Abstract: The article presents a typology of rural areas in the Russian Federation in terms of the level and dynamics of socioeconomic development based on comparative statistical and comparative trend methods of analysis, which the authors have elaborated. The authors cover methodological approaches, as well as organizational and economic mechanisms of agriculture, which are stipulated in the government program “Integrated Development of Rural Areas” for 2020-2025, and their expected influence on the transformation of types of rural areas, which have arisen in the country.

Keywords: types of rural areas, differentiation, level and dynamics of development, program-based approach to regulation, local initiative projects.

I. INTRODUCTION

The spatial development of Russian rural areas is characterized by the concentration of agricultural production and related innovative technologies, as well as social development of rural localities in the territories with the most favorable agroclimatic and soil resources and position in relation to major consumer markets [1], [2]. Districts, which are marked by relative socioeconomic prosperity and growth, are also rural areas that specialize in forestry and mineral extraction. Other districts, especially those, which are situated in an agriculturally unfriendly environment, are marked by low investment in production and infrastructure, underdeveloped road and transportation communications and labor market, low living standards, as well as degradation of the demographic potential [3]–[5]. This situation leads to the underutilization of natural, material and labor resources of rural areas, possibilities to provide food independence and security, as well as the country’s export potential, instability in the system of rural settlements and risks associated with the territorial expansion of populations from other countries. We have assessed socioeconomic conditions in Russian rural areas and defined their types based on this indicator.

II. PROPOSED METHODOLOGY

A. Block diagram

To assess socioeconomic conditions in rural areas of Russian constituent entities, we used comparative statistical and comparative trend methods. The analysis was conducted based on the indicators, which were selected from the Federal State Statistics Service’s available statistical data for 2013-2017. The system of assessment indicators was formed based on six main aspects of rural areas’ socioeconomic development and constituted 20 positions (Fig.1).
**1. State of rural economy**
- Gross agricultural product per one employed person, RUB thousand
- Agricultural production index, %
- Specific weight of profitable enterprises in agriculture, hunting and forestry, %
- Fixed asset value in agriculture, hunting, forestry and fishery per one employed person in these industries, RUB thousand
- Local budget income derived by rural municipal formations per one inhabitant, RUB thousand

**2. Rural labor market**
- Employment rate for rural population aged 15-72, %
- Total unemployment in rural areas as registered based on the ILO methodology, %
- Ratio between registered and total unemployment
- Share of the rural unemployed looking for a job for less than 12 months, %

**3. Rural household financial conditions**
- Ratio between available resources per one member of a rural household and the regional subsistence level

**4. Housing conditions**
- Provision of rural population with residential facilities, sq. m. of total residential space per one person
- Share of rural residential facilities equipped with all types of amenities, %

**5. Social and engineering infrastructure**
- Provision of rural residential facilities with gas via pipelines, %
- Share of rural settlements with paved roads, %
- Coverage of rural children aged 1-6 with comprehensive education institutions, %
- Number of feldsher and midwifery stations per 1,000 rural inhabitants, units
- Provision of rural population with clubs, number of seats per 1,000 inhabitants

**6. Demographic situation**
- Ratio between birth and death rates
- Ratio between people who arrived and departed
- Specific weight of non-pensioners, %

Fig.1.: Directions and indicators for the assessment of socioeconomic conditions in rural areas of Russian constituent entities

**B. Algorithm**

As part of the comparative statistical method, the calculation algorithm consists of the following stages:

1. Quotients for Russian constituent entities are correlated with their national indicators for every year of the five-year period under analysis:

\[
Q_{ij} = \frac{I_{ij}}{I_{ip}}, \text{where}
\]

- \(Q_{ij}\) is the value of \(i\) quotient of \(j\) region in relation to its national value;
- \(I_{ij}\) is the value of \(i\) quotient of \(j\) region;
lip is the value of i indicator for Russia; 
i is an indicator’s number;  
j is the number of a Russian constituent entity.
2. With regard to Russian constituent entities, integral quotients aggregating characteristics of a situation in different directions are calculated:

\[ I_{pkj} = \sum_{i=1}^{n} Q_{ijkav}, \text{where} \]

