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REGIONAL DEVELOPMENT

"Russian power will grow through Siberia."
M.V. Lomonosov

Social Development Risks of Siberia

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Abstract—The article examines the social aspects of regional development and identifies social threats to regional development: poverty, archaic social structure of the population with a high proportion of the poorest, a narrow middle class layer, and a scan proportion of the rich against a high income concentration. There are marked regional differences in the economic stratification of the population. Deterioration is the positions of most regions of the Siberian Federal District on the scale of living standards has been noted, as well as a decrease in disposable income. It is concluded that over the past 18 years, there have been no significant positive changes in technological paradigms in the Russian economy. Modernization of the economy is the main reserve for raising the level and quality of life of Siberians.

Keywords: social risks, social threats, economic stratification, inequality, poverty, technological paradigm, regional development

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INTRODUCTION

The brilliant foresight of the renowned Russian scientist Mikhail Vasilyevich Lomonosov came to pass: the natural resources and human capital of Siberia largely determine the level of development of the country. The Siberian Federal District (SFD), created on May 13, 2000, unites 12 federal subjects and occupies 25.5% of Russia's territory. The regional population as of January 1, 2019, was 17 174 000 people or 11.7% of permanent residents of the country.[1] Key problems of human capital development in Siberia have been repeatedly in the focus of attention of international and domestic forums (Materialy ..., 2017; Perspektivy ..., 2014). This article presents the results of an ongoing study of the social risks of regional development. The society of risk is, in essence, a new paradigm that replaces the concept of a society for the production and distribution of wealth.

"In the developed countries of the modern world, the social production of *wealth* is constantly accompanied by the social production of *risks* (Beck, 2000, p. 21). The obvious meaning of U. Beck's statement is the increasing threats to human survival and development as the productive forces are modernized. Unlike the hazards caused by natural disasters, social risks are the inevitable products of decision making. The subjects (producers) of risk can be politicians, business entities, and social groups. "Consumers," the objects of social risk, or risk groups, are social groups, communities, and individuals negatively affected by the decisions made by risk subjects.

According to A. Giddens's concept, the existing institutional environment sets unified options for the behavior of individuals and thus generates collective risks (Giddens, 1994). Moreover, each form of social life generates its own "portfolio" or set of risks in a certain time period.

Research on social risks has also been the focus of Russian researchers since the 1990s. They formulated a sociological and philosophical representation of the concept of risk and outlined the possibilities for the synthesis of risk theory and empirical knowledge (Maslova, 2011; Mozgovaya, 2001; Yanitskiy, 2003; Zubkov, 1994; etc.).

Social risks in our context are the likely negative consequences of social policy that pose a threat to human development.

[1] On November 4, 2019, a decree was signed on the transfer of Zabaykalsky Krai and the Republic of Buryatia to the Far Eastern Federal District. This article focuses on the SFD in its former borders.

