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# **Inequality of level of living in the Russian Federation: some regional and municipal aspects**

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## **Abstract**

Social disparities in regions of Russia were increasing since transition started in the 1990s. Economic growth of the first decade of the 2000-th contributed to improvement of well-being of population. But spatially socio-economic development is uneven and accompanied by regional convergence or divergence trends in levels of living.

This empirical paper attempts to add evidence on the issue of disparities and convergence in levels of living within regions and cities of the Russian Federation in the period 2001-2012 analyzing a number of social indicators and a synthetic general indicator of level of living.

*Keywords:* regional disparities, level of living, inequality, cities, regional capitals, convergence, divergence, Russian Federation

*JEL classification codes:* R13, I131

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## **I. Introduction**

Social disparities in Russia were increasing since transition started in the 1990s on the background of decline of all social indicators. In the first decade of 2000-th growth of economy contributed to improvement of wellbeing of population. Real income per capita almost doubled in this period, the rate of poverty decreased by almost 70%, indicator that reflects provision of expensive durable goods – number of own cars per 1000 population – rose by 88 %, the number of doctors per 10 000 population increased by 9%, life expectancy – by 7,5%.

But as growth of the economy is not equal across space, territorial disparity of levels of living is inevitable. And this is the reason why measurement of degree and the dynamics of inequality in level of living and the question of the evolution of social inequality continue to be relevant in terms of setting goals, directions and choice of activities of social policy.

Most studies of spatial disparities in levels of living in Russia refer to the period of the 1990s and concern the interregional inequalities (Nayden, 2010; Chernova, 2007; Bradshaw,

et al, 2003). Most of them conclude about regional divergence of levels of living in this period. But the tendencies of the 2000s are explored insufficiently. And even less of authors investigate inequality of levels of living in cities.

In most studies inequality of levels of living is assessed on the basis of both inequality indicators (range of variation, coefficient of variation, Gini coefficient and Theil index) as well as spatial data analysis (see review in Gluschenko, 2012). But when assessing the inequality for each indicator separately the authors usually are not able to make general conclusion about changes in disparity of level of living (Bobkov et al, 2012; Zubarevich et al, 2013).

There is another small group of works where researchers construct general index of level of living on the basis of a set of indicators and use it for ranking or clustering the regions (Akopov, et al, 2008) or (very seldom) to assess the general level of inequality (Bradshaw, et al, 2003).

In this paper we attempt to assess the degree of inequality in level of living between regions and between cities both on the basis of separate social indices and synthetic integral indicator of level of living. This complex approach make it possible to quantify the total inequality of levels of living in the regions and cities of the RF, to identify groups of territories that are similar in terms of level of living, to assess the divergence or convergence tendencies. The combination of two levels of research - regional and local - provides a more complete picture of territorial pattern of level of living.

## **II. Database and Method**

There is a great variety of approaches to the definition of the level of living. But most researchers agree that this category determines the degree of material well-being of people, allowing them to satisfy their diverse needs. In modern scientific tradition the level of living is characterized by a system of indicators, covering three aspects: the welfare of the population, the accumulation of human capital and the level of human development.

According to this approach we consider various components of level of living: income, poverty rate, employment, provision of housing, health care and education, life expectancy.

We use annual data for 79 regions of the RF for the period of 2001-2012 provided by Federal State Statistics Service (FSSS) of the RF (Table 1).

Table 1. Indicators of level of living for regions

<i>components of level of living</i>	<i>indicators</i>
real per capita income	ratio of per capita income of population to the cost of a fixed basket of consumer goods and services <sup>1</sup>
provision of expensive durable goods	number of own cars per 1000 population
poverty rate	proportion of people with incomes below the subsistence minimum level, %
unemployment	rate of unemployment (%)
provision of housing	housing stock, average per inhabitant, sq. m.
provision of health care	number of physicians per 10 000 population, persons
provision of education	number of students in higher educational institutions per 10 000 population, persons
general indicator of quality of life	life expectancy, years

The study also covers 166-174 cities of the RF with population over 100,000 in the period of 2001-2011.

Unfortunately, database provided by FSSS for cities is much scarce and the quality of information is lower than for cities. For this reason we use a little different set of indicators for the components of level of living in cities (Table 2).

Table 2. Indicators of level of living for cities

<i>components of level of living</i>	<i>indicators</i>
real per capita income	ratio of nominal wage to the cost of a fixed basket of consumer goods and services
provision of housing	housing stock, average per inhabitant, sq. m.
provision of health care	number of physicians per 10 000 population, persons
provision of education	number of pupils at general educational institutions, per 1 000 population, persons
general indicator of quality of life	<ul style="list-style-type: none"> <li>• natural increase of population per 1 000 population;</li> <li>• rate of growth of population</li> </ul>

Synthetic indicator of level of living is calculated by the formula:  $\bar{\lambda}^r = \sqrt{\frac{\sum_{i=1}^n (\lambda_i^r)^2}{n}}$ ,

$\bar{\lambda}^r \in [0;1]$ , where  $\lambda_i^r$  is unit-free rating-index which allows different indices to be added

together. For its calculation we use the following formula:  $\lambda_i^r = \frac{x_i^r - x_i^{\min}}{x_i^{\max} - x_i^{\min}}$ ,  $\lambda_i^r \in [0;1]$ ,  $x_i^r$  -

<sup>1</sup> The cost of a fixed basket of consumer goods and services is used to eliminate the influence of differences in regional prices

the value of the  $i$ -th indicator in the region (city)  $r$ ;  $x_i^{\max}$  and  $x_i^{\min}$  - the highest (the best) and lowest (the worst) values of the indicator  $x_i$  respectively attained in the period,  $n$  – the number of regions (cities)<sup>2</sup>.

