

# Tools for the Reproduction of Human Potential in the Socio-Economic Space of Heterogeneous Rural Areas

Vera Rubtsova  
*Laboratory of social  
 development of agro-industrial  
 complex and rural territories*  
*Institute of Agrarian Problems*  
 RAS  
 Saratov, Russia  
 mailofnick@yandex.ru

Sergey Andryushchenko  
*Laboratory of innovative  
 development of production  
 potential of agro-industrial  
 complex*  
*Institute of Agrarian Problems*  
 RAS  
 Saratov, Russia  
 andrapk@yandex.ru

Irina Sharikova  
*Department of accounting,  
 analysis and audit*  
*Saratov State Agrarian  
 University*  
 Saratov, Russia  
 ivcharikova@yandex.ru

Artem Sharikov  
*Department of accounting,  
 analysis and audit*  
*Saratov State Agrarian  
 University*  
 Saratov, Russia  
 ooo\_br@mail.ru

**Abstract**—The reproduction of human potential in the socio-economic space of heterogeneous rural territories is a prerequisite for ensuring food security in Russia and sustainable development of rural territories. The state regional policy aimed at improving the quality of life of the rural population is not effective enough. This is evidenced by irrevocable migration from the village of the working-age population with high qualifications. One of the main reasons for the situation in rural areas is the low quality of the subsystems of the socio-economic space of rural areas, which does not correspond to the social and economic needs of the population, its readiness to fulfill certain social roles. The article reveals and scientifically substantiates the relationship between the incomplete reproduction of human potential and the low quality of the subsystems of the socio-economic space of rural territories. Organizational and economic tools are proposed, the implementation of which will ensure the integrity and high quality of the socio-economic space in heterogeneous rural areas. The signs of groups of rural territories in which the full reproduction of human potential requires the use of tools with a greater share of the state participation have been identified and scientifically substantiated.

**Keywords**—*human potential, socio-economic space, organizational and economic tools.*

## I. INTRODUCTION

An active state policy aimed at improving the quality of life in the village has not yet achieved sufficiently high results. This situation actualizes the problem of scientific substantiation of the methods of full reproduction of human potential in the village. This is evidenced by the reduction in the number of rural population and rural settlements; stable dynamics of indicators of irrevocable migration from the village; distortion of the demographic situation. For the full reproduction of human potential in heterogeneous rural areas, it is necessary to develop and apply organizational and economic tools that allow forming and maintaining the subsystems of socio-economic space necessary for the full reproduction of human potential that ensure a comfortable existence for the population of rural territories.

The goal of the undertaken research is the development of organizational and economic tools that allow consciously and purposefully creating conditions for the full reproduction of human potential in groups of heterogeneous rural territories.

## II. LITERATURE REVIEW

An analysis of the sources allowed us to conclude that the development of tools for the full reproduction of human potential in heterogeneous rural areas is innovative. Moreover, certain aspects of this problem are developed in various sources. These include: The Leader program in the EU [1]; copyright works by T.I. Zaslavskaya [2]; Kolesnik and O.M. Goreva [3], A.I. Kostyaev [4]; V.R. Bogutsky, A.G. Volkova [5]; Marcuta A., Simionescu A., Tindecu C., Marcuta L. [6].

The Leader program in the EU includes the development of education and health in the strategic objectives of the EU agrarian policy as priority areas for sustainable rural development.

T.I. Zaslavskaya determined and investigated the socio-demographic, socio-economic, socio-cultural, activity subsystem of human potential; E.A. Kolesnik and O.M. Goreva note the diversity of theoretical approaches, the discussion of the issue of methodological approaches to studying the category of “human potential” and define the human potential of the village as a complex system, the interaction of the elements of which ensures the reproduction of the rural community, preservation of the rural lifestyle, agricultural production, as well as social control over the territory.

A.I. Kostyaev emphasizes the role of human potential as one of the main factors in the transition to modern rural development in the form of a self-developing system. V.R. Bogutsky and A.G. Volkova emphasize the relationship of the formation and use of the human potential of the village with the improvement of living conditions of the rural population. Marcuta A., Simionescu A., Tindecu C., Marcuta L. in the article “Relationship between sustainable development and public health” identify and scientifically prove the existence of a close relationship between well-being, rural health and sustainable development of the agricultural economy.

Sources of analysis of the main trends in the development of subsystems of the socio-economic space of the rural areas were the materials of state statistics [7, 8]; reports of the Ministry of Agriculture of Russia [9].

