

Scientific support for the innovative development of the economic space of rural territories as an area of natural functioning of the agro-industrial complex elements

A.A. Mirokhina*

Branch of RTU MIREA, Stavropol, Russia

Abstract. The article summarizes the results of the analysis of the causes of fragmentation, dissociation, and polarization of the economic space of rural territories, primarily the southern regions of Russia, which are the leading agricultural and industrial regions of the country (Rostov region, Krasnodar Krai and Stavropol Krai), determines the impact of infrastructure deficits, conventionality of farming for the outflow of economically active population to areas with a higher level of competitive advantages, determines the need to align the development of rural territories, primarily through the formation and development of poles of economic growth of the "second order", which should serve as intermediate links for leveling the discreteness of economic space of agricultural and industrial regions. The author considers a set of innovative measures that contribute to the generation of impulses for the development of rural territory economy and transformation of their economic space towards depolarization and the elimination of "dissociation", which is the key to increase the economic potential of the agro-industrial complex (its resource, agricultural and raw material, processing and production components), increase of its functioning efficiency, which is especially important for the agricultural and industrial regions of Russian South.

1 Introduction

At present time, the functioning of the Russian agro-industrial complex, which is a fundamental element of the country's food security system as part of national security, is experiencing certain difficulties related to economic development in all its three components - from the creation of means of production and processing of agricultural products, direct farming, to the processing of agricultural raw materials - which, in accordance with the modern concepts of regional spatial and economic development, which should be relied upon by virtue of the preferential development of the elements of the agro-industrial complex in rural areas of the Russian regions of a predominantly agrarian-industrial type, gives particular relevance to the generation of innovative impulses for the transformation and development of the economic space of rural-type territories.

* Corresponding author: mirala@yandex.ru

Purpose. Methodological clarification of an integrated approach to the development of the economic space of the rural-type territories on the basis of the innovative impulse of the economic activity of the agro-industrial complex elements.

Tasks. Characteristics of the actual problems of the agro-industrial complex development, including those arising from the peculiarities of the area of its functioning, identification of "bottlenecks" of the spatial and economic aspect of the agro-industrial complex functioning, actualization of potential directions for the development of rural areas, primarily of an innovative nature.

Scientific novelty. Based on the results of the study conducted, an original concept of innovative development of the economic space of rural territories in the context of the agro-industrial complex functioning as an anchor branch of economic specialization is proposed, which explains the effect of the mechanisms of transformational adaptability of the economic space of rural territories of agrarian and industrial regions to the negative and destructive influence of environmental factors and endogenous morphological and functional changes in the territorial architectonics of spatial and economic systems.

Theoretical importance and applied significance. The provisions of the author's developments allow to expand the conceptual knowledge about the impact of strategic and tactical determinants of the transformation of the economic space of rural territories of agricultural and industrial regions and serve as a basis for the development of programs and projects for the integrated socio-economic development of rural territories, which allows to eliminate socio-spatial and economic differences in the development of agricultural and industrial regions of the Russian South.

2 Materials and methods

The object of the study is the agro-socio-economic space of rural-type territories as a zone of natural functioning of the agro-industrial complex elements. Retrospective studies of primary empirical data were conducted to correlate and establish consistency with the author's results. The instrumental and methodological apparatus used to achieve the objectives and solve the tasks of the study was formed within the framework of a general system-diagnostic approach and includes such tools and techniques as observation, monitoring and analysis of documentary and statistical information sources (regional economic diagnostics), analogy (abstract-logical modeling), graphical interpretation of empirical and factual information, including explication of morphological data on the formation and development of the economic space of rural territories, as well as taxonomic, retrospective and program-target methods and techniques of comparison, institutional and structural-functional analysis, as well as there is also a critical understanding of the experience of spatial and economic transformations of the Russian periphery and semi-periphery of agricultural-industrial regions.

3 Results of the study

As a result of our previous research [1], we identified the presence of infrastructure deficits as the cause of fragmentation, dissociation, and polarization of the economic space of the regions of the Russian South, three of which are the leading agricultural and industrial regions of the country as a whole - the Krasnodar Krai, the Stavropol Krai and the Rostov Region. We agree with T.V. Uskova, that the historically low level of social and engineering infrastructure development of rural areas is one of the main reasons for the rejection of such territories by the economically active population as points of their own economic efforts application [2, p. 11].

