Methodological issues of assessing the effects of social inequality in Russia's regions *

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Abstract. The article deals with the issue concerning the assessment of the impact of social inequality on the socio-demographic characteristics of society. The authors evaluate the impact of the social inequality growth in the Russian Federation subjects on the basis of the analysis of the decile ratio dynamics. They propose a methodological approach to determine the degree of dependence of crime rate on the growth of social inequality. The authors compare the influence of the decile ratio and purchasing power on mortality rate in the regions of Russia.

Key words: social inequality, assessment of consequences, socio-demographic characteristics of the population, purchasing power.

Russian scientists who analyze poverty and social differentiation often take into consideration only economic factors and pay less attention to social factors. From the viewpoint of the European Community, the citizens, whose material, cultural and social resources are limited so that they are deprived of a minimally decent way of life within their resident country, are considered poor. In accordance with this definition, we can prove that it is necessary to take into account the social minimum, because people are not able to take active participation in the life of their society, or to maintain relations accepted in their society, if their resources fall below a certain minimum.

Social inequality as one of the key socio-economic factors that influence the state of health is more or less characteristic of all countries. It is also one of the most critical issues in modern Russia; it should be handled in order to promote Russia's socio-economic development and improve the demographic situation in the Russian regions. The decile ratio is the traditional indicator of social inequality that shows how many times the minimum income of 10% of the richest population exceeds the maximum income of 10% of the poorest population. The decile ratio is 3–4 times in the Scandinavian countries; 5–6 times in the European Union; 4–6 times in South and East Asia, Japan and North Africa; 9 times in the United States; 10 times in South Africa; 12 times in Latin America. The decile ratio in the USSR was about 3, and in modern Russia it is 14 times [1].

People tried to achieve *social equality* ever since the emergence of concepts such as wealth and poverty; however, differences in incomes and consumption of the population were and are one of the main characteristics of society. Various social sciences show interest in this issue and in its causes and consequences. For instance, French sociologist E. Durkheim argues that social inequality stems from the division of labor: mechanical (natural, age and gender-related) and organic (arising from the training and professional specialization) [2]. P. Sorokin defines social inequality as the differentiation of a given population into hierarchically superposed classes. Its basis and essence lie in the uneven distribution of rights and privileges, responsibilities and duties, in the presence or absence of power and influence among the members of the society [3].

P. Bourdieu concludes that opportunities for social mobility are determined by different types of resources or "forms of capital" — economic, cultural, and symbolic that are at the disposal of individuals [4].

According to V. Pareto, social inequality emerges from the lack of optimality in the allocation of resources, when it is impossible to make one person better off without necessarily making someone else worse off [5]. M. Weber's concept of social stratification distinguishes three factors – wealth, prestige and power – that divide a society into strata [6].

All theories have social inequality as their starting point. The views differ in what should be considered the main component of inequality – wealth, power or prestige. In any case, inequality is a situation, when people do not have equal access to social benefits. Stratification describes the ways in which inequality is transmitted from one generation to the next, thereby forming the classes or social strata.

Ideas about modern mechanisms of social differentiation are expressed by V.L. Makarov [7]. He compares the concept of "social category" to his concept of "social cluster". According to Makarov, a social cluster is a jurisdiction with its own ethics, rules of conduct, its own laws and currency. The standards, the compliance with which is crucial for being part of a particular social cluster, are of essential importance.

At that, with regard to modern society, Makarov proposes to distinguish social clusters based on professional occupation or employment sphere rather than on income or parentage.

The issue of social inequality and the consequences of the choice of the ways of its solution are very accurately defined by the well-known French economist L. Stoléru: "The country in which individual's incomes grow slowly, can be a happy country; a country in which the average income grows very rapidly, but at the same time income inequality also grows, is heading for its own destruction" [8].

Social inequality causes upsurge in crime and infringement on democracy; it corrupts public health and slows down economic development. That is why developed countries keep social inequality at a relatively low and "balanced" level.

The study of the correlation between crime rate in Russia and the value of the decile ratio shows that the higher the value of this indicator, that is, the higher social inequality in the country, the higher the values of crime rate *(tab. 1)*.

