Rural Territories of Russia: Realities and Prospects

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Abstract. Rural development is also a social task for any region of Russia and the country as a whole. Assessment of the degree of rural development and development of measures to address the identified problems are the key points in this article. Based on the analysis of the problems of rural territories of one of the regions of Russia—the Nizhny Novgorod region, the crisis characteristics of the current situation and the causes of the systemic crisis of socio-economic development of these territories are revealed. The refined method of integrated assessment makes it possible to determine key parameters, specify the value of factors that take into account the peculiarities of rural development and the specifics of the market under study, make a forecast for key management parameters and, as a result, determine the main directions of sustainable development.

Keywords: Rural areas · Indicators · Methodology · Indicators · Digitalization · Quality of life

1 Introduction

Close attention to the problems of development of rural territories at the present time in Russia is connected with catastrophic reduction in the number of rural population, a decline in the level and quality of life in rural areas, increasing income gap between rural and urban households, the declining share of the total area of the arranged well dwellings in rural settlements. In many regions of Central Russia and the North, almost every fifth village has been depopulated. According to Rosstat’s forecast, the number of rural residents will decrease by 2.8 million people, or 7.3%, by 2030. As the results of the all-Russian agricultural census of 2016 showed, the share of young workers in the structure of those employed in agriculture has decreased and the share of pensioners has increased. Rural unemployment and the lack of developed social infrastructure continue to be acute problems. Thus, almost 90% of the country’s rural areas need improvement. According to the monitoring of rural development conducted in 2018, the availability of places in pre-school organizations for rural children is extremely low: only 48.2% of rural children aged one to six years are covered, which is 31.4% lower than the urban level. The development of non-agricultural activities in rural areas remains weak, which
leads to a narrow scope of employment in rural areas. In general, the level and quality of life in rural areas remain extremely low [1–5].

Development of a comprehensive system of indicators for assessing rural development and their typology is one of the activities of the state program of the Russian Federation 2020–2025.

Rural territories include:

- rural settlements or rural settlements and inter-settlement territories United by a common territory within the borders of a municipal district;
- rural localities that are part of urban settlements, municipal districts, and urban districts (with the exception of urban districts where the administrative centers of the constituent entities of the Russian Federation are located);
- rural localities that are part of inner-city municipalities of Sevastopol;
- settlements with the status of urban settlements [6].

The strategic direction of the program for sustainable development of rural areas is to achieve continuous improvement of life support, living conditions of people and transition to a qualitatively new standard of living in the era of the digital economy, in which the ecosystem is not destroyed and the natural basis is preserved.

Socio-economic development of rural areas in Russia will be considered in one of the regions of Russia - the Nizhny Novgorod region.

Nizhny Novgorod region is one of the twenty largest regions of Russia (14th place in the Russian Federation) in terms of GRP. The largest sector of the region’s economy is the manufacturing industry - 31% of GRP. Due to the absence of fuel and energy and ore minerals in the region, the share of the mining sector in industry is insignificant. By the volume of products shipped in the manufacturing sector, the Nizhny Novgorod region ranks 6–7 in the Russian Federation.

The economy has a fairly high share of high-tech and knowledge-intensive industries in GRP (31.3% of GRP - 4th place among the regions of the Russian Federation; in Russia-20.7% of GDP).

In terms of exports, the Nizhny Novgorod region ranks 20th in Russia, and last among regions with comparable economies (the top fifteen in terms of GRP). Currently, the total volume of exports is only 13% of the volume of products shipped by processing enterprises.

The region’s economy remains dependent on equipment imports (as in Russia as a whole). Machine-building products are the main component of imports to the Nizhny Novgorod region - their share is 37.1% (in the Russian Federation-45.6%). This is the 35th place in the Russian Federation and the 7th place among regions of comparable economic scale.

In general, the region ranks on average 32nd in the ratings under review, which may indicate that it is a middle-class region that tends to be more developed regions due to a relatively developed sphere of innovation, the labor market and a fairly good quality of life.
2 Materials and Methods

Assessment of the level of socio-economic development of municipal areas and city environ-GOV in the Nizhny Novgorod region is carried out in accordance with the methodology approved by the decree of the government of Nizhny Novgorod region dated March 1, 2006 № 60 “Methodology of assessment of socio-economic development of municipal areas and city districts of Nizhny Novgorod region” [7].