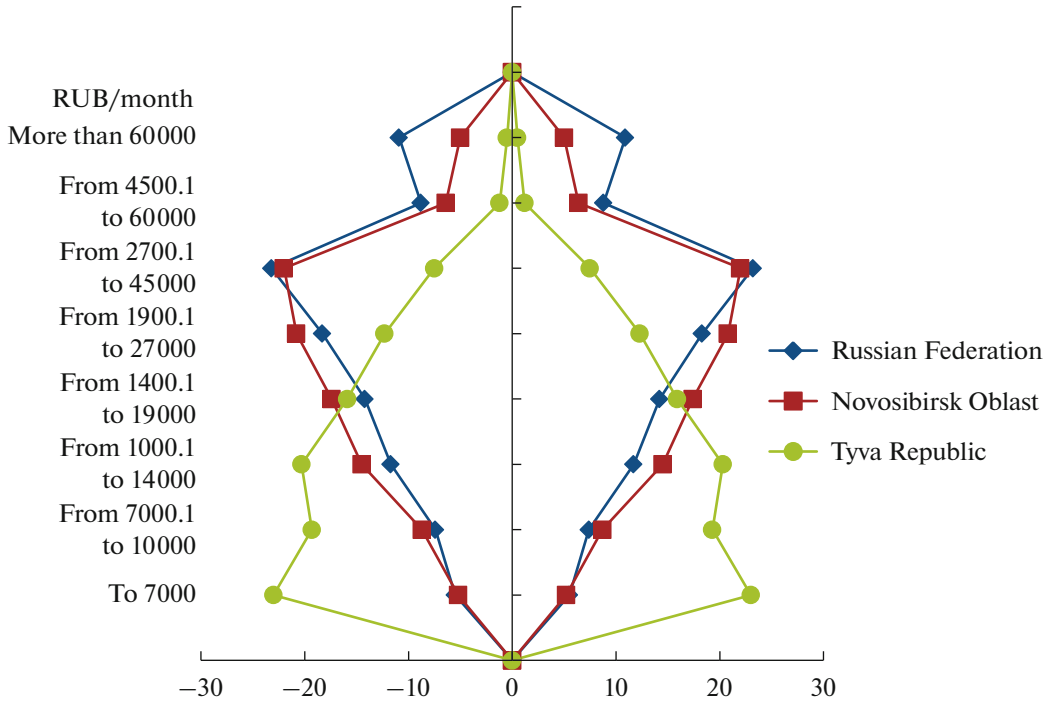

Fig. 1. Profile of economic stratification of population of Russian Federation, Novosibirsk Oblast, and Tyva Republic by income in 2017.

Source: Regions of Russia. Socioeconomic indicators. 2018: Stat. Dig/Rosstat. Moscow, 2018, pp. 222–223.

POVERTY AMONG POPULATION AS A THREAT TO REGIONAL DEVELOPMENT

Poverty among the population remains one of such threat. Poverty entails negative social consequences: deterioration of family nutrition; narrowing of material opportunities to receive qualified medical care or to give children a good education. The results of a poll conducted by VTsIOM revealed that Russians consider a family poor as one whose income per member is less than RUB 15500/month.[2] Based on this criterion, approximately of the population of the republics of Altai and Buryatia and more than a third of the population of other Siberian regions can be classified in this category.

Research by the Institute for Social Analysis and Forecasting, RANEPA, shows that only a tenth of Russians are satisfied with their financial situation. According to FOM (Public Opinion Foundation) data, 28% of the population consider themselves to be indigent, and 12% consider they do not earn enough for food. A poll by the Levada Center revealed that 65% of families do not have financial savings. According to a study by the Superjob portal, 29% of employees cannot go on vacation and continue to work year round due to lack of funds.

[2] VTsIOM: Russians consider people with incomes below RUB 15500 as poor. https://tass.ru/obschestvo/4175443

Our analysis showed that as a result of Russia's socioeconomic policy, an archaic social structure of the population formed with a high proportion of the poorest people, a narrow stratum of the middle class, and a scant proportion of the rich. Meanwhile, there are significant regional differences in the economic stratification of the population (Fig. 1). Economic stratification is the ranking or differentiation of the main strata of the population by income.

A comparison of the profiles of economic stratification of the population of the Russian Federation, Novosibirsk Oblast and the Tyva Republic by income for 2017–2019 (Figs. 1 and 2) allows us to draw the following conclusions. On the face, there have been positive shifts: the share of the poorest population has decreased, the share of Siberians receiving medium and high incomes has increased, and interregional differences have decreased.

One of the indicators characterizing people's disposable income is the ratio of money income to the cost of the fixed set of goods and services (Table 1).

Calculations showed that more than 3 mln Siberians, including residents of Zabaykalsky Krai and the Republic of Buryatia, live below the poverty line and about 500000 are in a situation of extreme poverty. Within the new borders, excluding Buryatia and Zabaykalsky Krai, more than 17% of Siberians are below the poverty line and 2% are in a situation of extreme poverty.