The problems of conceptual support of rural development process are particularly relevant in our country over the past two decades [3, p. 17-18], however, in terms of practical implementation, a single approach has not yet been developed. In terms of the competitiveness of rural areas from the point of view of their agro-industrial complex functioning, two types of areas can be distinguished: zones of functioning of agro-industrial holdings with fairly high competitive advantages, as well as zones with traditional agriculture that demonstrate trends towards "desertification". Thus, according to Rosstat, as of January 1, 2020, the share of the population in rural areas of Russia was 25.3% against 26.87% as of January 1, 2000 [4]. We agree with M.Yu. Kazakov, that one of the main priorities of regional development in terms of preserving territorial integrity and socio-economic stability is the "equalization" of rural territory development [5, p. 51]. M.Yu. Kazakov draws attention to the fact that, on the one hand, rural territories are not able to be formed as centers of economic space development, and on the other hand, they have a favorable socio-economic "color", providing proximity to the food component of economic development [5, p.52]. Based on the research of M.Yu. Kazakov, we consider it necessary to take the generation of "centers of attraction of the second order" in them as a basis for the formation of conceptual provisions for the innovative development of rural territories due to the remoteness of most of the elements of the agro-industrial complex of the region from the main regional "poles" of economic growth [6, p.30, 48]. We stand in full solidarity with V.N. Zekin and A.G. Svetlakov, that formation of the agro-socio-economic space of rural territories is the main direction of their innovative development and should be supplemented by stable sources of funding and research, technical and technological components [7, p. 32].

The concept of sustainable development of rural areas assumes their independence in terms of management and making individual economic decisions [8, p. 41]. In general, based on the approach of N.I. Pyzhikova, A.V. Tsvettsykh, Z.E. Shaporova, and K.Yu. Lobkov [9, p.163-164], we can distinguish such groups as ecological, natural, and climatic, socio-economic, institutional, and administrative, financial, and political, as factors and prerequisites for sustainable development of rural areas.

We suppose that in addition to the traditional ideas for the development of the agro-industrial complex and rural areas (introduction of innovations of marketing, commodity-product, agricultural-technological and organizational-managerial types [8, p.44]), special attention should be paid to digital transformations in society and the economy and the digitalization of the agro-industrial complex functioning, its development to the fifth and sixth technological levels in order to design a fundamentally new model for the development of the agro-industrial complex and the agro-socio-economic space of rural areas based on the predominant high-tech production (formation of the cyber potential of the agro-industrial complex, development of telecommunications, cyber logistics, formation of the digital space of rural areas, opportunities for electronic provision of public services, unmanned technologies and artificial intelligence, big data analysis, robotization and other "smart" technologies) [10, p. 89-90]. The introduction of innovative technologies in the agro-industrial complex will also contribute to ensuring an appropriate level of economic and food security of the region and the country [11, p. 11].

The systematization of the research results is shown in Figure 1.

