian regions (the regions are ranked by half-sum of assessments)

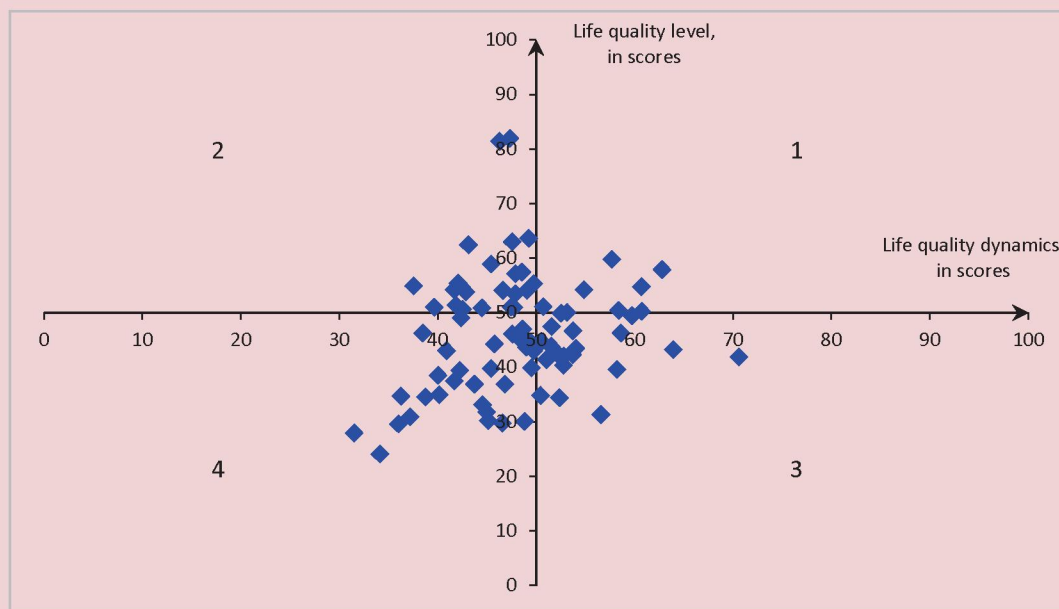
Regions of Russia	Scoring of life quality (2013.)	Scoring of life quality dynamics (2013/2011)	Half-sum of assessments
Saint Petersburg	81.9	47.4	64.6
Moscow	81.4	46.3	63.9
Kursk Oblast	57.9	62.8	60.3
Voronezh Oblast	59.7	57.7	58.7
Nizhny Novgorod Oblast	54.8	60.7	57.7
Republic of Tatarstan	63.6	49.3	56.4
Chechen Republic	41.9	70.6	56.3
Ryazan Oblast	50.2	60.7	55.5
Belgorod Oblast	63.0	47.6	55.3
Stavropol Krai	49.4	59.7	54.6
Astrakhan Oblast	54.2	54.9	54.6
Penza Oblast	50.4	58.4	54.4
Ivanovo Oblast	43.2	64.0	53.6
Tyumen Oblast	57.4	48.6	53.0
Moscow Oblast	62.4	43.2	52.8
Novosibirsk Oblast	55.3	49.8	52.5
Tambov Oblast	57.1	47.9	52.5
Tver Oblast	46.2	58.7	52.4
Republic of North Ossetia–Alania	58.9	45.4	52.2
Yaroslavl Oblast	50.0	53.2	51.6
Lipetsk Oblast	54.1	49.1	51.6
Krasnodar Oblast	49.9	52.6	51.2
Samara Oblast	51.1	50.7	50.9
Sakhalin Oblast	53.5	47.9	50.7
Chuvash Republic	54.1	46.6	50.4
Tomsk Oblast	46.7	53.8	50.2
Kabardino-Balkar Republic	47.5	51.6	49.5
Republic of Ingushetia	51.0	47.8	49.4
Omsk Oblast	51.0	47.5	49.3
Altai Krai	39.6	58.2	48.9
Kaluga Oblast	55.4	42.1	48.8
Perm	43.5	54.0	48.8
Saratov Oblast	53.8	42.9	48.3
Kostroma Oblast	42.3	53.7	48.0
Kaliningrad Oblast	54.2	41.7	47.9
Republic of Mordovia	47.0	48.7	47.8
Sverdlovsk Oblast	50.9	44.5	47.7
Ulyanovsk Oblast	43.8	51.5	47.7
Udmurt Republic	44.7	50.6	47.6