Rating-index  $\lambda_i^r$  is a measure of a relative distance between actual value of the indicator in the region (city)  $r$  and the minimum value. The closer rating-index to 1, the closer the actual value of the indicator to the maximum (the best) value. The closer rating-index to 0, the closer the actual value of the indicator to the minimum (the worst) value.

Synthetic indicator of level of living ( $\bar{\lambda}$ ) is a relative length of vector difference between vector of actual rating-indexes and vector of 0-rating-indexes (worst values in the period). The closer synthetic indicator to 1, the less the difference between vector of actual values of indicators of level of living in the region (city) and the vector of the best values of indicators attained during the period, the higher the level of living.

The closer synthetic indicator to 0, the less the difference between the vector of actual values of indicators of level of living in the region (city) and the vector of the worst values of indicators, the lower the level of living.

Introduced synthetic indicator enables to sort regions or cities by level of living; to quantify the extent of inequality of level of living in different regions or cities; to identify groups of regions (cities), similar in the level of living, and to assess the degree of heterogeneity either of these separate groups or of the aggregate of regions (cities).

Besides, calculated in this way synthetic indicators are comparable in time and can therefore be used to study the dynamics of levels of living in different regions or cities and their groups.

### **III. Results**

#### **III.1. Regional level**

##### **III.1.1. Dynamics of individual indicators of level of living in regions**

*Real per capita incomes* increased to a greater extent than all the other social indicators – they more than doubled. The leading position throughout the period belongs to Moscow due to agglomeration effect and institutional factor, which is the status of capital. In a centralized system of governance proximity to authorities facilitates the solution of many problems of business and provides a competitive advantage. Because of the status of capital Moscow concentrates not only economic activity, but also the headquarters of major Russian

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<sup>2</sup> For the purpose of calculation of synthetic indicator we convert rate of unemployment to the rate of employment to provide the correspondence between the best and maximum values.

companies, representative offices of international companies and as a result highest-paying jobs. All this significantly raises per capita incomes in the city of Moscow.

*Table 3. Coefficient of variation of indicators of level of living for regions (%)*

<i>Indicators of level of living</i>	<i>2001</i>	<i>2005</i>	<i>2012</i>
Real per capita incomes	43,9	37,3	28
Poverty rate	29,3	32,4	26,6
Number of own cars per 1000 population	25,6	23,7	17,1
Number of students in higher educational institutions per 10 000 population	56,8	45,9	38,1
Housing stock, average per inhabitant	8,7	10,2	12,4
Number of physicians per 10 000 population	23,8	26,1	26,1
Rate of unemployment (excluding Republic of Ingushetia)	46,2	52,2	41,0
Life expectancy	3,4	4,6	3,6

*Source: author's elaborations on FSSS data*

The composition of the leading income group changed to some extent to the end of the period. In the early period resource-rich export-oriented regions dominated in this group (Tyumen Region, Komi Republic, Chukotka Autonomous Area, Kamchatka Territory, Magadan Region, Murmansk Region, Republic of Sakha (Yakutia)). By the end of the period most of these regions in the group were replaced by other regions that demonstrated successful economic development (the city of St. Petersburg, Moscow region, Republic of Tatarstan, Belgorod Region, Sverdlovsk Region).

Among the regions with the lowest per capita incomes throughout the period there were less developed regions of the RF (Republic of Kalmykia, Karachayevo-Circassian Republic, Republic of Mordovia, Republic of Mari El, Republic of Tuva, Amur Region, Kabardino-Balkarian Republic).

Income inequality decreased significantly over the period (Table 1). Coefficient of variation for real incomes decreased from 43,9% to 28%.

The ratio of the maximum and minimum values fell by more than half - from 7,6 to 3,3 times as a result of significant growth in the minimum value (it increased by 13% per year in average, or 3,4 times for the whole period). At the same time the maximum value increased in a much more modest degree (1,48 times).

The main reason for such a significant increase of incomes in the underdeveloped regions was the growth of salaries of public sector employees and social benefits, due to the increase of state budget revenues in the first decade of the XXI century and redistribution of resource

rents. As long as public sector is a major sphere of employment in less developed regions the dynamics of salaries determines there the dynamics of per capita incomes as a whole.

All mentioned above caused a 3-fold reduction of *poverty*. Maximum value reduced from 94% in 2001 (Republic of Ingushetia) to 30,8% in 2012 (Republic of Kalmykia)

Prevalence of poverty significantly reduced too. In 2001 the poverty rate above 30% was in 66 regions, in 2011 - only in two (Republic of Tuva and Republic of Kalmykia), and in 2012 - in one region (Republic of Kalmykia). Spatial pattern of poverty has also changed to some extent. In 2001 a high poverty rate was in the North Caucasian republics (Republic of Ingushetia, Republic of Dagestan, Karachayevo-Circassian Republic and Kabardino-Balkarian Republic), as well as in Republic of Kalmykia, Republic of Tuva, Republic of Altai, Trans-Baikal Territory.

By 2012 as a result of state social policy the situation in the North Caucasus improved and all these republics left the group of leaders of poverty.