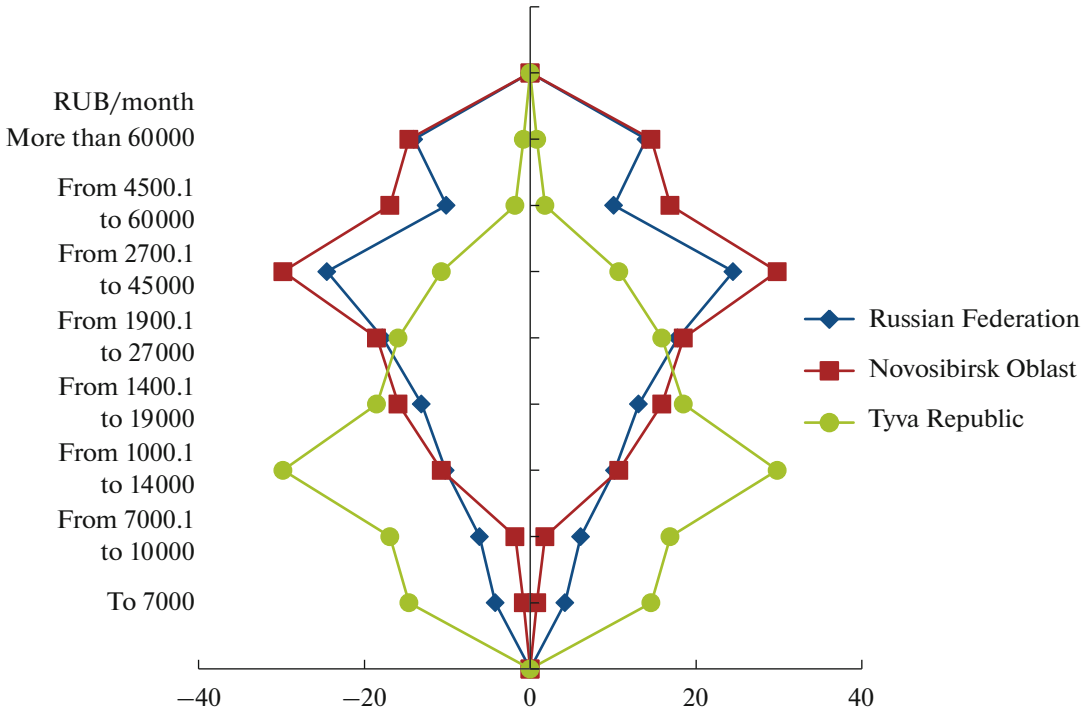

Fig. 2. Profile of economic stratification of population of Russian Federation, Novosibirsk Oblast, and Tyva Republic by income in 2019.
Source: Bulletin on current trends in Russian economy no. 58, February 2020.

Low disposable incomes and the high cost of living in the region largely determine the quality of life. When compiling the rating of regions by quality of life (85 regions in total), 72 indicators were selected that characterize living conditions and quality of life of the population, as well as the level of regional economic development (Table 2).

According to experts, one reason for the low quality of life in Russia is that institutional and economic prerequisites have not been created to extend access to market sources of income, and, accordingly, to growth of the middle class.

The situation is aggravated by the fact that there is a high concentration of income in the country. Credit

Table 1. Rating of SFD regions by disposable incomes, 2019*

Region	Ratio of median income to cost of fixed set of goods and services	Share of population below poverty line in 2019, %	Share of population below extreme poverty line, %
Krasnoyarsk Krai	1.48	18.2	3.0
Kemerovo Oblast	1.40	15.0	1.7
Novosibirsk Oblast	1.55	16.0	2.0
Irkutsk Oblast	1.36	18.1	2,3
Omsk Oblast	1.51	13.5	1.8
Tomsk Oblast	1.45	15.7	2.0
Altai Krai	1.31	17.8	2.7
Zabaykalsky Krai	1.32	21.0	3.4
Republic of Buryatia	1.31	18.0	2.8
Republic of Khakassia	1.18	18.3	2.4
Altai Republic	0.98	24.2	4.3
Tyva Republic	0.88	40.1	9.2

* Rating of regions by disposable income – 2019. https://riarating.ru/infografika/20190708/630129839.html.

