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Life satisfaction in the Russian cities

Russia is a very big country with more than 20 thousand municipalities, thousand cities and towns. Each of them has the features and appeal. To estimate «socially wellbeing», if the residents are satisfied with life and what the main reasons of discontent – main goals of this research.

Relevance of such research is caused by need of increase in appeal and competitiveness of the Russian cities for preservation and development of the human capital of territories. This approach borders on the marketing researches of territories directed to development of the principles of management by it. From this point of view, such characteristics of the population as desire to live in territory borders, subjective appeal, estimates of living conditions and main problems at the territory are important. Appeal of the territory is complex of objective and subjective characteristics of the territory allowing the individual to regard this territory as the suitable or not suitable residence.

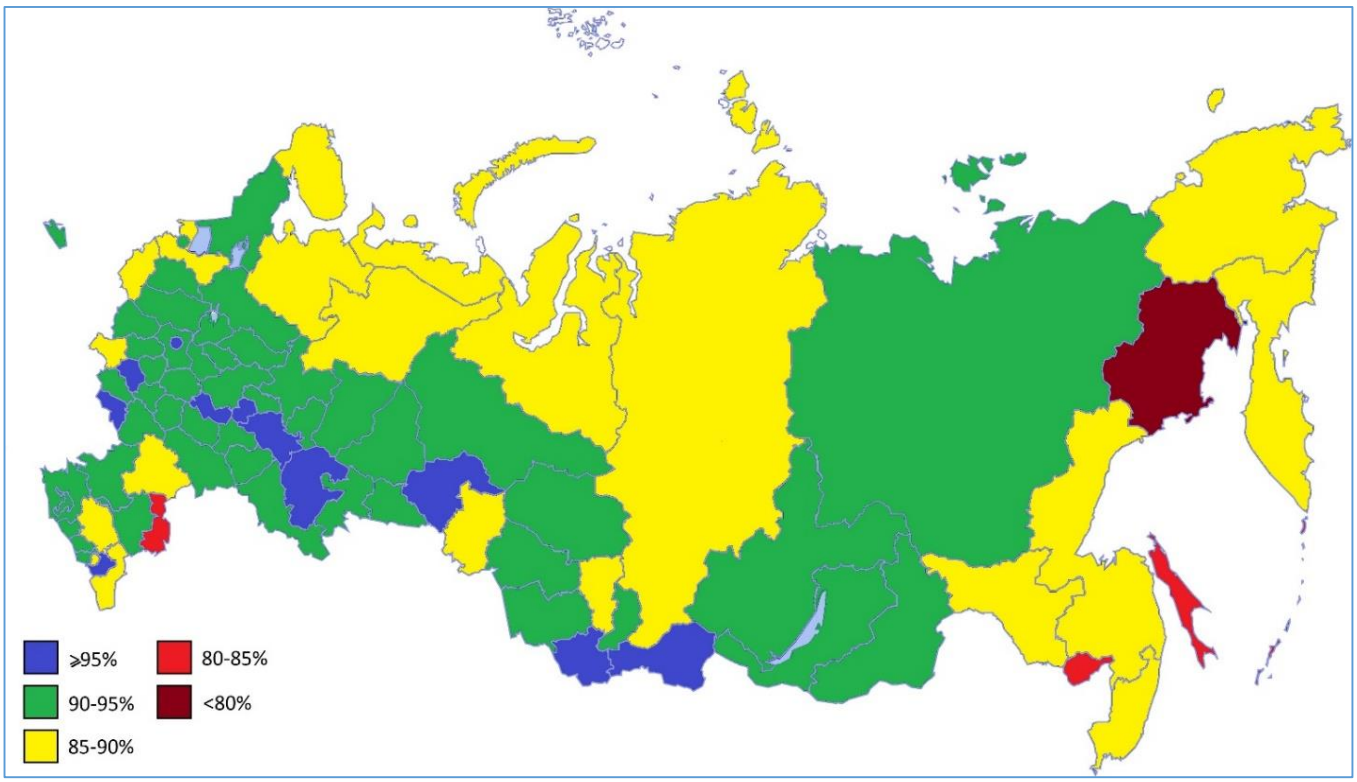
Based on system approach to the city as the difficult social and economic system, the methods used in various scientific directions are integrated into a uniform research complex: application of mathematical methods in regional economy and sociology, creation of conceptual models, statistical and sociological methods of a collection of information.