Another welfare indicator which is sometimes used as a proxy for per capita income is the *number of cars per 1000 population*. Throughout the period it increased by 88% and its coefficient of variation decreased from 25,6% to 17,1%.

However, the leading position in this indicator is provided not only by the level of income (Moscow, St. Petersburg, Moscow Region, Sverdlovsk Region), but also by the geographical location of the region - among leaders there are always border regions (Kamchatka Territory, Sakhalin Region, Magadan Region, Kaliningrad Region).

Underdeveloped territories with low per capita incomes like the North Caucasus republics, Republic of Mari El and Republic of Tuva, the Jewish Autonomous Region are lagging behind.

The indicator of *number of students* per 10000 population increased by 42% and its coefficient of variation decreased from 56,8% in 2001 to 38,1% in 2012 mostly due to the growth of minimum value. It increased by 2,8 times in comparison with growth of maximum value only by 3%. Actually in many cases increase of this indicator reveals the growing availability of diplomas of higher education and the growth of incomes of people who are willing to pay for these diplomas.

The coefficients of variation for indicators of per capita *housing stock* and *number of physicians* per 10 000 population slightly increased (Table 1).

Throughout the period the *rate of unemployment* dropped almost by half from 9,1% in 2001 to 5,5% in 2012 despite a slight increase in the years of crisis in 2008-2009 (Fig.1). The

lowest rate of unemployment in 2012 was in Moscow (0,8%) and St. Petersburg (1,1%). The highest rate of unemployment in 2012 was in Republic of Ingushetia (47,7%).

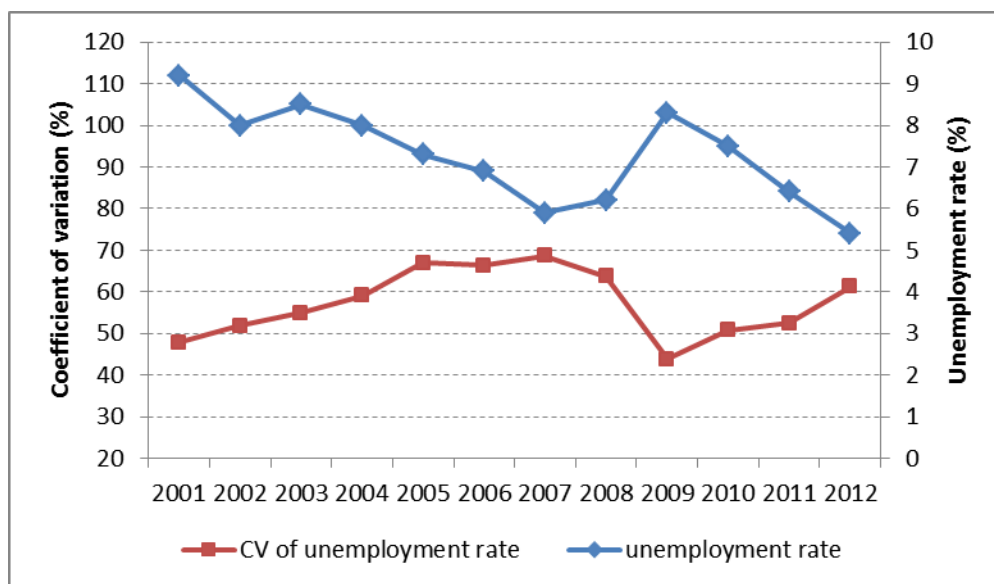


Figure 1. Unemployment rate (weighted average) and its coefficient of variation (Source: author's elaborations on FSSS data)

Regional inequality in the unemployment rate was determined by the economic dynamics in the developed regions where unemployment reduced notably during the period of growth and increased during the economic decline. At the same time changes in unemployment rate in the underdeveloped regions were not significant both during growth and decline of the economy in 2008-2009. As a result the regional inequality in the level of unemployment increased in the period of economic growth (coefficient of variation raised from 46,2% in 2001 to 58,9% in 2007) and reduced during the crisis years (to 34% in 2009) . With the renewal of economic growth, it began to grow and reached 41% in 2012 (Fig. 1).

**Life expectancy** in Russia began to increase in 2004. In 2000 it exceeds 70 years only in two regions, in 2012 – in 29 regions. By the end of the period the absolute difference between maximum and minimum values declined from 20 (in 2003-2009) to 17 years in 2012. Among leaders there were republics of the Northern Caucasus, where longevity was explained by better climate conditions, low alcoholism and underestimation of infant mortality. Besides Caucasus republics in leading group there were Republic of Tatarstan, Belgorod Region, Stavropol Territory, Moscow and St. Petersburg where longevity was explained not only by high quality of health care but also change of people's attitudes towards their health, which was regarded as a sign of success and a factor of competitiveness in the labor market.

Low indicators of longevity were in the Far East regions (Khabarovsk Territory, Magadan Region, Amur Region, Sakhalin Region, Jewish Autonomous Region, Chukotka Autonomous



Area), some regions of East Siberia (Irkutsk Region, Trans-Baikal Territory, Republic of Tuva), Republic of Altai. Life expectancy was not more than 67 years there, and the minimum value was in the Chukotka Autonomous Area (60,79 years).