Table 2. Rating of socioeconomic situation of SFD subjects at the end of 2019

Region	Integral ranking at end of 2019	Ranking	
		2019	2018
Moscow	88.980	1	1
Krasnoyarsk Krai	61.554	12	17
Kemerovo Oblast	52.350	21	20
Novosibirsk Oblast	51.251	22	23
Irkutsk Oblast	51.167	23	24
Omsk Oblast	45.883	32	33
Tomsk Oblast	38.391	49	45
Altai Krai	41.974	43	46
Zabaykalsky Krai	27.794	65	68
Republic of Buryatia	28.884	67	66
Republic of Khakassia	13.710	71	69
Altai Republic	13.814	83	83
Tyva Republic	13.174	84	85

Source: Rating of regions by disposable income – 2019. https://riarating.ru/infografika/20190708/630129839.html.

Table 3. Ratio of average per capita income of population of SFD to value of subsistence level in 2017–2019, times

Region	2017	2018	2019
Altai Republic	1.90	2.03	1.27
Tyva Republic	1.45	1.44	1.18
Republic of Khakassia	2.28	2.22	1.49
Altai Krai	2.43	2.40	1.66
Krasnoyarsk Krai	2.47	2.45	1.94
Irkutsk Oblast	2.23	2.19	1.73
Kemerovo Oblast	2.37	2.39	1.76
Novosibirsk Oblast	2.36	2.36	1.99
Omsk Oblast	2.84	2.77	1.92
Tomsk Oblast	2.38	2.41	1.82
Zabaykalsky Krai	2.17	2.17	1.68
Republic of Buryatia	2.56	2.41	1.63

Source: FSSS. Inequality and Poverty. https://rosstat.gov.ru/storage/mediabank/VtUJQKz1/PovertyLevel%20.html.

Suisse estimates that the top 10% of Russians own 89% of the total wealth of all Russian households. This share is significantly higher than in other large economies. For comparison, in the United States, the top 10% account for 78% of the country's wealth; in China, 73%. The high concentration of wealth is reflected in the fact that Russia is second only to China and the United States in the number of billionaires. At the same time, more than 70% of the adult population of Russia belongs to the less well-off half of the world's population, including a quarter of Russians, among the poorest 20% of humanity.[3]

Similar trends are observed in Siberian regions. Statistics show that in all SFD subjects, in the fourth 20% group of people with the highest incomes, more than 40% of the total income is concentrated.

One indicator characterizing the population's standard of living is the ratio of the average per capita income of the population to the value of the subsistence level. The republics of Tyva and Altai and Zabaykalsky Krai are among the poorest regions of Russia. The ratio of per capita income to the subsistence level in Siberian regions varied in 2019 from 1.18 in the Tyva Republic to 1.99 in Novosibirsk Oblast. Compared to 2018, all SFD regions had worsened positions in this indicator (Table 3).

Siberia remains the focus of the country's poorest population. In all Siberian regions, the share of the population with incomes below the subsistence level significantly exceeds the all-Russian indicators, and the share of rich with incomes over six subsistence levels is significantly lower. According to Rosstat data, in 2019, the indicators of differentiation of money income in Russia did not change compared to 2018. The Gini coefficient is still 0.413, and the decile coefficient of funds (the ratio of the share of income belonging to 10% of the richest part of the population to the share of income belonging to 10% of the poorest part of the population) is 15.6.[4] Social inequality in the distribution of income is also demonstrated by the distribution of income by quintile. In 2019 in Russia, the quintile income distribution was as follows: 5.3–10.0–15.0–22.6–47.1, which indicates the persistence of income inequality among the population.

Unsubstantiated social inequalities generate tension in society, lead to disintegration and confrontation of social forces, and ultimately turn into a social threat to national security. In addition, the extensive statistical material on countries of the world shows that inequality (above the critical level) impedes economic growth and progressive transformations of institutions.

According to calculations by Academician A.G. Aganbegyan, 30% of Russians now live worse than in Soviet times, and 20% live much better and sharply raise the average. The salary of 10% of low-paid workers is RUB 12000, and of 10% of high-paid workers, almost RUB 156000. He sees the reason for poverty of the population as due to the extremely low

[3] Income inequality has increased in Russia over the course of the year. https://www.vedomosti.ru/economics/articles/2019/10/21/814324-rossii-uvelichilos-neravenstvo

[4] Disposable income dynamics. Bulletin on current trends in the Russian economy, February 2020, no. 58., p. 3.