\( I_{pkj} \) is an integral quotient of k direction in j region;  
\( Q_{ijkav} \) is quotient values of k direction in j region;  
n is the number of quotients characterizing k direction;  
k is the number of the direction (from 1 to 6).
3. An aggregated integral indicator for the socioeconomic development of a region’s rural areas (AIIS) is calculated by summing integral values from various directions:

\[ AIIS_j = \sum_{k=1}^{6} I_{pkj}, \text{where} \]

AIIS\(_j\) is an aggregated integral development indicator of rural areas in j constituent entity of the Russian Federation;  
I\(_{pkj}\) is values of integral quotients of j constituent entity of the Russian Federation;  
k is the number of the direction of assessment;  
j is the number of a constituent entity of the Russian Federation.

The comparative trend method provides for the calculation of the average rate of AIIS changes for the period of 2014-2017, which allowed to take note of fluctuations within the dynamics range:

\[ AIID_j = \sqrt[4]{\frac{AIIS_j(2017)}{AIIS_j(2013)}}, \text{where} \]

AIID\(_j\) is the index of changes in the aggregated integral

An overwhelming majority of Russian rural areas (60%) is marked by stagnation, with some growth seen in the rural areas of 11 regions; 10 regions are in a recession. The relative range of the AAIS reached nearly a 2-fold number in 2017, with extreme values in the Republic of Buryatia (15.94) and

Table 1. Breakdown of Russian constituent entities by types of rural areas, %.

| Type No. | Name of the type                  | Number of Russian constituent entities |
|---------|-----------------------------------|----------------------------------------|
| 1       | Highly developed, progressive     | 8                                      |
| 2       | Averagely developed, progressive  | 1                                      |
| 3       | Insufficiently developed, progressive | 1                                      |
| 4       | Poorly developed, progressive     | 1                                      |
| 5       | Highly developed, stagnating      | 4                                      |
| 6       | Averagely developed, stagnating   | 27                                     |
| 7       | Insufficiently developed, stagnating | 23                                     |
| 8       | Poorly developed, stagnating      | 6                                      |
| 9       | Highly developed, regressive      | 4                                      |
| 10      | Averagely developed, regressive   | 1                                      |
| 11      | Insufficiently developed, regressive | 2                                      |
| 12      | Poorly developed, regressive      | 3                                      |

Upon calculations, three blocks of territories were defined in the types of Russian rural areas: relatively successful, median and most problematic. The third block, which comprises 34 regions and unites the territories of the seventh, eighth, eleventh and twelfth blocks, prevails in terms of constituent entities. The smallest block (17 constituent entities) is the first block, consisting of the rural areas of the first, second, fifth and ninth types. The median areaal consists of 30 Russian constituent entities, uniting rural areas of the third, fourth, sixth and tenth types. They are either averagely developed rural districts with unfavorable dynamics (stagnation, recession) or insufficiently or poorly.
developed districts, which report a positive trend.

The composition of the most problematic areas is quite heterogeneous in terms of the level and dynamics of development. For this reason, we defined two groups of areas among them (depressive and crisis). Stagnating and regressive areas with a low level of development (Type 7, Type 11) are classified as depressive. This group comprises 25 regions. The group of crisis areas consists of stagnating and regressive districts, which are marked by the lowest level of development (Type 8, Type 12), including nine constituent entities (Table 2).