### **III.1.2. Dynamics of synthetic indicators of level of living in regions**

Synthetic general indicator of level of living demonstrated stable growth and increased by 34,5% for the whole period (Fig. 2). The crisis of 2009 did not change the trend, but only slowed the growth: before 2009 the integral indicator of level of living increased by 3% per year, in 2009-2010 its growth rate declined to less than 1%, in 2011-2012 recovered at the 1% level. This is explained by inertness of the majority of the selected indicators of level of living. Due to social policy real incomes and poverty rate reacted to the economic crisis very slightly. Another reason for the decrease in growth rates of level of living is a reduction in the number of students caused by demographic trends.

In 2012 about 20% of the population lived in the top 10 regions. Among them - the cities of Moscow and St. Petersburg, Belgorod region, and also Moscow region which significantly improved its position and by the end of the period reached the leading group. In the top ten is the Republic of North Ossetia - Alania, due to high longevity, per capita housing stock, relatively low poverty rate (a characteristic phenomenon for the North Caucasian republics by the end of the period). Two Far Eastern regions (Kamchatka Territory and Magadan Region) were among the leaders due to low rates of poverty and high indices of per capita housing stock and number of cars. Magadan Region has also high rating in the number of students. The group of top ten regions also includes Kursk Region, Ryazan Region and Tver Region.

In ten regions with the lowest level of living there lived only about 4,5% of the population. Composition of this group is quite stable: Republic of Kalmykia, Republic of Mari El; underdeveloped regions of Siberia - Trans-Baikal Territory, Republic of Buryatia, Republic of Tuva and Republic of Altai; North Caucasus Republics (Republic of Ingushetia, Kabardino-Balkarian Republic and Karachayev-Circassian Republic).

Regional inequality of level of living declined. The ratio of maximum and minimum values reduced from 2,35 to 1,9 times, the coefficient of variation started declining since 2006 and decreased from 11,3% to 9,7% throughout the period (Fig. 2).

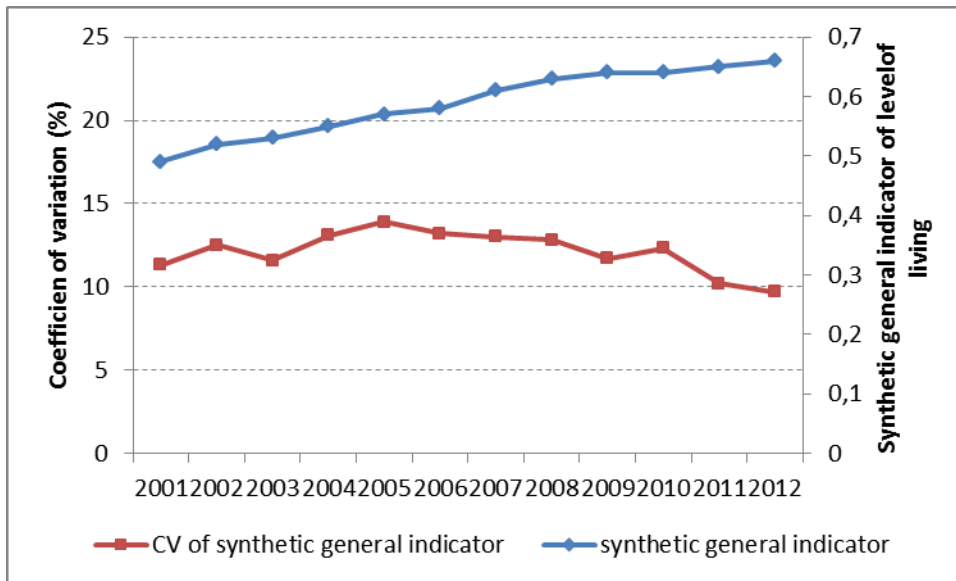


Figure 2. Synthetic indicator of level of living (weighted average) and its coefficient of variation (Source: author's elaborations on FSSS data)

So we can conclude that the level of living in regions depends on level of economic development, which in turn in great deal is determined by export orientation of region or agglomeration effect or institutional factor (status of the capital). But the inequality in level of living decreased due to the state social policy and redistribution of resource rent.

### III.2. City level

As institutional factor (status of regional capital) in condition of centralized system of governance becomes an important factor of socio-economic development, the dynamics of indicators of level of living was investigated separately for the regional capitals and other "non-capital" cities, among which are: the largest (population over 500 thousand people), major (with population above 250 thousand, but not more than 500 thousand people) and big cities (with a population of over 100 thousand, but not more than 250 thousand people). It should be noted that most of largest cities (except three – Novokuznetsk, Togliatti and Naberezhnye Chelny) are regional capitals.

We excluded from consideration the federal cities of Moscow and St. Petersburg because they are in different conditions of development in comparison with other cities of the Russian Federation due to their status of subjects of the Federation.

#### III.2.1. Dynamics of individual indicators of level of living in cities

Unfortunately FSSS does not develop data on per capita income for cities. Because of this researchers usually use data on wages or retail turnover per capita as indicators of per capita

income. But in 2010 FSSS changed the methodology for calculating retail turnover and because of that in this study we use data on wages as an indicator of per capita income.

Weighted average of the *real wages* doubled for the whole period. The minimum value has almost doubled, and the maximum even decreased slightly. This corresponds with the general trend of poverty reduction. As a result the ratio of maximum and minimum values decreased significantly (from 8,5 to 4,19 times).

Due to institutional factor and agglomeration effect average real wage in regional capitals demonstrated more rapid growth than in non-capital cities.