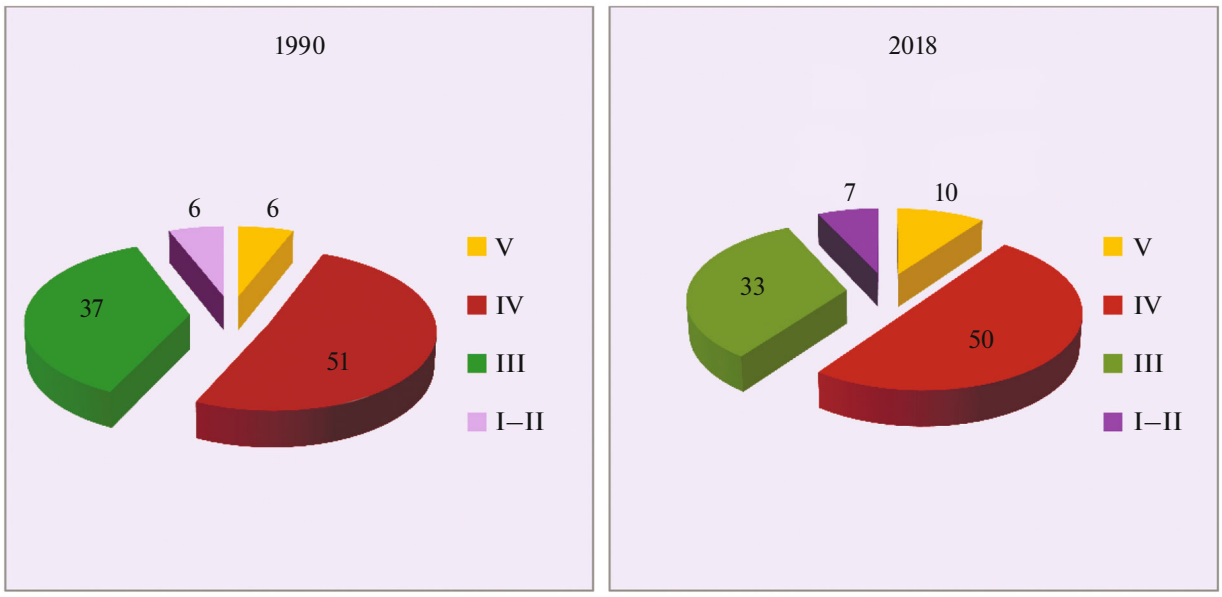

Fig. 3. Share of technological paradigms in Russian economy, %.
Source: (Kablov, 2010).

labor productivity in the economy and lack of modern highly productive jobs. In labor productivity, Russia lags behind developed OECD countries by two to three times. The key to raising living standards can only be large-scale modernization of the economy and the creation of highly productive and well-paid jobs. However, large-scale modernization of jobs in Russia in the near future can hardly be expected (Aganbegyan, 2017, 2019).

This forecast is confirmed by the fact that over the past 28 years there have been no significant positive shifts in the technological paradigms of the Russian economy (Fig. 3).

TECHNOLOGICAL PARAIGMS IN RUSSIAN ECONOMY

A technological paradigm is the aggregate technologies characteristic of a certain level of development of production. The term was introduced by Russian economists D.S. Lvov and S.Yu. Glazyev. A technological paradigm is characterized by a single technical level of its constituent industries, connected by vertical and horizontal flows of qualitatively homogeneous resources, relying on the total resources of the qualified labor force, the general scientific and technical potential, etc. In relation to scientific and technological progress, there has been a transition from low to higher technologies (Glazyev, 2018).

In connection with scientific and technological progress, a transition from low to higher technologies is taking place. The dynamics of technological paradigms in the Russian economy from 1990 to 2018 (See Fig. 3) indicates that there have been no progressive changes in their structure. Russia still lags significantly behind the United States, Japan, and China. Note that in the United States, the share of the fourth technological paradigm is 20%; the fifth, 60%; and the sixth, 5%. According to Academician E.N. Kablov, while maintaining the current rates of technical and economic development, the sixth technological paradigm in Russia will begin to form in 2010–2020, and will enter a mature phase in 2040 (Kablov, 2010).