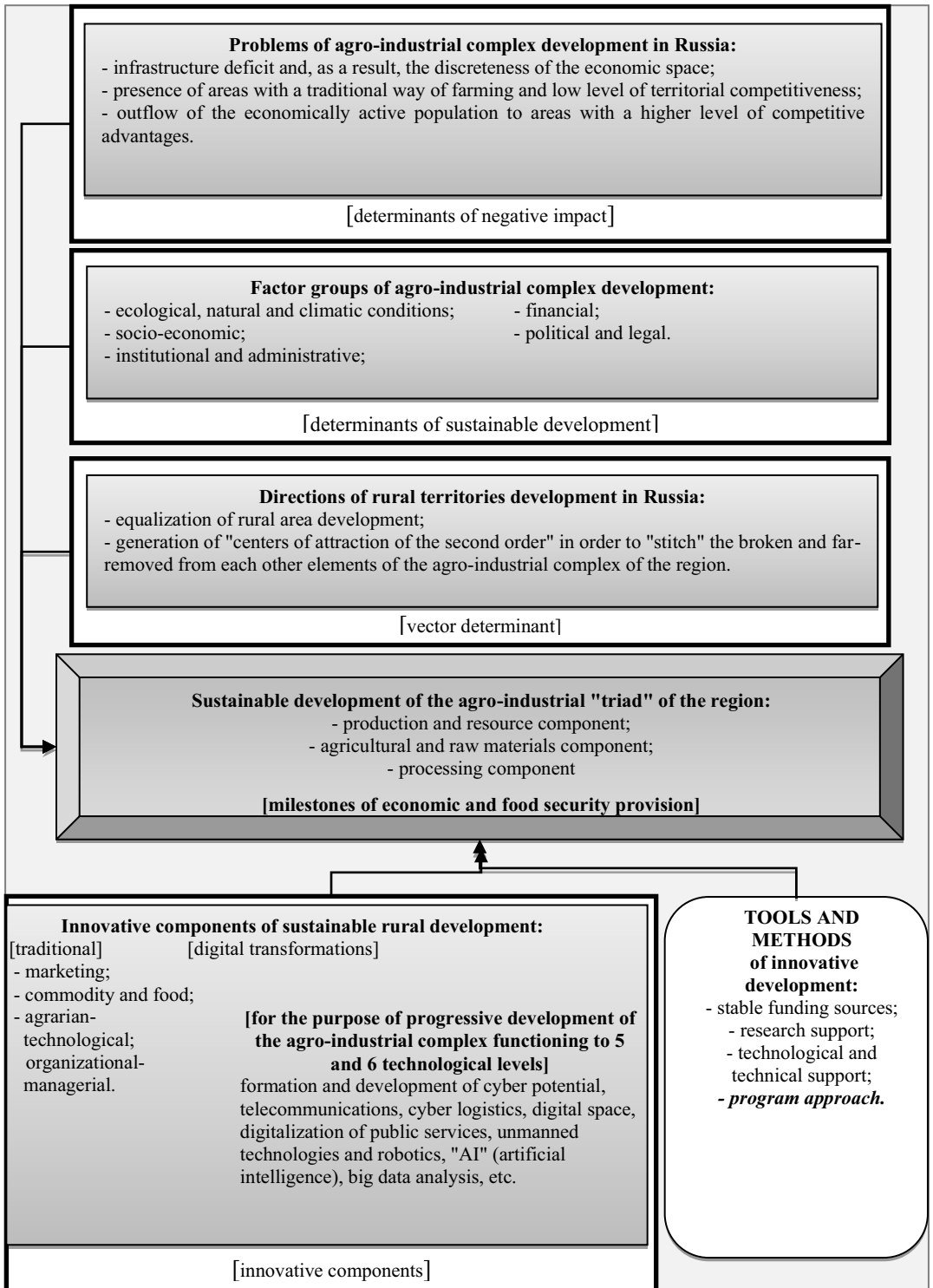


Fig. 1. Author's vision of innovative development of the economic space of rural territories in the context of the agro-industrial complex functioning as an anchor branch of economic specialization

4 Conclusions

The processing and production components of the agro-industrial complex serve as reference points for the localization of economic space in rural areas, concentrating labor resources, forming infrastructure facilities and transport hubs. Regional centers and urban districts that historically have a certain socio-economic and transport infrastructure, which should be adapted in accordance with the current requirements for the level of the agro-industrial complex development, should function as centers of innovative development. The narrative of the momentum of innovative development of the agro-industrial complex in the spatial socio-economic aspect implies, first, the legal definition and regulatory consolidation of the status and powers of the "second-order" centers and, second, the opening of resources and reserves of economic growth of agricultural facilities in rural areas.

References

1. O.B. Bigday, A.A. Mirokhina, *World Applied Sciences Journal*, **30 (8)**, 1075-1079 (2014)
2. T.V. Uskova, *Problems of the territory development*, **5 (97)**, 7-17 (2018)
3. M.S. Tafintseva, *Bulletin of the Volgograd State University. Series 10: Innovation activity*, **1(8)**, 17-21 (2013)
4. Share of urban population in the total population as of January 1, Rosstat: showcase of statistical data: the number and composition of the population, URL: <https://rosstat.gov.ru/folder/12781>.
5. M.Yu. Kazakov, *Bulletin of the Buryat State University, Economics and Management*, **1**, 48-55 (2018)
6. M.Yu. Kazakov, *Regionology*, **27 - 1 (106)**, 30-57 (2019)
7. V.N. Zekin, A.G. Svetlakov, *Agrarian Bulletin of the Urals*, **12-2 (167)**, 32-39 (2017)
8. I.V. Khilinskaya, *Agri-food policy of Russia*, **9 (81)**, 41-47 (2018)
9. N.I. Pyzhikova, A.V. Tsvettsykh, Z.E. Shaporova, K.Yu. Lobkov, *Bulletin of the Altai Academy of Economics and Law*, **1-1**, 159-165 (2019)
10. T.I. Bukhtiyarova, D.G. Demyanov, *Society and power*, **6 (80)**, 87-98 (2019)
11. R.A. Abdullaev, *Scientific Notes of the Crimean Engineering and Pedagogical University*, **4 (66)**, 10-14 (2019)