Throughout the period the highest real wage was in Norilsk. Among leaders there were other northern cities which specialize on oil and gas extraction (Nefteyugansk, Nizhnevartovsk, Surgut, Novy Urengoy, Noyabrsk). The number of cities of Moscow Region in the leading group was growing throughout the period and by the end of it reached the half of the group. The notable fact is the absence of regional capitals and the largest cities in the leading group. Therefore, we can conclude that the high positions of the city in the real wages are provided by specialization of the city and its proximity to Moscow (agglomeration effect).

*Table 4. Dynamics and inequality in indicators of level of living for cities*

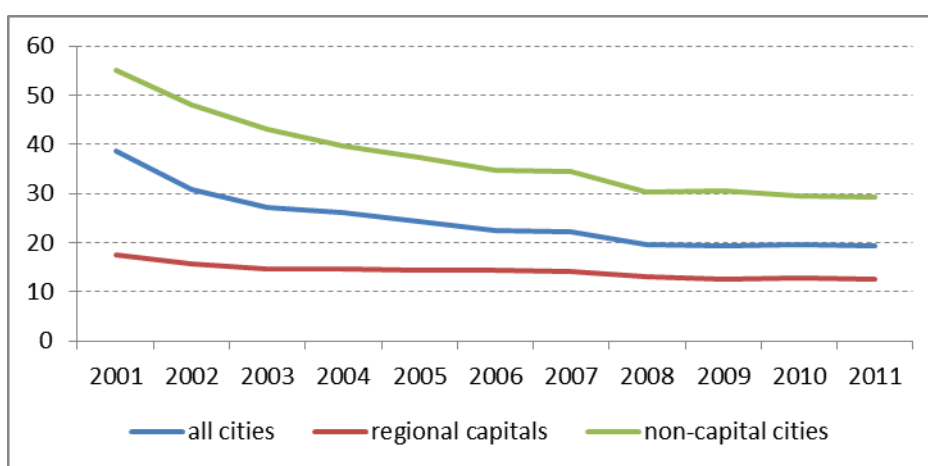
	All cities		Regional capitals		Non-capital cities	
	2001	2011	2001	2011	2001	2011
Real wage						
Minimum	0,665	1,326	0,665	1,845	0,687	1,326
Mean	1,291	2,645	1,212	2,653	1,453	2,627
Maximum	5,653	5,556	1,745	3,992	5,653	5,556
Coefficient of variation (%)	38,6	19,2	17,4	12,4	55,0	29,2
Number of physicians per 10 000 population (persons)						
Minimum	22,6	18	36,5	37,1	22,6	18
Mean	65,11	71,12	76,0	84,4	37,6	37,6
Maximum	126,9	140,2	126,6	140,2	72,5	72,5
Coefficient of variation (%)	36,7	37,7	21,0	20,0	23,5	23,6
housing stock, average per inhabitant, sq. m.						
Minimum	6,5	11,3	13	11,3	15,6	13,2
Mean	18,72	22,4	18,83	22,54	18,50	22,11
Maximum	26,8	37,8	25	32,2	26,8	31,5
Coefficient of variation (%)	8,8	11,8	6,6	11,1	14,6	13,7

*Source: author's elaborations on FSSS data*

Cities of the Altai Territory (except the capital - Barnaul), and of the North Caucasus Federal District were permanently among outsiders.

Differentiation of regional capitals in wages was not large and slightly decreased: coefficient of variation reduces from 17,4% to 12,4% (Fig. 3).

Group of non-capital cities was substantially heterogeneous in the level of real wages. It includes both northern oil and gas extraction cities of the Tyumen Region, and backward cities of the North Caucasus and the Altai Territory. However, its heterogeneity significantly reduced: as a result of state social policy the minimum value of real wage almost doubled, and the maximum - slightly reduced. The ratio of the maximum and minimum values has fallen by half and the coefficient of variation reduced from 55% to 29% by the end of the period. This



reduction determined the trend for the entire set of cities - weighted coefficient of variation reduced by half (Fig. 3).

*Figure 3. Coefficient of variation of real wages in groups of cities (Source: author's elaborations on FSSS data)*

An average value of **number of doctors per 10 000 of population** increased by 9% for the whole set of cities. At the same time the minimum value reduced by 23% and maximum value increased by 10%. As a result, the gap between the maximum and minimum increased.

The number of doctors per 10000 of population was higher in regional capitals than in non-capital cities and grew faster. The gap in this indicator between regional capitals and other cities increased from 2 to 2,25 times. At the same time the degree of inequality in this indicator changed differently in the group of regional capitals and non-capital cities. Regional capitals become more equal and non-capital cities – more unequal in the number of doctors per 10 000 of population.

Thus, we can conclude that the mean number of doctors per 10 000 of population increased due to the growth of this indicator in regional capitals and its inequality increased because of the growth of inequality of non-capital cities on the one hand and growing gap between regional capitals and non-capital cities on the other.

Of course, the concentration of large medical centers in the regional capitals is economically rational. However, this increases the inequality in access to high-quality health care services between residents of cities with different status.

Despite the growing quantitative indicators situation in health system in the RF is considered to be close to critical and widely discussed by authorities and media. Availability of medical care in rural areas is a very acute problem. In small towns the situation is not much better. Inequality in access to health services is growing even between large cities. Problem number one in the Russian health care is a deficit of staff. Medical personnel, including the most skilled, concentrated around the federal medical centers, large regional hospitals, university clinics. All these institutions with rare exceptions are situated in regional capitals. In primary health care shortage of personnel is growing. According to FSSS data the average salary of employees of municipal medical institutions, where nearly half the country's doctors is employed, only 14,600 rubles (approximately 365 euro per month).