The Russian economy is still dominated by the third and fourth technological paradigms (Fig. 3). The share of the fifth most progressive technological paradigm does not exceed 10% (in the military-industrial complex and aerospace industry). The fifth technological paradigm relies on the capabilities of electronic and nuclear energy, innovations in microelectronics, information technology, genetic engineering, and biotechnology, which led to the exploration of outer space, the emergence of satellite communications, and other human possibilities. The transition to the sixth technological paradigm, according to experts, is taking place through the next technological revolution, which radically increases the efficiency of the main directions of economic development.

According to Glazyev, at present, the sixth technological paradigm is emerging from the embryonic phase of development, in which its expansion was restrained both by the insignificant scale, lack of development of the corresponding technologies, and the unpreparedness of the socioeconomic environment for their widespread use. Although the costs of mastering the latest technologies and scale of their application are growing exponentially, the total weight of the sixth technological paradigm in the structure of

the modern economy remains insignificant. A qualitative leap will occur after completion of restructuring of the world's leading economies and transition of the new technological paradigm to the growth phase, which is expected in the middle of the next decade. According to forecasts by the US National Science Foundation, by 2015 the annual turnover of the nanotechnology market will reach USD 1–1.5 trln. These lines were written more than a decade ago, when there was still no talk about "Industry 4.0," "Society 5.0," the digital revolution, and other trendworthy topics. However, all the processes indicated by these topics were already in full swing (Glazyev, 2018).

As a result, in the rate of innovative development, Russian industry lags behind the leading industrial countries by four to six times. For example, in Switzerland 60.2% of companies use innovations; in Germany, 58.9%; in France, 46.5%; and in the UK, 45.7%. Even in Central and Eastern Europe, innovation is doing better. In Poland, for example, 18.6% of industrial enterprises engage in these; in Hungary, 18.8%. Of the 33 countries analyzed by the Higher School of Economics, only in Romania was innovative activity lower than Russia's: 6.4%.[5]

QUALITY OF LIFE

Income inequality causes inequality in the level, structure, and quality of consumption among different social groups and negatively affects the conditions of human development. Calculations have shown that the energy value of food products varies from 1993.4 kilocalories in the group with the lowest income to 2946.5 kilocalories in the fifth group with the largest available resources. The Rosstat survey shows that only every second Russian family has the ability to provide adequate nutrition. Large families and single-parent families, as well as pensioners, have fewer possibilities.

In countries with a high level of disposable income and a favorable economic situation, food costs are relatively low compared to other costs and account for less than 15% of total family costs. Residents of such countries spend the rest of the funds on travel, dining, education, household goods, etc. The first position in this ranking is occupied by Luxembourg. Residents of this country spend only 8.4% of their expenses on food purchases. The Netherlands and UK are next with 10.6% of expenses. Residents of Ireland, Finland, Austria, Norway, and Switzerland spend less than 12% on food. In general, economically developed Western European countries are at the top of the ranking.[6] Russia occupies 30th place. According to Rosstat research, the nutritional situation has worsened in every sixth Russian family. Most often, these are single-parent families with many children, as well as those consisting only of pensioners. Malnutrition negatively affects the health of the population.

According to UNISEF, the undoubted dominant factor of ill health in the population in modern conditions is the decline in the socioeconomic well-being of inhabitants. Research carried out under the guidance of Doctor of Economics S.V. Soboleva confirm these findings. According to the authors, it is alarming that there has been significant deterioration in the health of the younger generation, while in the SFD, the growth rates for the morbidity of children and adolescents were higher than the national average (Soboleva et al., 2018).

The deteriorating health status of the population, in turn, negatively affects the economic growth of regions. The results obtained by M.A. Kaneva, based on data for 80 Russian regions for 2005–2013, indicate that "*the increase in government spending on health care as a share in GRP by one percentage point is associated with an increase in the growth rate of GRP per capita by 1.34 percentage points. Private spending on health care, the dynamics and directions of which are associated with the consumption of paid medical services, according to the Arellano–Bond model, have a negative impact on economic growth*" (Kaneva, 2019).