The results of research by Russian and foreign authors related to the determination of human potential, its structure, relations of reproduction of human potential and socio-

economic conditions and well-being of the rural population sustainable development of agricultural economy, allowed for the development of the necessary tools for full reproduction of human potential in socio-economic space are heterogeneous rural areas. At the same time, it remains possible to use the definitions of human potential subsystems studied by T. I. Zaslavskaya [2] in application to the modern human potential of heterogeneous rural areas.

### III. RESEARCH METHODOLOGY

The study of "human potential" category is carried out in this article on the basis of theories of the effective development of society and sustainable social growth. These theories consider a person as a material carrier of intellectual and personal characteristics, an active subject of social and economic activity. The need for the formation of subsystems of socio-economic space with high qualities that ensure the full reproduction of human potential is confirmed by the experience of implementing programs for the development of rural areas of the United States [10].

The research methodology is based on the monographic method, with the help of which the author's definitions of the main research categories are formulated; on the logical method that provides an opportunity to identify the sequence of tasks in the process of arranging the socio-economic space of heterogeneous rural territories; on measurement theory, through the use of which the dynamics of indicators characterizing the subsystems of the socio-economic space is quantitatively revealed.

To identify the main factors that are closely interrelated with the development conditions of rural territories, a correlation-regression analysis was applied. The grouping of rural administrative regions according to the conditions for ensuring the reproduction of human potential was carried out on the basis of the results of correlation-regression analysis by the Ward method.

### IV. RESULTS

Authors understand human potential as the totality of needs, abilities, readiness of the population of rural areas to carry out socially necessary activities and social roles [2], [3]. In this regard, the relationship between the full and sustainable reproduction of human potential with the high qualities of the social environment or socio-economic space in which human potential is realized [5], [6] becomes apparent. The socio-economic space of rural territories is a developed territory on which there are agricultural and processing enterprises, objects of economic, domestic and social infrastructure, where the population of rural areas carries out their daily activities.

An integral indicator of the quality of the socio-economic space of rural territories is the dynamics of population migration from rural territories [7]. The reduction in the number of enterprises and organizations located in rural areas is statistically confirmed [8]. The same pattern is observed in the dynamics of the network of rural settlements [9]. The downward trend can be seen in the dynamics of the quantitative composition of educational, medical institutions, and cultural objects.

Negative trends in the socio-economic space of rural areas, determined the migration from the village of an active, able-bodied, skilled part of the population of rural areas and a reduction in rural settlements entail the withdrawal of arable land from circulation, threaten the uninterrupted functioning

of the agro-food sector as a whole. The comprehension of these facts leads to the conclusion that the labor, domestic, social and infrastructural subsystem of the socio-economic space does not allow to fully realize the human potential of rural population. In our opinion, this mismatch is one of the barriers to the full and sustainable reproduction of the human potential of rural territories.

The problem of forming and maintaining a balance of human potential with subsystems of the socio-economic space that ensure full reproduction of human potential, the development of tools to effectively "build up" the missing subsystems of the socio-economic space of heterogeneous rural areas is beyond the scope of scientific research by domestic authors.

The low efficiency of national policies based on the state concept of sustainable development of rural areas and its complement with the concept of achieving their sustainable development by comprehensively providing conditions for comfortable living in rural areas, actualizes the problem of developing and applying organizational and economic tools for the reproduction of human potential in rural areas.

Organizational and economic tools that allow developing processes of full reproduction of human potential, ensuring high quality elements of the living environment for the rural population, are considered as a set of rules, according to which there should be a targeted impact on the functioning of organizational and economic relations in the process of reproduction of human potential within the framework of social and economic space of heterogeneous rural territory.

A significant obstacle to the application of the above concepts of creating conditions that ensure high quality of the labor, household, cultural, interpersonal subsystems of the socio-economic space of rural territories is the socio-economic heterogeneity of rural territories, the result of which are different sets of aggravated problems characteristic of each of the territories. Therefore, the first task of arranging the socio-economic space of heterogeneous rural territories, which is necessary for the full reproduction of human potential, is to identify priority areas of targeted impact on resolving aggravated problems, which serve as a barrier to the comfortable existence of the population in the socio-economic space.

The results of studies conducted by the Institute of Agrarian Problems, Russian Academy of Sciences based on the use of correlation and regression analysis using the Ward method, revealed four heterogeneous groups of rural areas in the Saratov Region, differentiated by socio-economic conditions for the reproduction of human potential.

The first group of districts is characterized by high rates of urbanization. The level of indicators is significantly affected by district centers, which are small cities with developed industrial and transport sectors. There are transport links with the regional center, high infrastructure, an undeveloped network of rural settlements in these areas. The group includes four districts.