Graduates of medical universities do not want to work in clinics. The average age of doctors in local clinics has passed for 50.

If to speak about *educational services*, for the study of cities it is important to consider the availability of high-quality secondary education.

Data on the number of students of secondary educational institutions provided by FSSS, show a decline in their numbers, which reflects demographic trends.

Other studies show that the quality of education varies with changes in the size of the city. A study by the Institute of Sociology of Russian Academy of Sciences evidences that the smaller the town, the greater the share of "normal" and "weak" schools that do not have "high" status and specialization, in which there is a small proportion of high-skilled teachers (Konstantinovskiy *et al*, 2008). Graduates of these schools have relatively low results of Unified State Exam (USE) and are less likely to enter higher education institutions. "Normal" schools with low learning outcomes are usually in rural areas, urban settlements and district centers, and almost never - in metropolitan areas.

On the other hand, as the size of the city increases the proportion of "strong" schools (with the status of the gymnasium, with specialized studies or in-depth study of any subjects, that provide additional services) grows. These schools have a large proportion of high-skilled

teachers, their graduates demonstrate high results of USE, most of them enter higher education institutions. More than half of these schools are concentrated in regional capitals and the largest cities.

Average *housing stock per inhabitant* grew for 21% for the whole period including 22% increase in regional capitals and 20,5% in non-capital cities. Coefficient of variation is quite small and rose both for regional capitals and the whole considered set of cities.

However, the quantitative indicators of housing conditions do not reflect the characteristics of the quality of housing.

Surveys conducted by FSSS in the frame of integrated monitoring of the living conditions of the population in 2011 show that quality of housing improves with the increase in city size. For example 27,9% of respondents in big cities complained about the lack of heat in their flats, and less than 20,5% - in the largest cities (almost all of them are regional capitals). Dampness in dwellings noted 17,1% of households living in big cities, 16,2% - in the largest, and only 9,1% - in the largest cities with population over 1 million (that is cities-millionaires). The number of complaints about shortages of cold water is also higher among residents of big cities (3,5% of households in the big cities, and 1,7% - in the cities-millionaires). The situation with complaints about power interruptions is very much the same (Fig. 4).

The bigger the city, the better the availability of communications: cable TV, fixed and mobile phones, home and portable personal computers (Fig. 5).

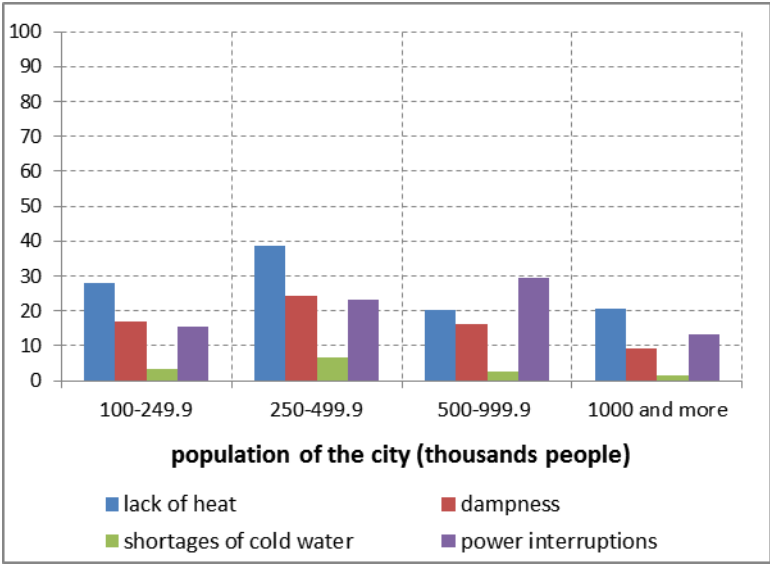


Figure 4. The proportion of households (in%), marking the disadvantages of living conditions in cities of various sizes (Source: Federal State Statistics Service of the Russian Federation)

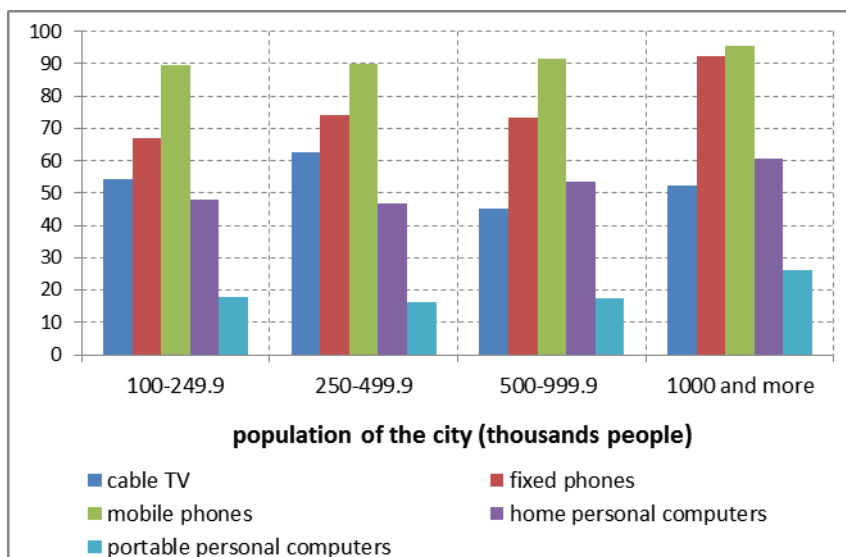


Figure 5. Households equipment with communication facilities in the cities of different sizes (in%) (Source: Federal State Statistics Service of the Russian Federation)

Households living in cities of different size vary essentially by having access to the Internet. Access to the network have about half of households in big and major cities, 57,4% - in the largest (from 500 thousand to 1 million) and 69,8% - in the cities-millionaires. High cost as a reason for the lack of network access was pointed out by 4% of households in big cities, 2,4% - by households in the largest cities and 0,7% - in cities-millionaires.