One of the important social threats to regional development is the low life expectancy of the population. According to this indicator, Russia is among the second hundred countries in the world and, according to data for 2018, 129th place with an average life expectancy of 66.05 years, including 59.1 years for men and 73 years for women. At the same time, negative trends are observed.

Among the CIS countries, citizens of Azerbaijan live longer than in Russia, 66.3 years; Kazakhstan, 67.35 years; Ukraine, 68.1 years; Turkmenistan; 68.35 years; Kyrgyzstan, 68.9 years; Belarus, 70.2 years; Armenia, 72.4; and Georgia, 76.55 years.[7]

Among the regions of Siberia, based on data for 2019, the highest indicators of life expectancy are in Tomsk (72.85 years), Omsk (72.32 years), and Novosibirsk (72.25 years) oblasts, and the lowest is in the Tyva Republic (66.3 years).[8]

The most important factor in regional development is level of education of the population. In all

[5] Russia is increasing its technological gap. https://news.rambler.ru/scitech/39457868/?utm_content=news_media&utm_medium=read_more&utm_source=copylink

[6] Family spending on food in Europe – ranking 2019. https://riarating.ru/infografika/20191217/630147021.html

[7] Where do centenarians live: top 10 regions of Russia. https://news.rambler.ru/other/37564207-gde-zhivut-dolgozhiteli-top-10-regionov-rossii/

[8] Regions of Russia. Socioeconomic indicators. 2020: 1242 s. Moscow, 2020.

countries of the world, the state plays a significant role in solving this problem, compensating for insufficient individual investments. Thus, government spending on education amounted to, % of GDP: Canada, 4.4; USA, 4.2; UK, 4.8; Sweden, 5.0; Germany, 3.6; Italy, 3.3; France, 4.7; Russia, 3.5; Japan, 2.9; South Korea, 4.1% (Indikatory ..., 2018, p. 18).

In Russia, public spending on education in 2018 amounted to RUB 3668.6 bln or 4.3% of GDP (Indikatory ..., 2018, p. 27). In addition to government spending on education, the volume of paid services is growing. According to Rosstat, in 2018, the volume of paid services to the population in Russia exceeded RUB 9.4 trln. Moreover, costs for educational services in 2019 increased by 5.6%.

At the same time, expenditures on educational services of households from the fifth, richest, 20% population group, in monetary terms exceed the average value for the sampling, but the share of expenditures on these services is the lowest, and the downward trend continues (4.1% 2016 and ~3.4% in 2018). The highest share of spending on educational services in 2018 was observed in households of the first quintile (7.5%, +0.5 percentage points with respect to 2016). According to experts, this change can be explained by the fact that the poor spend more money on developing preschool education in recent years, while the fourth group leads in spending on secondary education, and the fifth, in spending on higher education. (Market ..., 2020, p. 12).

CONCLUSIONS

Russia faces revolutionary tasks from the challenges of time related to the choice of prospects for modernizing the economy based on knowledge, accumulation of human capital, and more equitable social development of the country for all segments of the population. In modern conditions, as world experience has shown, the role of science, education, and innovation in all spheres of human activity is sharply increasing. Most social doctrines in developed countries focus on reducing inequality and creating equal opportunities for all. For modern Russia, this development vector is the most relevant.

Many countries are working to revitalize the population in the economic sphere. Various methods and ways of enhancing human potential are proposed. In China, a social system that rates citizens is currently being implemented. People who perform positively in the workplace, in business relationships, in fulfilling commercial and social obligations, in conducting business with integrity and complying with ethical standards, will automatically be valued highly, be supported by the government regulation system, and move up the career ladder. Unscrupulous, immoral, unnecessary, and, moreover, corrupt and criminally inclined persons, on the contrary, will be excluded from all forms of state support and promotion. A similar system is being created for legal persons (Sotsial'naya ..., 2016).

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CONFLICT OF INTEREST

The author declares no conflict of interest.

REFERENCES

Aganbegyan, A.G., Overcoming poverty and reducing the income and consumption inequalities in Russia, *EKO*, 2017, no. 9, pp. 66–84.