| Types of rural areas | Block 1 | Types of rural areas | Block 3 |
|----------------------|---------|----------------------|---------|
| Block 1              | Relatively successful (Types 1, 2, 5, 9) | Block 3 | The most problematic (Types 7, 8, 11, 12) |
| 1                    | Republics: Sakha (Yakutia), Chechnya | 7      | 2.1. Depressive Republics: Chuvashi, Kabardino-Balkaria, Altai, Dagestan, Karachaevo-Cherkessia, Adygea, Komi |
|                      | Krai: Kamchatka | | Krais: Stavropol, Perm, Altai, Khabarovsk |
|                      | Regions: Murmansk, Moscow, Kursk, Amur | | Regions: Volgograd, Tomsk, Sverdlovsk, Rostov, Kostroma, Irkutsk, Voronezh, Vladimir, Tula, Arkhangelsk, Vologda |
|                      | Autonomous District: Yamal-Nenets | | Autonomous area: Jewish |
| 2                    | Region: Pskov | 11 | Republics: North Ossetia-Alania, Marigr-El |
| 5                    | Regions: Kaluga, Belgorod, Lipetsk | 8      | 2.2. Crisis Republics: Tyva, Buryatia, Kalmykia |
|                      | Autonomous District: Chukotka | | Krai: Primorie |
| 9                    | Republic: Tatarstan | 12 | Region: Ulyanovsk |
|                      | Region: Magadan | | Regions: Astrakhan, Novgorod |
|                      | Autonomous districts: Khanty-Mansi, Nenets | |

To sum up, it can be said that signs of depressive areas are a strong and sustainable gap from the Russian average and, at the same time, either conservation of the low level of development or its further contraction and the prospect of joining the group of areas with the lowest level of development, with socioeconomic risks arising out of this. Crisis areas are the most unfavorable areas, in which the extreme degree of retardation combines either with stagnation in this condition or with a bigger retreat downward, which is fraught with full socioeconomic degradation.

Given sharp regional differentiation in the state of rural areas, which has shaped up nationwide and poses a real threat to Russia’s national interests, it is evident that it is necessary to tighten targeted federal regulation of spatial development in rural areas.

The Spatial Development Strategy of the Russian Federation for the period until 2025, the Concept for Sustainable Development of Rural Areas of the Russian Federation for the period until 2020 and the Strategy for Sustainable Development of Rural Areas of the Russian Federation for the period until 2030 are main normative statutory acts in this area in the Russian Federation.

Specifically, the Spatial Development Strategy of the Russian Federation highlights a number of priority measures aimed “to reduce inter-regional differentiation in the socioeconomic development of Russian constituent entities”. “Ensuring equal opportunities for the exercise of constitutional rights and freedoms of Russian citizens throughout the Russian Federation” [6, p. 8, 9] is determined as one of the main spatial development principles.

The Concept for Sustainable Development of Rural Areas determines that a key target of regional policy is to reduce inequality [7, p. 10]. The Strategy for Sustainable Development of Rural Areas adds the idea of regional equalization to the list of the government policy’s principles to ensure sustainable development of rural areas [8, p. 25].

The main instrument of implementing the regional policy for the development of rural areas in Russia is special federal and state programs. However, the application of the program-based approach to rural development (as part of the Federal Targeted Program “Social Development of Settlements until 2013” [9] and the Federal Targeted Program “Sustainable Development of Rural Areas for 2014-2017 and the period until 2020” [10]) in the course of 16 years did not show any positive results in bringing closer socioeconomic conditions in rural districts of various Russian constituent entities. In May 2019, the Russian government issued a resolution to approve a new program aimed at supporting rural districts (the Government Program “Integrated Development of Rural Areas” for 2020-2025 (GPIDR), for the implementation of which RUB 2,288 billion is intended to be earmarked [11].

By comparison, RUB 517.8 billion was totally earmarked for rural development programs in Russia from 2003 through 2018, including RUB 133.9 billion (25.9%) from the federal budget. In annual terms, this is just RUB 32.4 billion per year and RUB 8.4 billion per year from the federal budget.

On an annual average basis, the...
new program’s total financial support was raised by nearly 12 times to RUB 381 billion. Meanwhile, the federal budget’s contribution climbed by 21 times to RUB 176.8 billion on average per year and its specific weight reached 46.4%. Such intermittent growth of government support for rural areas can be named as Russia’s large-scale socioeconomic innovation in the 21st century. In these conditions, it is of utmost importance that these funds are spent efficiently to eliminate acute spatial differences in socioeconomic conditions of rural districts. However, the successful accomplishment of the country’s important national objective is in doubt.