Distinction in the need for the use of Internet is also an evidence in favor of discrepancy in the way of life of the inhabitants of different-sized cities: the lack of need for its use declare 42-43% of the households in big cities, 36,9% of the households – in the largest cities, 28,2% of the households – in the cities-millionaires.

In the beginning period *natural increase of population* was only in 17 of considered cities (in cities of North Caucasus republics, Tatarstan Republic, the Republic of Tuva, autonomous areas of Tyumen Region, the cities of Norilsk and Yakutsk). By the end of the period there are 63 cities with natural increase of population and among them – the largest cities and regional capitals of Siberia and European part of the country (Barnaul, Novosibirsk, Tomsk, Krasnoyarsk, Irkutsk, Stavropol, Vologda, Kazan, Sochi and others).

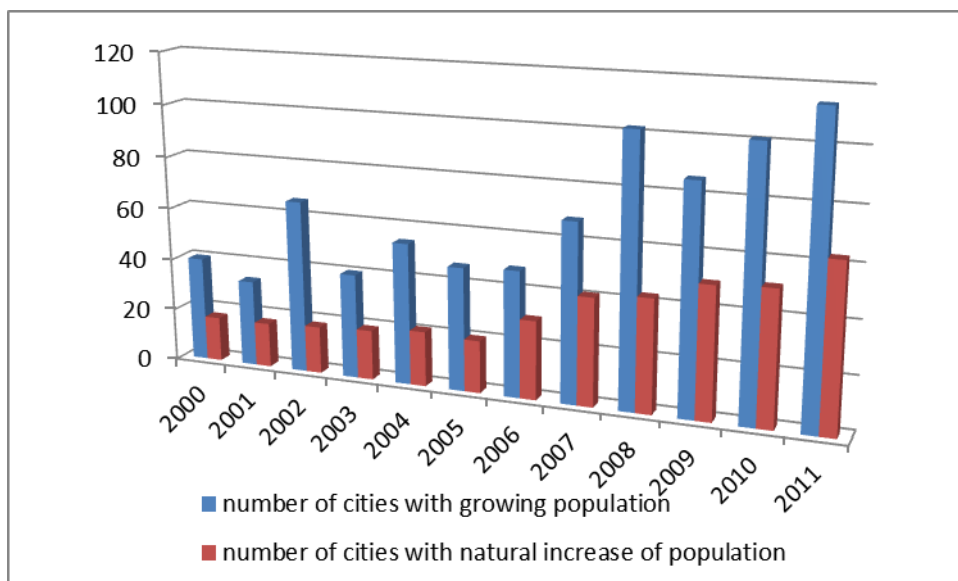


Figure 6. Number of cities with increase and natural increase of population (Source: author's elaborations on FSSS data)

The number of cities where the population was increasing, including due to the influx of migrants on the background of natural population loss, was notably greater and growing (Fig.6). In Siberia and the Far East population grew mainly in regional capitals. In Ural Federal District and European part of Russia the population increased in non-capital cities too. Among them:

- northern cities of Tyumen Region;
- cities of The North Caucasus Federal District where in the beginning of the period the population was decreasing despite its natural increase and by the end of the period it began to grow;
- cities of Krasnodar Territory and Stavropol Territory which are attractive for people by their climatic conditions;
- cities of Republic of Tatarstan and Republic of Bashkortostan;
- cities of Moscow Region in spite of natural decrease of population there because of their proximity to Moscow and growing level of living.

### III.2.2. Dynamics of synthetic indicators of level of living in cities

The synthetic indicator of level of living for the whole set of cities increased by 35%, for regional capitals – by 33% and for the set of non-capital cities – by 36%. Level of living in regional capitals was notably higher than in non-capital cities (Fig. 7).