Aganbegyan, A.G., What the regions can do to overcome stagnation and rekindle significant socioeconomic growth, *Reg. Res. Russ.*, 2020, vol. 10, no. 3, pp. 291–300. https://doi.org/10.1134/S2079970520030016

Beck, U., *Risikogesellschaft: Auf dem Weg in Eine Andere Moderne*, Frankfurt-on-Main: Suhrkamp, 1986.

Bondarenko, N.V., Gokhberg, L.M., Kovaleva, V., et al., *Indikatory obrazovaniya, 2018: Statisticheskii sbornik* (Education Indicator, 2018: Statistical Handbook), Moscow: Vyssh. Shk. Ekon., 2018.

Family spending on food in Europe: ranking, 2019. https://riarating.ru/infografika/20191217/630147021.html.

Giddens, A., Fate, risk and security, in *Modernity and Self-Identity: Self and Society in the Late Modern Age*, Cambridge: Polity Press, 1991, pp. 109–143.

Glaz'ev, S., Rossii neobkhodimo formirovanie novogo tekhnologicheskogo uklada (Russia Requires A New Technological Paradigm), Moscow: Knizhnyi Mir, 2018.

Kablov, E.N., Towards sixth technological paradigm. http://www.nanonewsnet.ru/articles/2010/kursom-v-6-oi-tekhnologicheskii-uklad.

Kaneva, M.A., The influence of the capital of the population's health on the economic growth of the Russian regions, *Reg.: Ekon. Sotsiol.*, 2019, no. 1 (101), pp. 47–70.

Market of paid services in Russia, *Byull. Tekushchikh Tendentsiyakh Ross. Ekon.*, 2020, no. 60.

Maslova, M.E., Social risk: philosophical and sociological analysis of the definition, in *Reg. Obraz. XXI Veka: Probl. Perspekt.*, 2011, no. 11.

Materialy Mezhdunarodnogo nauchnogo foruma "Obrazovanie i predprinimatel'stvo v Sibiri: napravleniya vzaimodeistviya i razvitie regionov," Novosibirsk, 12–13 oktyabrya 2017 g. (Proc. Int. Sci. Forum "Education and Entrepreneurship in Siberia: Cooperation and Development of the Regions," Novosibirsk, October 12–13,

2017), Novosibirsk: Novosib. Gos. Univ. Ekon. Upr., 2017.

Mozgovaya, A.V., Sociology of risk: theory and empirical knowledge, in *Risk v sotsial'nom prostranstve* (Social Risk), Mozgovaya, A.V., Moscow: Inst. Sotsiol., Ross. Akad. Nauk, 2001.

Perspektivy i riski razvitiya chelovecheskogo potentsiala v Sibiri (Prospective and Risks of Development of Human Potential in Siberia), Novosibirsk: Sib. Otd., Ross. Akad. Nauk, 2014.

Rating of regions by population income–2019, RIA Rating. http://riarating.ru.

Regiony Rossii. Sotsial'no-ekonomicheskie pokazateli (Regions of Russia. Socioeconomic Indicators), Moscow, 2020.

Soboleva, S.V., Smirnova, N.E., and Chudaeva, O.V., Specific dynamics of the morbidity of children and adolescents in Siberian Federal District in the context of Russian trends, *Reg.: Ekon. Sotsiol.*, 2018, no. 3 (99), pp. 97–119.

Sotsial'naya politika v Rossii i Kitae (Social Policy in Russia and China), Golenkova, Z.T., Ed., Moscow: Novyi Khronograf, 2016.

Vasilenko, I.V. and Tkachenko, O.V., Definition of the social risk concept, *Vestn. Volgograd. Gos. Univ., Ser. 7: Filosofiya, Sotsiol. Sots. Tekhnol.*, 2014, no. 3 (23), pp. 32–44.

Yanitskii, O.N., Key concepts of risk sociology, *Mir Ross.*, 2003, no. 1, pp. 3–35.

Zubkov, V.N., Risk as a subject of sociological analysis, *Sotsiol. Issled.*, 1994, no. 4, pp. 3–9.