The second group (6 districts) includes less urbanized districts, which are located close to the regional center, or connected to it by trunk roads. They are characterized by a lower infrastructure provision and a relatively developed network of large rural settlements.

The third group (7 districts) is determined by a dense network of small rural settlements and a relatively high infrastructure provision.

The fourth group is the largest, it includes 19 districts, which are characterized by rural settlements with weak district centers and low infrastructure; these are mainly districts far from the regional center.

**V. PRACTICAL SIGNIFICANCE**

Result of the study, which has practical significance, are the scientifically substantiated identification of the socio-economic heterogeneity of rural administrative regions and the idea that different groups of regions have unequal conditions for the reproduction of the social potential of their population. Based on this fact, it has been suggested and scientifically substantiated that the tools that should be used to form the elements of the socio-economic space necessary for the full reproduction of the social potential of various groups of rural areas must be adapted precisely to the conditions of the group.

The practical significance of the study is to identify groups of rural administrative districts of the Saratov region and to propose tools for each of the groups, the use of which will help ensure the conditions necessary for the full reproduction of human potential in the groups of districts. The proposed tools are designed for extreme groups of districts in order to emphasize the need to develop tools that are most appropriate for the conditions of a particular group of rural territories. They will be offered to representatives of power structures for subsequent use in the formation of strategies and development programs for the agro-industrial complex of the Saratov region.

**VI. SUGGESTIONS**

The suggestions of the authors of the article are as follows. For the first group of districts having relatively favorable conditions for the reproduction of human potential, containing strong regional centers in the form of urban-type settlements and provided with objects of social infrastructure, we can recommend tools for the self-development of territories in the form of initiative groups that form the missing for the full reproduction of human potential subsystems of socio-economic space [1, 11]. Groups can also engage in proactive financing of the formation and support of the missing subsystems of the socio-economic space. Initiative financing of agricultural enterprises, organizations, infrastructure, carried out by the population itself voluntarily, is quite popular in European countries.

In the fourth, largest group of rural administrative regions of the Saratov region, the use of such tools is not possible. It is necessary to implement a more active policy of the state and the region on the formation of elements of the socio-economic space of rural territories in order to ensure conditions for the full reproduction of the social potential of the regions.

Priority policies in each of the districts and settlements should be determined by specialists, who should also develop appropriate programs for overcoming critical situations, justify the need for state and regional assistance to come into force with an increase in the share of state and regional funding for developed programs. Monitoring the results of the implementation of programs and strategies should be carried out at the external level. It seems advisable to carry out targeted support to enterprises, organizations, and

infrastructure facilities of “weak” rural areas. In our opinion, the necessary tool in this case is the inclusion of information on the results of program implementation in the list of evaluating the performance of representatives of the administration of rural territories and the imposition of sanctions for the unjustified termination of funding of programs and strategies at all levels.

To implement an effective state and regional policy that ensures full reproduction of human potential based on the arrangement of the corresponding subsystems of the socio-economic space of heterogeneous rural territories, the authors propose the following priorities, indicators, and tools (Table 1).

TABLE I. INDICATORS, FEDERAL AND REGIONAL TOOLS OF FORMING CONDITIONS FOR FULL REPRODUCTION OF HUMAN POTENTIAL IN HETEROGENEOUS RURAL TERRITORIES OF THE RUSSIAN FEDERATION

Indicators	Tools	
	Federal	Regional
Rural migration; average life expectancy of the rural population; working age rural population; ratio of per capita disposable resources of rural households to the regional subsistence level; the amount of disposable resources per household member living in rural areas; number of initiative groups and applications for financing initiative projects in rural areas	the concept of the formation of conditions for the full reproduction of human potential in heterogeneous rural areas of the Russian Federation; differentiated rules for the provision of state subsidies for groups of rural administrative districts that do not reach normative indicators; flexible project financing system, providing for changes in the shares of federal, regional, municipal project financing; state control of project implementation	organization of interregional research centers for rural development; identifying the priorities of socio-economic policies in heterogeneous rural areas; development of strategies and programs for rural development, taking into account their differentiation; scientific support for the implementation of rural development taking into account their differentiation; subregional blocks including in regional development strategies and programs.

The table reflects the indicators and tools designed to implement the overall priority of the formation and support of conditions for the full reproduction of human potential in heterogeneous rural areas of the Russian Federation. The indicators include the main demographic indicators, indicators of the level of income of the rural population in comparison with the subsistence minimum, as well as indicators of social activity of the rural population, their willingness to form initiative groups and apply for grants to improve the quality of life in rural settlements. The instruments for implementing effective state policy ensuring the full reproduction of human potential are divided into Federal and regional ones in accordance with the established practice.