To lay the information base of a research of the Russian cities representing a combination of the statistical and sociological data characterizing and a social and economic situation in the cities and perception by its residents. The sources for formation of such base are: data of municipal statistics, data of Comprehensive inspection of living conditions (CILC) - selective sociological survey of households - mass representative poll over 113000 residents of Russia in all regions; data of geoinformation resources, etc.

First results of the research

Among the main date of CILC was the question about the pleasant (like) live in the municipality. Through the relation to the place of residence it is possible to judge if the residents are satisfied with their location and if is it attractive to accommodation. Such «**Life satisfaction in the city**» (LSC) became the central category of the first part of the research. Economic indicators (for example, the Cost of living index in the city) became also essential addition, that explained some reasons of dissatisfaction.

The regional view gives only the general description, the generalized picture of life satisfaction in the municipalities in the region.



In brief in the majority of regions the level of life satisfaction in municipalities is high and very high (60 of 85 regions – more than 90%). These are only 4 regions with rather low level – the Astrakhan, Sakhalin regions, Jewish autonomous area, and also the Magadan region where level is the lowest – 72,4%. However, a regional view is too general for representation of LSC. At each region there are set of the cities with the different level LSC.

Our empirical object is the city and used CILC it is possible to reveal factors which influence this satisfaction. In total sociological and economic data of 101 main Russian cities (100000 and more inhabitants) were available to the analysis.

16 value total score of the main problems in the city (their existence according to the respondent), satisfaction of own salary and the Cost of living index in the city were selected.

1. Cost of living index (CLI) measuring the relative cost of set of goods and services in the certain cities in comparison with its average Russian value (municipal statistics);
2. Crime rate (CILC)
3. Impurity of the environment (CILC);
4. Bad organization of work of public transport (CILC);
5. Bad organization of housing-and-municipal services (CILC);
6. Inaccessibility of the services in the sphere of education (CILC);
7. Inaccessibility of the services in the sphere of medical attendance (CILC);
8. General improvement (CILC);
9. Problems with road condition (CILC);
10. Vandalism (CILC);
11. Drug trafficking (CILC);
12. Alcoholism (CILC);
13. Remoteness of trade centers (CILC);
14. Remoteness of drugstores (CILC);
15. Remoteness of cultural objects (CILC);
16. Remoteness of relax objects (CILC);
17. Remoteness of sport objects (CILC);
18. Satisfaction of own salary (CILC).

The linear regression analysis became the main statistical method of the analysis on the first stage. Check of pair correlation of possible predictors showed that some indicators strongly correlate among themselves (Pearson's correlation >0,7) and they need to be excluded from the regression analysis. The indicator №6 correlates with an indicator №7. Mutual correlation of indicators №10, 11 and 12, between 13 and 14, and also between №15,16 and 17 is revealed. Considering it, indicators №№6, 10, 11, 14, 15 and 18 were excluded from the regression analysis. By results of the regression analysis also check on autocorrelation, heteroscedasticity and normality was made.

Constructing regression model by reduction of the least significant predictors (stepwise regression) 5 main predictors was revealed: *CLI (1), impurity of the environment (2), inaccessibility of the services in the sphere of medical attendance (3); general improvement (4), problems with road condition (5)*. The coefficient of a multiple correlation exceeds 72%, and determination coefficient – 52%. It is not the best, but quite admissible level.

More attentive studying of concrete municipalities, their group and a ratio with the main predictors (indicators) became the following stage of the research. The group of objects was made by means of the faster cluster analysis and it was the most successful classification on 5(7) groups.