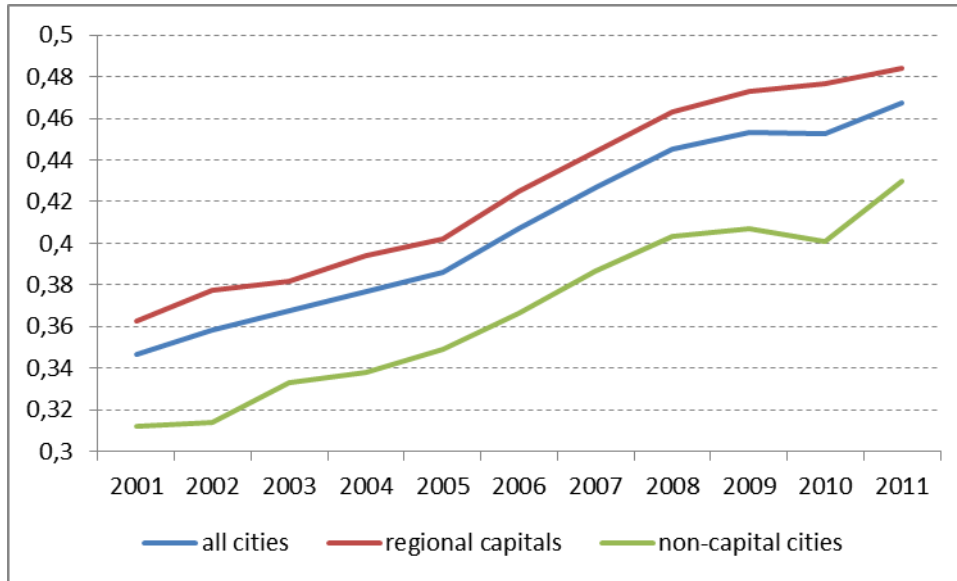


Figure 7. Synthetic indicators of level of living in groups of cities (Source: author's elaborations on FSSS data)

The majority in the group of low level of living were cities with the population below 250 thousand. And there were no regional capitals in this group. The latest prevailed in groups of cities with medium and high level of living. Besides regional capitals there were also Northern cities of the Tyumen Region which specialized on gas and oil extraction and cities of Moscow Region in the group with high level of living. Cities of Moscow Region demonstrated a rapid growth of level of living. During the period most of them moved from the group with low level of living to the group of cities with high level of living.

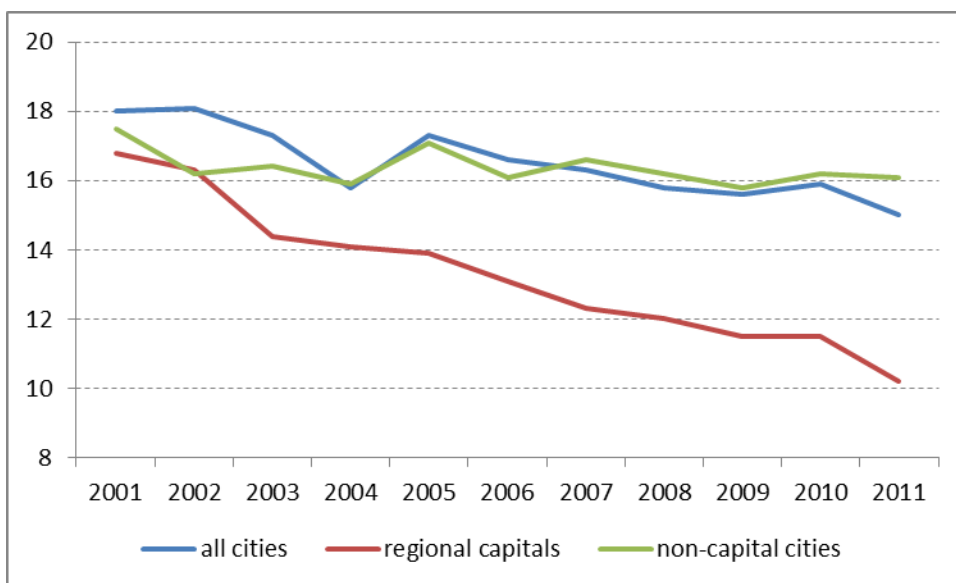


Figure 8. Coefficient of variation of the synthetic indicators of level of living in groups of cities (Source: author's elaborations on FSSS data)

So for the cities with population more than 100 thousand we can mark out the following factors which provide high level of living (in order of importance): specialization of a city, proximity to Moscow, status of regional capital and the size of a city.

Inequality in levels of living between cities decreased: coefficient of variation declined from 18 to 15% for the whole period. But this trend is formed mostly by decrease in variation of levels of living in regional capitals. It diminished from 18,8 to 10,2%. Coefficient of variation in the group of non-capital cities is higher and decreased in an insignificant extent, actually it hadn't clear trend (Fig. 8). So the administrative status of regional capitals provides not only high level of living but a clear convergence trend.

#### **IV. Conclusions**

In the period of 2001-2012 social state policy notably increased real incomes in less developed regions and reduced the poverty rate. As a result interregional inequality in well-being indicators reduced.

The unemployment rate is completely determined by economic development. It considerably reduced during the period but its interregional inequality increased in the years of economic growth and reduced in the years of economic decline.

The rise of real incomes, reduction of poverty and state social and demographic policy led to increase of life expectancy even in less developed regions.

As a result the level of living in regions increased by more than one third in average. The main factor that explains high level of living in regions is the level of economic development which in turn determined by specialization (export orientation), agglomeration effect and institutional factor (status of capital or federal city).

Interregional inequality of levels of living decreased considerably mainly due to the reduction of income inequality. The main reason for this is the state social policy pursued by the redistribution of resource rent.

Inequality of levels of living in cities with population more than 100 thousand reduced too. As in the case of regions the main source for this is the decrease in income inequality. It decreased both between regional capitals and non-capital cities but in the last case the reduction is greater.

In spite of convergence of quantitative indicators of level of living the difference between regional capitals and non-capital cities in quality of housing, in availability of qualitative secondary education and health care didn't decrease.

The general trend for decrease of inequality in levels of living is provided by convergence trend for regional capitals. Inequality between non-capital cities reduced insignificantly.

Despite the general trend of convergence of levels of living in cities the difference between regional capitals and non-capital cities is still considerable and actually do not diminish.

The main factors that determine high level of living in cities are: specialization of a city (gas and oil extraction), proximity to Moscow, status of regional capital and the size of a city (the last two factors are connected).

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