When the value of the decile ratio is more than eight, the number of victims increases

Table 1. Influence of the value of the decile ratio on crime rate in Russia in 2008–2012 [9]

Group by the level of the decile ratio	Decile ratio	Number of registered crimes (per 100 thousand people)	Homicide and attempted murder	Number of offences for which the victims are identified	Number of victims of criminal actions
Minimum (less than 6)	5.65	1733	118	3253	12526
Excessive (6–7)	6.41	1841	173	4850	19200
Dangerous (7–8)	7.38	2119	332	9768	36635
Insufferable (over 8)	8.95	2007	358	12422	53860
Total	6.53	1851	196	5716	22534

four odd times (from 12526 to 53860 people), and homicide rate increases threefold (from 118 to 358 per 100 thousand population).

Naturally, the question arises: is the impact of social inequality limited to only the criminal aspects of society or does it apply to the main demographic processes that are reflected, for example, by mortality rate?

In order to investigate this issue, a research has been conducted that studies the impact of the decile ratio on the total mortality and mortality from external causes in the Russian Federation within five years (2008–2012) *(tab. 2)*.

The result appears paradoxical: the less social inequality, the higher mortality. In order to understand the reasons for this contradiction, we, first of all, confirmed a previously discovered dependence of mortality rate on the value of purchasing power (PP).

To adjust for differences in local consumer prices, the purchasing power of the population was assessed not in rubles, but in relative units that show how many times the average monthly money incomes of the population exceed the subsistence level (SL) *(tab. 3)*.

The dependence of the rates of total mortality and mortality from external causes remains as usual: the less the purchasing power of the population, the higher its mortality. With the exception of the group with a very low purchasing power, where its influence on mortality rate from external causes has no obvious manifestation; this can be caused by other factors: a significant part of the population dies before they reach retirement age in the areas that receive most part of subsidies. It is the reduction in the share of retirement age persons that entails the decline of mortality rates [10, 11].

Table 2. Effect of the value of the decile ratio on the total mortality and mortality
from external causes in the subjects of the Russian Federation in 2008–2012

Group of the RF subjects by the value of the decile ratio	Decile ratio, times	Total mortality per 1000 people	Mortality from external causes (per 100 thousand people)
Minimum (less than 6)	5.65	14.60	177.70
Excessive (6–7)	6.41	14.43	165.79
Dangerous (7–8)	7.38	13.20	177.76
Insufferable (over 8)	8.95	11.72	145.73
Total	6.53	13.97	168.80

Table 3. Influence of the value of purchasing power in the Russian Federation subjects
on the total mortality and mortality from external causes in 2008–2012 [9]

Group of the RF subjects by the level of purchasing power	Purchasing power	Total mortality (per 1000 people)	Mortality from external causes (per 100 thousand people)
Excessive (over 4 SL)	4.60	11.72	165.04
Median (3.5–3 SL)	3.70	13.64	176.05
Low (3–3.5 SL)	3.22	14.45	176.86
Very low (less than 3 SL)	2.73	14.62	159.53
Total	3.33	13.97	168.80

After that the Russian Federation subjects with the highest decile ratio (DC) and the lowest PP were compared. The comparison has proved to be extremely revealing *(tab. 4)*.

Analysis of the decile ratio dynamics suggests that the greatest value of DR and the highest social inequality are observed in the wealthiest regions with high purchasing power, including Moscow, and Saint Petersburg and northern regions specializing in oil and gas production (Khanty-Mansi and Yamalo-Nenets autonomous okrugs).

Poverty and income differentiation of the population in Russia are assessed mainly by the indicator of absolute poverty, based on the correlation between people's incomes and the subsistence level. In this case citizens are considered poor, if their incomes do not exceed one SL. Note that the parameters of SL are characterized by the lowered standards for what is needed. As V. Roik points out, some of them are below the level typical for military time [12]. Currently, the average income in Russia only slightly exceeds three SL nationwide and in most of the regions.

There is a significant differentiation of income and wages in the regions, which is caused mainly by the current economic specialization of the regions. For example, the Kurgan Oblast, being an agro-industrial region, is characterized by the lowest purchasing power of wages (2.63 SL in 2008; 2.98 SL in 2012) among all the RF subjects within the Ural Federal District.