Continuation of the table 3

Sakha (Yakutia) Republic	42.0	52.8	47.4
Orenburg Oblast	42.2	52.3	47.3
Volgograd Oblast	44.5	49.5	47.0
Tula Oblast	45.4	48.4	46.9
Rostov Oblast	45.6	48.1	46.9
Murmansk Oblast	46.1	47.6	46.8
Bryansk Oblast	45.0	48.5	46.8
Republic of Dagestan	51.4	41.9	46.6
Republic of Bashkortostan	50.6	42.6	46.6
Vladimir Oblast	40.4	52.8	46.6
Republic of Adygea	43.0	49.8	46.4
Smolensk Oblast	43.7	49.1	46.4
Chukotka Autonomous Okrug	54.9	37.6	46.2
Mari El Republic	41.4	51.0	46.2
Orel Oblast	49.0	42.4	45.7
Magadan Oblast	51.0	39.7	45.3
Khabarovsk Krai	44.3	45.8	45.0
Amur Oblast	39.9	49.6	44.7
Arkhangelsk Oblast	31.3	56.6	44.0
Zabaykalsky Krai	34.4	52.4	43.4
Republic of Kalmykia	34.8	50.5	42.6
Chelyabinsk Oblast	39.7	45.5	42.6
Kamchatka Krai	46.3	38.5	42.4
Leningrad Oblast	43.1	40.9	42.0
Republic of Khakassia	36.9	46.9	41.9
Novgorod Oblast	39.4	42.3	40.8
Krasnoyarsk Krai	36.9	43.8	40.3
Kirov Oblast	37.5	41.7	39.6
Karachay-Cherkess Republic	30.0	48.9	39.5
Primorsky Krai	38.5	40.1	39.3
Komi Republic	33.1	44.6	38.8
Kurgan Oblast	31.8	45.0	38.4
Irkutsk Oblast	29.8	46.6	38.2
Vologda Oblast	30.2	45.2	37.7
Republic of Buryatia	34.9	40.2	37.6
Republic of Karelia	34.5	38.8	36.6
Pskov Oblast	34.7	36.3	35.5
Altai Republic	30.9	37.2	34.1
Kemerovo Oblast	29.6	36.0	32.8
Jewish Autonomous Oblast	27.9	31.5	29.7
Tyva Republic	24.1	34.2	29.1

Figure 2. Typological division of Russian regions by the life quality factor by the coordinate system squares



axis. The intersection of the coordinate axes corresponds to average values of these estimates for all Russian regions, i.e. 50 points (*fig. 2*).

In the figure the Russian regions are shown by points in the coordinate system of the two-dimensional mathematical space. The typological group of regions based on graphical interpretation of the estimates of life quality level and dynamics:

- Group 1 – developed and developing regions;
- Group 2 – developed regions, but characterized by retarded development;
- Group 3 – regions with a lower level of life quality, but which are rapidly developing;

- Group 4 – regions with a lower level and dynamics of life quality.

The upper right square includes Group 1 regions, where the dynamics and the level of life quality are higher than the national average (*tab. 4*). They are the Kursk Oblast, the Voronezh Oblast, the Nizhny Novgorod Oblast, the Ryazan Oblast, the Astrakhan Oblast, the Penza Oblast, the Yaroslavl Oblast and the Samara Oblast. This is a slightly different perspective for the assessment of the quality of social development of regions, as it estimates not only the success of the preceding period of development, but also the efficiency of current management. The more above and the more to the right in this square the

Table 4. Group 1 regions that have the higher level and dynamics of life quality compared to the national average

Region	Life quality level	Life quality growth dynamics	Region	Life quality level	Life quality growth dynamics
Kursk Oblast	57.9	62.8	Astrakhan Oblast	54.2	54.9
Voronezh Oblast	59.7	57.7	Penza Oblast	50.4	58.4
Nizhny Novgorod Oblast	54.8	60.7	Yaroslavl Oblast	50.0	53.2
Ryazan Oblast	50.2	60.7	Samara Oblast	51.1	50.7

Table 5. Group 2 regions that have a higher level and lower growth of life quality compared to the national average

Region	Life quality level	Life quality growth dynamics	Region	Life quality level	Life quality growth dynamics
Saint Petersburg	81.9	47.4	Chuvash Republic	54.1	46.6
Moscow	81.4	46.3	Republic of Ingushetia	51.0	47.8
Republic of Tatarstan	63.6	49.3	Omsk Oblast	51.0	47.5
Belgorod Oblast	63.0	47.6	Kaluga Oblast	55.4	42.1
Tyumen Oblast	57.4	48.6	Saratov Oblast	53.8	42.9
Moscow Oblast	62.4	43.2	Kaliningrad Oblast	54.2	41.7
Novosibirsk Oblast	55.3	49.8	Sverdlovsk Oblast	50.9	44.5
Tambov Oblast	57.1	47.9	Republic of Dagestan	51.4	41.9
Republic of North Ossetia–Alania	58.9	45.4	Chukotka Autonomous Okrug	54.9	37.6
Lipetsk Oblast	54.1	49.1	Republic of Bashkortostan	50.6	42.6
Sakhalin Oblast	53.5	47.9	Magadan Oblast	51.0	39.7

region is located, the more successful the policy to improve life quality is. Though relative to some other regions, such as Saint Petersburg and Moscow, they have a bit reduced standard of living, but the high dynamics of this indicator forecasts optimistic future.