**VII. CONCLUSION**

The results of the study allow drawing a scientifically based conclusion about the mismatch of the low qualities of the subsystems of the socio-economic space of rural areas with the needs and expectations of the rural population. For the full reproduction of human potential, it is necessary to use tools that improve the quality of the living environment of groups of heterogeneous rural districts, adapted to solve the problems of full reproduction of social potential in each group.

For successful application of the tools of full-fledged reproduction of human potential in the socio-economic space of heterogeneous rural areas, certain conceptual and legislative prerequisites must be formed. The formation of conceptual prerequisites involves the development of a long-term concept that defines the main trend of socio-economic development of rural settlements as the promotion of self-development with a strictly regulated and gradually decreasing participation of state, regional and municipal authorities, used mainly to overcome barriers that prevent the full reproduction of human potential in groups of heterogeneous rural areas. The concept should include quantitative parameters characterizing the reproduction of human potential in groups of heterogeneous rural areas.

Migration from rural areas should be fixed as a basic indicator in the concept. As this indicator decreases, the participation of external management of human development in rural areas may also decrease in rural groups. It is necessary to develop legislative and bylaws that clearly regulate state obligations, the procedure for their implementation and the assessment of the effectiveness of solving problems related to ensuring the full reproduction of human potential in different groups of heterogeneous rural districts.

The proposed definition of the human potential of rural areas allowed us to conduct a study that showed a significant differentiation of rural areas by the level of conditions for the full reproduction of the human potential of rural residents. The application of the proposed tools of state and regional policy for the full reproduction of the social potential of heterogeneous rural territories will ensure the effectiveness of the state regional policy of creating and supporting the reproduction of human potential in the socio-economic space of heterogeneous rural territories. On the example of heterogeneous rural territories of the Saratov region, the signs of groups of rural territories were identified and scientifically substantiated, in which it is necessary to implement tools with a greater state participation for the full reproduction of human potential. The priority should be a group of rural districts with a set of features that characterize the "weak" in social and economic terms of the territory. In turn, the decrease in the rate of migration from rural areas will serve as a basis for

strengthening the territorial and municipal influence in the formation and support of the process of reproduction of human potential in groups of rural areas.

#### ACKNOWLEDGMENT

The research was carried out in accordance with the plans of the Institute of agrarian problems of the Russian academy of sciences and Saratov state agrarian university.

#### REFERENCES

- [1] "Rural Development Programme for England: LEADER funding," GOV.UK. <https://www.gov.uk/guidance/rural-development-programme-for-england-leader-funding>
  - [2] T.I. Zaslavskaya, "Human potential in the modern transformational space," *Social sciences and contemporary world*, No.3, pp. 5-16, 2005. (in russ.)
  - [3] K. A. Ustinova, "Human Potential of Russia's Rural Areas: Assessment and Interpretation," *Economic and Social Changes: Facts, Trends, Forecast*, Vol. 11, No. 2, pp. 192-211, 2018. (in russ.) <https://doi.org/10.15838/esc.2018.2.56.13>
  - [4] A. I. Kostyaev, "Conceptual approaches to the development of rural areas, taking into account the European experience," *Agricultural Science Euro-North-East*, No. 6 (67), pp. 141-148, 2018. (in russ.) <https://doi.org/10.30766/2072-9081.2018.67.6.141-148>
  - [5] V. A. Bogutsky and A. G. Volkova, "Formation and use of human potential of rural areas," *Proceedings of the Voronezh State University of Engineering Technologies*, Vol. 80, No. 3 (77), pp. 471-477, 2018. (in russ.) <https://doi.org/10.20914/2310-1202-2018-3-471-477>
  - [6] A. Marcuta , A. Simionescu, C. Tindecu, and L. Marcuta. "Relationship between sustainable development and public health", in *Case study Romania*, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 18, No. 3, pp. 251-260, 2018.
  - [7] *The Demographic Yearbook of Russia 2018*. Moscow: Rosstat, 2018. (in russ.)
  - [8] *Russian Statistical Yearbook 2018*. Moscow: Rosstat, 2018. (in russ.)
  - [9] *On the state of rural territories in 2017: Annual Monitoring Report*, Moscow: Ministry of Agriculture of the Russian Federation, 2019. (in russ.)
  - [10] *Rural Viability Index: A Tool for Assessing Rural Communities*. George Bush School of Government & Public Service, Texas Office of Rural Community Affairs, 1992.
- M. Gospodarowicz, "Social and technical infrastructure development of municipalities (gminas) in Poland," *Studies in Agricultural Economics*, Vol. 117, pp. 147-154, 2015.