This methodology includes:

1. Indicators that characterize tax capacity building, including economic and financial indicators (weight coefficient −0.7).
2. Indicators of the population’s standard of living (weight coefficient −0.3).

To make an assessment for each municipal district and urban district of the Nizhny Novgorod region, the value of the integral indicator is calculated using the method. Based on the integral indicator, the overall rating of the territory is determined (based on all indicators), as well as ratings for blocks of indicators that characterize the increase in tax potential and the standard of living of the population. The methodology provides for determining the rating by groups of territories, based on the number of people living in the territories.

Based on this methodology, the following data were obtained for the 1st half of 2020 in the Nizhny Novgorod region:

– with an above-average level of development – 11 municipal districts (municipal districts and urban districts);
– with an average level of development – 32;
– with a level of development below average – 9.
– According to the results of the 1st half of 2020 compared to the results for the 1st quarter of 2020:
  – 5 territories moved to the group of territories with a higher level of development;
  – Koverninsky, Lyskovsky municipal districts and the city district of Kulebaki moved from the category of territories with an average level of development to the category with an above-average level of development.

Changes in indicators that have affected the improvement of the situation in these territories are associated with an increase in:

– the growth rate of investment in fixed assets (in the real sector of the economy) in the Kovensky and Lyskovsky municipal districts;
– growth rates of shipped products (across the entire range of organizations) and profits of large and medium-sized organizations of the koverninsky municipal district;
– profit size of profitable organizations in Kovernino, Lyskovsky municipal district, Kulebaki city district;
– growth rates of tax payments to the budget system of the Russian Federation in the city of Kulebaki;
the share of receipts of the unified imputed income tax and the unified tax paid in connection with the application of the simplified tax system, and receipts from the application of the patent tax system in tax revenues collected in the consolidated budget of the koverninsky and Lyskovsky municipal districts.

At the same time, the territories of koverninsky, Lyskovsky municipal districts and Kulebaki city district saw an increase in housing starts per capita during the reporting period.

Pilninsky and Tonkinsky municipal districts moved from the category with a level of development below average to the category of territories with an average level of development (Fig. 1).

These changes in the territories are associated with an increase in:

- the size and growth rate of profit of profitable organizations per employee, as well as the ratio of the average monthly salary of one employee to the subsistence minimum of both territories;
- growth rates of tax payments to the budget system of the Russian Federation, investment in fixed assets and average monthly wages in the Pilninsky municipal district;
- the volume of housing commissioning per capita in the Pilninsky and tonkinsky municipal districts.
- 3 territories moved to the group of territories with a lower level of development;
- Voznesensky, lukoyanovskiy, and Krasnooktyabrsky municipal districts moved from the category of territories with an average level of development to the category of territories with a lower average level of development.
The main changes in indicators that affected the deterioration of the situation in these territories:

– decline decrease in the volume of tax payments to the budget system of the Russian Federation and slowdown in the growth rate of average monthly wages per employee in Voznesensky, lukoyanovsky and Krasnooktyabrsky municipal districts;
– slowing growth in fixed capital investment in these territories;
– decrease in the rate of profit growth of profitable organizations and a significant increase in the registered unemployment rate in the Voznesensky municipal district.

In our opinion, the decline in the main socio-economic indicators in the territories was also affected by the spread of the CoViD-19 coronavirus infection and the restrictive measures introduced in this regard.

Fig. 2. Trends in the socio-economic development of municipal districts

Trends in the socio-economic development of territories over a number of years are shown in Fig. 2.

During the period under review (from 2015 to the 1st half of 2020), the following trends in the development of territories were noted:

– the socio-economic situation has improved in Bolshemurashkinsky, Gaginsky, Sechenovsky, tonkinsky municipal districts, Koverninsky municipal district, Kulebak city district;
– the socio-economic situation has worsened in Voznesensky, Volodarsky, Gorodetsky, Krasnooktyabrsky, lukoyanovsky, Shatkovsky municipal districts, Pochinkovsky municipal district and Chkalovsky city district.