Another group of regions (upper left square) with a higher level of life quality and lower growth dynamics consists of 22 regions, including Moscow and Saint Petersburg that have the highest level of life quality, but a bit lower growth dynamics

(*tab. 5*). As for these regions, we can say that their separation from others by the life quality level will be decreased annually, thus reducing their competitive advantages. In relation to this group of regions there also is a dual evaluation of past successes and shortcomings of today's delayed development.

The Group 3 regions (bottom right square), on the contrary, try to catch up with other regions by life quality level due to high rates of growth, increasing their competitive features by this factor (*tab. 6*).

Table 6. Group 2 regions that have a lower level and higher dynamics of life quality compared to the national average

Region	Life quality level	Life quality growth dynamics	Region	Life quality level	Life quality growth dynamics
Chechen Republic	41.9	70.6	Udmurt Republic	44.7	50.6
Stavropol Krai	49.4	59.7	Sakha (Yakutia) Republic	42.0	52.8
Ivanovo Oblast	43.2	64.0	Orenburg Oblast	42.2	52.3
Tver Oblast	46.2	58.7	Vladimir Oblast	40.4	52.8
Krasnodar Oblast	49.9	52.6	Mari El Republic	41.4	51.0
Tomsk Oblast	46.7	53.8	Arkhangelsk Oblast	31.3	56.6
Altai Krai	39.6	58.2	Zabaykalsky Krai	34.4	52.4
Perm Krai	43.5	54.0	Republic of Kalmykia	34.8	50.5
Kostroma Oblast	42.3	53.7	Kabardino-Balkar Republic	47.5	51.6
Ulyanovsk Oblast	43.8	51.5			

Table 7. Group 2 regions that have a lower level and dynamics of life quality compared to the national average

Region	Life quality level	Life quality growth dynamics	Region	Life quality level	Life quality growth dynamics
Republic of Mordovia	47.0	48.7	Krasnoyarsk Krai	36.9	43.8
Volgograd Oblast	44.5	49.5	Kirov Oblast	37.5	41.7
Tula Oblast	45.4	48.4	Karachay-Cherkess Republic	30.0	48.9
Rostov Oblast	45.6	48.1	Primorsky Krai	38.5	40.1
Murmansk Oblast	46.1	47.6	Komi Republic	33.1	44.6
Bryansk Oblast	45.0	48.5	Kurgan Oblast	31.8	45.0
Republic of Adygea	43.0	49.8	Irkutsk Oblast	29.8	46.6
Smolensk Oblast	43.7	49.1	Vologda Oblast	30.2	45.2
Orel Oblast	49.0	42.4	Republic of Buryatia	34.9	40.2
Khabarovsk Krai	44.3	45.8	Republic of Karelia	34.5	38.8
Amur Oblast	39.9	49.6	Pskov Oblast	34.7	36.3
Chelyabinsk Oblast	39.7	45.5	Altai Republic	30.9	37.2
Kamchatka Krai	46.3	38.5	Kemerovo Oblast	29.6	36.0
Leningrad Oblast	43.1	40.9	Tyva Republic	24.1	34.2
Republic of Khakassia	36.9	46.9	Jewish Autonomous Oblast	27.9	31.5
Novgorod Oblast	39.4	42.3			

Such dynamic regions include the Chechen Republic, the Ivanovo Oblast and the Tver Oblast, Altai Krai and other areas, where the life quality dynamics is by 20–

25% higher than the average increase of life quality indicators in Russia. The group comprises 19 regions, nearly a quarter of all Russian regions.

The fourth group of regions – with a lower level and dynamics of life quality – has 31 regions, with eight of them being located in the Northwestern Federal district (*tab. 7*). This group includes 7 regions of the Siberian Federal district and 5 regions of the Far Eastern Federal district. The unfavorable situation there is confirmed by a systematic outflow of the resident population.

In general, the regional social policy to regulate and align the quality of life in Russia can be considered quite positive, as most regions are located in the square of the two-dimensional space with coordinates from 40 to 60 points. Of 80 it includes 44 regions and 8 regions, where the level or dynamics of life quality are higher than in the specified square. It seems to us that only 10 regions (the Tyva Republic, Jewish Autonomous Oblast, Altai Republic, the Irkutsk Oblast and several others) have very

a low level and growth dynamics. These regions require measures for accelerated social development.

The presented typology provides a better understanding of advantages and disadvantages of both federal and local social policies of regions' strategic development and helps justify the need in programs and projects focused on territorial development, taking into account the need to ensure competitive attractiveness of regions.

The method and algorithm can be applied for the analysis of regional development and relevant factors of competitive attractiveness: economic, innovation and infrastructural development, human potential. The two-dimensional space of analysis allows us to identify regional development factors, such as economy and innovation, economy and life quality, education and innovation development.

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