Firstly, this is stipulated by the fact that social infrastructure will be developed only in the areas, in which enterprises operate or investment projects aimed at production development are executed. As Russian minister of agriculture Dmitry Patrushev noted at a meeting held by the Government Commission for agrobusiness issues and sustainable development of rural areas, “jobs both already created and planned are a key criterion for the selection of areas, in which the government program will be implemented” [12]. This means that GPIDRT does not aim to revive Russian settlements, to create infrastructure conditions to resume production in the areas where it degraded, to mitigate inter-regional differences in socioeconomic conditions, to ensure social guarantees to all rural inhabitants regardless of their residence. Support will be provided only to viable and developing areas which can pay back fast. As for the rest, this means extinction and, as a consequence, the loss of profit for the country from the under exploitation of rural areas’ potential and risks associated with adverse geopolitical consequences. In our opinion, this is a myopic regional policy of “here and now”.

The globalization of support provided to local initiatives hinders the selection of rural areas in terms of production. The point is that in the organizational economic mechanism the new program refocuses on initiative budgeting, which is a form of participation for households, businesses and public organizations in local self-government by putting forward initiatives and elaborating development projects for their areas that are to be financed from federal, regional and municipal budgets, and using funds from enterprises, households and their unions. Such practice recommended itself in the European Union where local initiatives have been supported as a way to stipulate sustainable development of rural areas for nearly 30 years, initially as part of the LEADER program (Establishing ties among the measures aimed at economic development of rural areas) and within the CLLD (Community Led Local Development) program since 2014. Roughly 5% of total resources for rural development programs of EU member states is earmarked from the total EU budget [13].

The multi-year experience shows that the implementation of programs aimed to support local initiatives is an efficient tool in drawing funds from the civil society and private investors to the elaboration and implementation of integrated and sectoral strategies for sustainable development of rural areas and measures (projects) to solve current economic, environmental and social problems. In 2007-2013, the direct economic effect (excluding off-budget sources) was EUR 0.56 per EUR 1.00 from the EU budget [14]. In addition, large amounts of private investment were attracted. The funds were spent to implement thousands of local projects aimed at boosting output of agricultural and other local products, their branding and marketing, improving the environment, developing information technologies, diversifying the economy, creating and maintaining jobs, constructing infrastructure facilities and increasing affordability of various services for the local population.

The western experience was first tested in Russia while implementing the Federal Targeted Program “Sustainable Development of Rural areas for 2014-2017 and the period until 2020” (FTP SDRT). However, the role of initiative budgeting as part of this program was not substantial. In 2014-2018, local initiatives were supported through grants in the amount of 0.8% of the program’s total funding, including 0.6% of all allocations for the program coming from the federal budget [15], [16].

571 projects were intended for the implementation throughout the FTP SDRT period, including 378 in 2014-2018. De facto, the five-year plan was overfulfilled by more than four times. This means that the relevant measures on the spot are in high demand and local bodies stand ready to provide substantial co-funding. During this period RUB 1.33 billion from all funding sources was spent to implement local initiative projects. In annual terms, a project’s average cost ranges from RUB 600,000 to RUB 1.6 million [17], [18].

Off-budget sources, which in the course of five years account for 39% of all costs, substantially outweigh in the provision of resources to support local initiatives via grants. The portion of Russian constituent entities’ consolidated budgets accounts for one-third of total costs. The federal budget makes the smallest contribution but this support played the role of a strong driver in mobilizing the regions’ resources to develop rural areas. The economic effect from subsidiary support of local initiatives from the federal budget in 2014-2018 was as follows: RUB 1.2 billion from the regions’ attracted budget funds while the total amount of money drawn, including off-budget funds, came to RUB 2.63 billion (Table 3).

