

## The Role of Social Infrastructure in Non-Urbanized Territories Development

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**Abstract:** Social infrastructure is an important prerequisite for the effective development non-urbanized territories. Indicators of well-being of rural development are indicators of natural and mechanical population growth, density of social infrastructure, peculiarity of its territorial organization. Allocated 3 types of non-urbanized territories within the Republic of Tatarstan, with different trends of socio-demographic development. Shows the role of social infrastructure in shaping a prosperous and crisis of rural areas. The rural population is increasingly concentrated around the urban agglomerations. There is formed by intensive agricultural production suburban type, there are areas of low buildings for the urban population and develop recreational areas. At the junction of urban and rural areas are formed zone with mixed agro-industrial functions. Other rural areas have significantly less competitive advantages: they are located away from the regional growth points, practically without influence of local centers. The worst social and demographic situation and the lowest level of saturation of the territory social infrastructure have outlying municipal districts of the republic.

**Key words:** Non-urbanized territory, social infrastructure, regional development, infrastructure factor, junction

### INTRODUCTION

Socio-economic development of non-urbanized territories is an urgent issue for the majority of subjects of the Russian Federation. Recent decades have shown the presence of common and private regional problems of rural development in Russia. To problems of the overall plan include a reduction of the total rural population, its ageing, migration to large cities able-bodied rural population, no job, low income of the rural population. In some regions towards common problems joined by environmental concerns, the high level of alcoholism in the population, the loss of the population of the agricultural labor skills, etc. To indicators of ill-being of rural development can be attributed to the reduction in the number of rural settlements in the regions of Russia.

According to most researchers Komarova *et al.* (2014), Del Bo and Florio (2012), Maghsoodi *et al.* (2013), Coleman (2006), Zubarevich (2013), Nefedova (2012) and Alekseev (1990), a crucial role in the socio-economic development of rural areas is the availability and quality of social infrastructure, its spatial distribution. Among the objects of social infrastructure of highest value for maintaining population in rural settlements have public schools and hospitals.

That reduction in schools and health facilities affects the decisions of the working population to move to the

city. The study presents a spatial analysis of the distribution of social infrastructure of rural settlements, evaluated the effect of the density of the social infrastructure in the final demographics of the rural population of Tatarstan. As the initial information materials were used by the Federal State Statistics Service of the Republic of Tatarstan including materials of municipal statistics.

### MATERIALS AND METHODS

Rural (non-urbanized) areas are the traditional object of geographical research and in practice, the focus of regional policy. The level of development of rural areas is determined by many factors, leading among which is the general level of socio-economic development of the state, its agricultural policy, historical trends in the development of rural areas (which are often difficult to overcome), the demographic characteristics of the rural population and finally, the level of development of social infrastructure (Chugunova, 2014).

The role of infrastructure factor in territorial development is very high and is likely to intensify in the future. Numerous studies have shown that areas with high levels of infrastructure equipment have significant advantages and have a direct impact on

the increasing concentration of population and economy (Denmukhametov and Zjablova, 2014; Denmukhametov *et al.*, 2014; Alekseev, 1990).

The countryside is not only the carrier of tradition and a source of primary resources (according to, for example, the concept of center-periphery). In the modern world, it acts as guardian of the natural and cultivated landscape as an area of recreation; the area within which there are the processes of de urban population. It's importance as a socio-economic range is continuously increasing (Zenka *et al.*, 2014).

In Russian economic, geography has developed its own principles studies of rural areas which relate primarily to the study of specialization of agricultural enterprises, the analysis of multiple relationships in rural settlement systems and in higher status rural territorial socio-economic systems (Alekseev, 1990).

As, the and determining its structure, quality, dynamics and information base for the research, we used materials of the Territorial Department of the Federal Service for State Statistics of Russia which documents processes of natural and mechanical movement of population and indexes related to various population structures.

## **RESULTS AND DISCUSSION**

The Republic of Tatarstan is one of the prosperous regions of the Russian Federation demonstrates a sustainable growth rate of the economy and in recent years and population (Denmukhametov and Zjablova, 2014). The specialization of the economy is associated with oil production, mechanical, chemistry of organic synthesis, infrastructure sectors. Agriculture has traditionally played a significant role in the region's economy, accounting for 7.2% (2013) in the structure of gross regional product. The rural population comprises about 26% of the population and only 6.2% of the economically active population. For the republic are characterized by a general decline in the rural population and number of rural settlements that are regularly reflected in the censuses and micro-censuses of the population of the region (Denmukhametov and Zjablova, 2012).

Is there a relationship between the outflow of the rural population (and the reduction of its total population) and the level of development of social infrastructure? For for matching processes for all agricultural areas of Tatarstan discussed the following indicators: total population, crude rates of natural and mechanical population growth, growth (reduction) in the population

from 2000-2013, densities of social infrastructure, the share of persons of retirement age, the indicators of the density of secondary schools and hospitals.

The first four indicators reflect the degree of well-being demographic development of the rural population, indirectly indicating the degree of well-being socio-economic situation. Analysis of the proportion of the elderly population are needed to assess the aging of the rural population.

The densities of social infrastructure is calculated as the ratio of the number of objects of social infrastructure to the population of the municipal area. These indicators reflect not only the saturation of the objects of the public service but also reflect the spatial features of the service industry .