Table 4. Russian Federation subjects with the lowest purchasing power*
and with the highest decile ratio** in 2008–2012 [9]

RF subjects with the lowest purchasing power	Purchasing power	Decile ratio	RF Subjects with the greatest value of the decile ratio	Decile ratio	Purchasing power
Altai Krai	2.33	5.7	Moscow	11.8	4.68
Altai Republic	2.43	5.5	Tyumen Oblast	8.8	4.15
Republic of Dagestan	2.52	6.6	Nenets Autonomous Okrug	8.7	4.56
Kostroma Oblast	2.59	5.5	Samara Oblast	8.5	2.88
Karachay-Cherkess Republic	2.61	5.7	Saint Petersburg	8.3	4.83
Ivanovo Oblast	2.64	5.4	Yamalo-Nenets Autonomous Okrug	8.3	5.46
Republic of Adygea	2.64	6.0	Republic of Bashkortostan	8.1	3.59
Republic of Kalmykia	2.66	5.8	Khanty-Mansi Autonomous Okrug	8.1	5.00
Kurgan Oblast	2.68	6.8	Krasnoyarsk Oblast	8.0	3.72
			Sverdlovsk Oblast	8.0	3.62

* Purchasing power is calculated as the average value over the years of observation. If during the years of observation the RF subject fell out of the 4th group with the lowest purchasing power, then the decile ratio was calculated according to this period.
** The situation is similar with the decile ratio: if during the years of observation the RF subject fell out of the 4th group with the highest decile ratio, then its mean value was calculated and the value of purchasing power was calculated corresponding to the same period.

The regions engaged mainly in raw materials extraction, such as Khanty-Mansi and Yamalo-Nenets autonomous okrugs, have the highest level of purchasing power of labor incomes (in 2008 – 5.00 and 5.41 SL, in 2012 – 5.35 and 5.84 SL, respectively) not only among the Federal District regions, but also nationwide, being on the same level as Moscow. At the same time, old-industrial regions of the Ural Federal District such as the Sverdlovsk and Chelyabinsk oblasts are characterized by low purchasing power, which amounts to a little more than three subsistence levels (in 2008 – 3.62 and 3.28 SL, in 2012 – 3.76 and 3.77 SL, respectively) [9].

In fact, there is a constant reproduction of a deeply flawed situation, when the regions that have labor-intensive industries with high added value of manufactured products ultimately have significantly lower wages than the regions that specialize in the extraction of raw materials.

The purchasing power of money incomes of the population is minimum and social inequality is not so significant in the North Caucasus, in Altai, and in the Ivanovo and Kostroma oblasts. High purchasing power of the population in the wealthy RF subjects partially masks the negative impact of social inequality on public health.

The achievement of social justice in the sphere of labor remuneration requires active involvement of the state in the formation of an effective and socially equitable distribution of newly created value by factors of production [13]. The cardinal increase in the wages of employees is associated not only with the achievement of the principle of "social justice"; it also stems from objective economic necessity.

There is a contradiction between social equality, on the one hand, and economic growth and production efficiency on the other hand; this contradiction should be taken into account and the means and methods for its timely resolution should be found, namely: striving to achieve social equality and acquiring the income of the richest population groups in favor of the poor, the government reduces the opportunities of entrepreneurial organizations for expanding production and increasing economic activity.

At the same time, the completely opposite situation is also unjustified: we mean the uncontrolled growth of incomes of the richest population groups, on the one hand, and the impoverishment and social differentiation, on the other hand. Excessive disparities in incomes and consumption disrupt the balance of interests of various social groups and provoke economic, social and political conflicts [14].

In this regard, it is necessary to find a comprehensive solution to the pressing issue concerning the growth of social differentiation; the government should pursue a clear and sensible policy in the sphere of income and wages. When elaborating such policy, it is necessary to use scientific research findings in the sphere of socio-economic and demographic processes that are going on in Russia's regions, in particular, the data of the new integrated science, called "social biology" [15].

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