The level of socio-economic development above average is consistently observed in the Kstovsky municipal district, Pavlovsk municipal district, as well as in the city districts of Arzamas, Bor, Vyksa, Dzerzhinsk, Nizhny Novgorod, and Sarov.
At the end of 2019, a regional Center for supporting sustainable rural development was established at the regional University of the Nizhny Novgorod state University of engineering and Economics in order to implement measures to implement the strategy for the development Of the North-urban region.

The peculiarity of this center is that it was created on the basis of our University and the University is located in one of the municipal districts of the region, where there are 2,000 students per 8,000 thousand inhabitants. Research and teaching staff and students are residents of rural areas of the region and are daily confronted with the factors that hinder the successful development of rural areas.

The center together with the Ministry of economic development and investment of the Nizhny Novgorod region conducted a survey of one of the municipal districts of the region “the Degree of satisfaction of the population with the level and quality of life”.

The purpose of the survey is to determine the level of satisfaction of residents of the Spassky district with the standard of living and identify the most important problems for developing a strategy for the development of the municipal district.

The questionnaire included 42 questions, 1,500 people took part in the survey, which is 18.2% of residents of the Spassky municipal district. Analyzing respondents by gender, it is worth noting that 66.0% of all respondents are women aged 21 to 66 years working in various fields of activity (health care, education, trade, public catering, etc.). it is Important to note that 52% of respondents have higher education. The share of respondents with primary education is only 4.5%.

Analyzing the respondents’ level of well-being, the salary of the main part of the respondents, namely 60.6%, varies from 11 to 20 thousand rubles. The share of respondents with a salary level of more than 20 thousand rubles accounts for 11.3% of respondents. However, it is worth noting that among the respondents there are citizens whose income per family member does not exceed 5 thousand rubles.

When asked about the comfort of living in the territory of the Spassky municipal district, 14.6% of respondents said that they are satisfied with the level of development of the territory where they live. Rather, they are satisfied with the level of comfort - 69.3% of respondents and 16.1% say that living is not comfortable and note a number of problems that would increase the level of attractiveness of rural areas. Among the problems are the underdeveloped transport infrastructure, problems related to youth employment, the underdeveloped system of additional education, the lack of a sufficient number of cultural and leisure institutions, issues in the housing and utilities sector, health care, etc.

Despite the fact that the survey was attended by residents of the Spassky municipal district who are at an economically active age, only 44.6% of respondents have information about the development Strategy of the Spassky district until 2035. It is worth noting that 74.4% of the respondents who do not have information would like to participate in its development in order to improve the quality and standard of living in rural areas, which indicates a high degree of social responsibility of those living in the territory and a low level of awareness of citizens on the part of the authorities.
3 Discussion

Many agricultural scientists note an insufficiently complete and comprehensive list of indicators and indicators in the existing methods of assessing socio-economic development, taking into account the current situation. As a result of the analysis of economic, environmental, social and digital problems of rural territories, it is proposed to improve the methodology by adding indicators (digitalization, municipal management, ecology) and corresponding indicators of sustainable development of rural territories (Table 1, 2). It is based on the methodology for assessing the level of socio-economic development of municipal districts and urban districts of the Nizhny Novgorod region [8], the development of scientists [8–14] and regulatory documents [15–22].

4 Results

The indicators presented in Table 1 characterize the degree of digitalization of the territory, the innovation climate of the region and the environmental environment, and contribute to increasing the tax potential. Indicators that characterize indicators and their normative values can be improved as the economic situation changes in a given territory, thereby increasing or decreasing its competitiveness.

Table 1. Updated indicators and indicators that characterize the increase in tax potential

| Indicator                      | Indicators                                                                 | Unit | Calculation                                                                 |
|-------------------------------|---------------------------------------------------------------------------|------|-----------------------------------------------------------------------------|
| Digitalization                | Share of organizations that used information and communication technologies| %    | Ratio of the number of organizations that used information and communication technologies in their activities to the total number of organizations surveyed |
| Innovative activity of organizations | Share of organizations that implemented technological, organizational, and marketing innovations in the reporting year in the total number of organizations surveyed | %    | Ratio of the number of organizations that implemented technological, organizational, and marketing innovations in the reporting year to the total number of organizations surveyed |
|                               | Share of innovative goods, works, and services in the total volume of goods shipped, works performed, and services rendered | %    | The ratio of the cost of innovative goods, works, services to the cost of the total volume of goods shipped, works performed, services |
| Ecology                       | Share of protected areas from the entire territory                         | %    | Ratio of the area of protected areas to the total area of the territory     |
|                               | Air pollution index (ISA)                                                  |      | The ratio of the average annual concentration of the pollutant to its average daily maximum permissible concentration (taking into account the coefficient that depends on the degree of harmfulness of the pollutant) |

Of the 18 indicators proposed in the Strategy, only one – item 16 “the share of rural households that have access to the information and telecommunications network “Internet” from a home computer”-indicates the need for the presence of telecommunications services (hereinafter referred to as TLC services).