Table 3. Support of FTP SDRT local initiatives via grants.

| Indicator                                      | 2014  | 2015  | 2016  | 2017  | 2018  | Total, 2014-2018 |
|------------------------------------------------|-------|-------|-------|-------|-------|------------------|
| Number of implemented local initiative projects, units | 130   | 362   | 434   | 361   | 319   | 1,606            |
| Funds spent on the implementation of local initiative projects, RUB billion | 0.21  | 0.24  | 0.28  | 0.3   | 0.3   | 1.33             |

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Russian Rural Areas: Typology and Initiative Budgeting

During the entire period of the government program’s implementation total costs required to execute local initiative projects will amount to RUB 712.4 billion, or 35.5% of entire GPIDRT resources. Most funds will come from the federal budget (82.1%), while funds from the budget system of Russian constituent entities and off-budget sources will play an equal role. In these conditions, the efficiency of initiative budgeting as a method to stimulate regions to solve rural development problems is nearly next to none. Specifically, as part of the FTP “Modern Look of Rural Areas”, in which the federal budget accounts for 91% of all costs to be incurred to execute local projects, RUB 1.00 of FB subsidies is equal only to RUB 0.10 of funds drawn from Russian constituent entities.

III. DISCUSSION

EU experience shows that the policy towards rural development is “a second component” of the general agricultural policy, which supplements a system of direct payments to farmers and measures aimed to manage agricultural markets that constitute the “first component” of the general agricultural policy. The agricultural development policy aims to settle a wide range of economic, environmental and social problems faced by rural settlements in the 21st century. EU member states and regions elaborate their own rural development programs taking into account the needs of their areas and general EU priorities that are transformed once an objective is achieved [19], [20].

For this reason, in the conditions when initiative budgeting becomes self-contained, there is a real threat that federal support will be concentrated on successful and steadily developing regions that will develop high-budget competitive projects with professional technical documentation and will be able to co-finance them. In other words, nearly two-thirds of the federal budget’s funds will be allocated “to build communism” in rural areas of Russia’s separate economically strong regions.

It is possible to mitigate the negative effect from total initiative budgeting by limiting the cost of local projects, amounts of federal support, giving preferences when selecting projects on a competitive basis and determining amounts to be co-funded from regional budgets and off-budget sources in the most problematic rural areas.

As part of Russia’s government program “Integrated Development of Rural Areas” for 2020-2025, local initiatives will obtain support from the federal budget by executing the departmental project (DP) “Accomplishment of Rural Areas” and the departmental targeted program (DTP) “Modern Look of Rural Areas” (Table 4).

Table 4. Initiative budgeting in GPIDRT.

| Indicator                                                                 | RUB billion | %  |
|--------------------------------------------------------------------------|-------------|----|
| Financial support of DP “Accomplishment of Rural Areas” and DTP “Modern Look of Rural Areas”, total | 812.4       | 100|
| including: federal budget                                               | 666.9       | 82.1|
| consolidated budgets of Russian constituent entities                    | 75.7        | 9.3 |
| off-budget sources                                                       | 69.8        | 8.6 |
| RUB 1.00 of federal budget subsidies is equal to all funds drawn from Russian constituent entities, RUB | 0.2         | x  |
| Financial support of DP “Accomplishment of Rural Areas”, total           | 122.3       | 100|
| including: federal budget                                               | 41.0        | 33.5|
| consolidated budgets of Russian constituent entities                    | 44.4        | 36.3|
| off-budget sources                                                       | 36.9        | 30.2|
| RUB 1.00 of federal budget subsidies is equal to all funds drawn from Russian constituent entities, RUB | 1.98        | x  |
| Financial support of FTP “Modern Look of Rural Areas”, total             | 690.1       | 100|
| including: federal budget                                               | 625.9       | 90.7|
| consolidated budgets of Russian constituent entities                    | 31.3        | 4.5 |
| off-budget sources                                                       | 32.9        | 4.8 |
| RUB 1.00 of FB subsidies is equal to all funds drawn from Russian constituent entities, RUB | 0.1         | x  |
IV. CONCLUSION

The analysis we conducted shows the high degree of differentiation between the level and dynamics of development in Russian rural areas, with the most problematic areas prevailing. Under the circumstances, the objective of bringing closer the level of socioeconomic development in rural areas helping them get out of stagnation and recession is a national priority. This should be achieved as part of the program-based approach aimed to regulate the state of rural areas, to ensure their sustainable development by elaborating and implementing goal-oriented efficient organizational and economic mechanisms.

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