Level of LSC	Number	Range of values of LSC	Average value of LSC
Very high	26	96,0%-100%	97,7%
High	28	92,0%-95,9%	94,1%
Middle	27	87,0%-91,9%	89,8%
Low	12	80,1% – 86,9%	84,7%
Very low	6	74,9% – 80,0%	78,2%

The first three groups approximately equal fullness and quantity of cities is enough for comparison of average values on indicators. In groups "Low" and "Very low" objects (cities) it is significantly less (12 and 6) and to values of averages costs belongs carefully. Besides, two cities with values 70 and 50% of LSC were «grouped» individually and should be considered separately.

№	Name of the group	Average value of LSC	Main indicators-predictors (% in average value)				
			CLI	*Impurity of the environment*	*Inaccessibility of the services in the sphere of medical attendance*	*General improvement*	*Problems with road condition*
1	Very high	97,7	0,95	28,71	8,57	23,54	47,78
2	High	94,1	0,96	41,19	14,45	35,10	57,43
3	Middle	89,8	0,99	46,29	19,11	38,00	58,18
4	Low	84,7	1,10	43,07	21,12	35,56	48,10
5	Very low	78,2	1,13	61,06	39,72	48,95	71,74

Comparing average values on the revealed significant indicators in each group, it is possible to see a tendency (especially it noticeable by the first three groups) – decrease in the average level LSC with a growth of significant indicators. Increase in the Cost of living index, quantity dissatisfied of ecological situation, availability of medicine, level of improvement and road problems leads to decrease in the general level of LSC.

As for the low-filled groups with very low and extremely low level (2 individual cities) it should be taken into account the main indicators of these cities in more detail.

City	Value of LSC (%)	Main indicators -predictors (% in average value)				
		CLI	*Impurity of the environment*	*Inaccessibility of the services in the sphere of medical attendance*	*General improvement*	*Problems with road condition*
		1,00*	41,56*	16,78*	34,65*	55,08*
Voronezh	80,0	0,92	**68,86**	21,27	**53,51**	67,11
Petropavlovsk-Kamchatsky	79,3	**1,64**	50,30	**36,09**	**46,15**	69,23
Omsk	79,0	0,85	42,58	**38,69**	38,52	60,42
Arkhangelsk	78,4	1,06	**57,22**	**40,72**	**46,91**	**77,32**
Miass	77,5	0,90	**91,01**	**70,79**	41,57	**87,64**
Magadan	74,9	**1,42**	**56,42**	**30,73**	**67,04**	68,72
Yuzhno-	70,0	**1,37**	**70,00**	**37,33**	**66,00**	58,00
Norilsk	50,0	**1,33**	**95,12**	21,95	**92,68**	**76,83**

* average value of an indicator among all 101 cities

Even if to take for «significant» excess of average value of main indicators in 1,33 we can see that in Voronezh there are problems with Ecology and Improvement, significant for residents, in Petropavlovsk-Kamchatsky, considering its location on the far Kamchatka region, high CLI, there are problems with improvement and availability of medicine.

The example of the city of Omsk where formally only by availability of objects of medicine (more than twice) significantly exceeds average values among all 101 cities, but also other indicators very high.

In Arkhangelsk negative estimates by ecology, availability of medicine, level of improvement and road condition prevail. In Miass 9 of 10 respondents in this city declared existence of problems with impurity of the environment (91%) and roads (88%), there are also problems with availability of medicine (71%). The city of Magadan located in the Far East due to the lack of federal transport infrastructure has a high CLI (1,42), every second respondent declared existence of environmental problems, and the share dissatisfied with level improvement reaches 67%. Approximately with the same values of indicators and, respectively, problems it is possible to say also about Yuzhno-Sakhalinsk.

And, at last, the city of Norilsk with 50% of LSC: every second respondent told that he likes to live in this city. All indicators are significantly higher than averages. Especially it concerns problems with pollution and improvement. Unfortunately, it is not surprise, it is the most northern city in the world, is behind a polar circle with extremely climate in the permafrost region. Besides, it is one of the most polluted cities of the world.

These are results only of the first stage (little part) of the work. All research with new results and conclusions will be presented at a conference.