In the remaining seventeen, there is no direct or indirect indication of the need for quantitative and qualitative TLC services. In fact, almost no one indicator can be executed without availability of the telecommunications wrappers.
In addition, the following services should be provided as priority: broadband access (hereinafter referred to as broadband) to the Internet at a minimum speed of 100 Mbit/s, IP telephony, geoservices, video surveillance, video conferencing systems and unified electronic document management, smart electricity and water meters, smart street lighting, interactive digital TV vision, etc. All these TLC services are designed not only to assist in the production of agricultural products, but also to significantly save resources through systematic monitoring.

| Table 2. Augmented indicators and quality of life indicators |
|---------------------------------|
| Indicator | Indicators | Unit | Calculation |
|---------------------------------|
| Digitalization | Percentage of the population that used the Internet to receive state and municipal services in the total population that received state and municipal services | % | The ratio of the number of people who used the Internet to receive state and municipal services to the total number of people who received state and municipal services |
| | Percentage of households with broadband Internet access in the total number of households | % | Ratio of the number of households with broadband Internet access to the total number of households in the analyzed territory |
| | Percentage of the population who used the Internet to order goods and/or services in the total population | % | The ratio of the population that used the Internet to order goods and/or services during the analyzed period to the total population at the reporting date |
| Municipal management | Number of programs implemented to improve the quality of life of the population per 1000 people | Units | The ratio is the number of programs implemented to improve the quality of life of the population per 1000 people |
| | The level of public satisfaction with the activities of OmSU (survey) | % | The ratio of the number of respondents who are satisfied with the activities of the OmSU to the total number of respondents |
| | Percentage of requests on the official websites of the city/district on the Internet in the total number of requests for the year | % | The ratio of the number of requests (requests) of citizens to official sites on the Internet to the total number of requests (requests) of citizens |

Indicators of digitalization, as well as indicators describing them, characterize trends in the development of the digital economy, namely the degree of use by business, government and social sphere of cloud services, the Internet at a speed of at least 2 Mbit/s, CRM and ERP systems, which allows you to effectively manage sales, resources, finances, logistics processes, etc.

Today, an organization’s innovation activity should be viewed from several perspectives, since some economic entities conduct research and development, while others actively introduce elements of technological, organizational and marketing innovations into production activities. Consequently, innovation activity is characterized not only by the frequency of use of innovative technologies, but also by the degree of involvement of business units in their development.

An important indicator in the analysis of socio-economic development of the region is the degree of formation of the ecological environment. Namely, the implementation of measures to reduce the impact of negative factors on the environment will help to improve the quality and standard of living of the population, will allow you to correlate the level of pollution with the number of diseases of the population within the analyzed territory.
Indicators and indicators of quality of life characterize the degree of penetration of digital technologies into the daily life of each person in terms of solving everyday issues (obtaining state and municipal services using the Internet, purchasing goods and services, etc.), which in turn increases the level of comfort of living conditions in a particular territory, expands the possibility of purchasing goods and services regardless of territorial remoteness.

5 Conclusions

Based on the above, it can be concluded that rural areas play an important role in the activities of any State. The state should pay considerable attention to the development of villages and villages, because the “extinction” of these territories will lead to irreparable consequences. Overpopulation of cities, environmental problems, social problems due to the fatigue of citizens from the rapid pace of urban life are only a small part of what the state can face. However, rural development currently still faces a number of challenges, the main ones being:

– mass Exodus of the population;
– reducing the attractiveness of small businesses in the agro-industrial complex;
– low social and transport infrastructure of settlements. All these problems should be analyzed and identified on the basis of modern methods of socio-economic development of rural areas.

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