Indicators density of secondary schools and hospitals are calculated as the ratio of the number of objects to the total number of settlements. As a long-term practice shows, it is the presence of a secondary school and a health center has an impact on maintaining the population in rural settlements. The lower the density of rural schools, the more the spatial radius of their service and higher outflow of families raising young children. The practice of children living in rural boarding schools caused by the relative rarity of rural schools is in humane and is not supported by most parents. Spatial access to health services was also important, primarily families with children.

Indicators density of secondary schools and hospitals are calculated as the ratio of the number of objects to the total number of settlements. Baseline information was presented in a matrix that contains 8 indicators 43 municipal districts of the republic. Multidimensional classification of municipal areas allowed us to identify 3 of the area with different degree of social well-being (Table 1).

Previously our analysis geodemographic situation in the Republic of Tatarstan (Denmukhametov and Zjablova, 2014) shows that the most unfavorable symptoms are confined to disadvantaged areas of Predvolzhja and Zakamye. In the medium term, these areas will have a sparse system of settlement, a reduced population of rural settlements, the high level of emigration.

There is a vicious circle: population decreases due to low saturation of infrastructure, lack of working places with decent wages. On the other hand, to create a diversified system of public service becomes unprofitable. The most favourable geographic and demographic situation in the zones of influence of large regional agglomerations Kazan, Naberezhnye Chelny and

Table 1: Classification rural areas of the Republic of Tatarstan according to the degree of social welfare

Non-urbanized territory	Features
The prosperous Suburban areas. The proportion of the total number of municipal areas 14%; Municipal districts: Laishevo, Pestretsy, Zelenodolsk, Elabuga, Tukai, Almetyevsk	They include municipal districts having boundaries with Zelenodolsk, Elabuga, Tukai, Almetyevsk major cities of the Republic Kazan, Naberezhnye Chelny, Almetyevsk. They include municipal districts having Naberezhnye Chelny, Almetyevsk. For these territories is characterized by a very high mechanical growth of population (from 2.5%-38.4%), low positive natural increase. The density of social infrastructure is relatively low (16-21), since the population has the opportunity to use the services of the city's social infrastructure which has a high level of development and in border with the municipal areas areas. In these areas, there are a growing number of cottage settlements and other forms of reception of citizens. These processes testify to intensive processes of suburbanization, education developed suburban areas around the three major industrial centers of the republic. The population of these areas is growing
Areas with conflicting trends. The proportion of the total number of municipal areas 21%; Municipal districts: Alexeevsky, Arsk, Baltasi, Bugulma, Kukmor, Muslyumovo, Mendelev, Nizhnekamsk, Saby	The areas of this group are the traditional agricultural areas to varying degrees impacted cities. They are characterized by a trend of increase of outflow of the population while remaining insignificant the natural increase of population (no <10%). Contribute to the problem of unsustainable spatial organization of social infrastructure its contraction in large settlements, especially schools and medical facilities. Other settlements lose their competitive advantages, the working-age population with young children, move into the cities. The density of social infrastructure is 22.2-26.0 to. The main social risk is the buildup of adverse trends associated with further loss of population, especially of working age; the ageing of the local population and its low provision of social services. Trends in the development of these territories cannot be considered sustainable. Rather, we are seeing a transition to total negative population growth. These rural areas now have become the object of regional policy of improving social infrastructure
The crisis territories. The proportion of the total number of municipal areas 65%; Municipal districts: Agryz, Aznakaevo, Vysokogorsky, Aktarysh, Alkeevsky, Apastovo, Atna, Bavlinsky, Buinsk, Drozhzhanovsky, Zainsk, Kaybitsky, Ceskoslovensky, Leninogorsk, Mamadysh, Menzelinsk, Novosheshminsk, Nurlat, Rybnaya Sloboda, Sarmanovo, Spassky, Tetyushi, Tyulyachi, Yutazinsky.	The vast majority of areas forming the distribution area of crisis territories. The vast majority of regions form the area of crisis areas. They are characterized by negative values of the total population growth, the outflow of the population of working age, a significant rate of population aging, reducing the number of schools and hospitals, the low density of the social infrastructure. An urgent problem is alcoholism among the population, reduced life expectancy, Cheremshansky, Chistopol, loss of social reference points. Ultimately, these processes lead to a reduction in the number of rural settlements and the loss of population in rural areas. Many areas are located near the small and medium-sized cities, which are not able to have a positive impact on their socio-demographic and economic situation. The lowest density of social facilities, a high rate of population decline are calculated for the outlying areas Yutazinsky, Spassky Menzelinsky, Agryz, Aksubaevsky forming further regional periphery

Almetyevsk which gradually shrinks the urban population of the republic and also increasingly migrating rural population.

## CONCLUSION

Thus, the social infrastructure is an important factor in the territorial arrangement. High abundance of objects of social purpose creates the preconditions for successful rural development.

In the Republic of Tatarstan pronounced national trends of development in rural areas. The rural population is increasingly concentrated around the three urban agglomerations. As a result of such rural areas are becoming complex specialization. There is formed by intensive agricultural production suburban type, there are areas of low buildings for the urban population and develop recreational areas (Denmukhametov *et al.*, 2014).

At the junction of urban and rural areas are formed zone with mixed agro-industrial functions. Other rural areas have significantly less competitive advantages. They are located away from the regional growth points, practically without influence of local centers. The

remaining rural areas are much less competitive advantages. They are located away from the regional growth points, almost without being influenced by local centers. The worst social and demographic situation and the lowest level of saturation of the territory social infrastructure have outlying municipal districts of the republic.

Improvement of the territorial organization of social infrastructure, its ubiquity and accessibility for the rural population are necessary and essential condition for the reduction of rural population and improve their standard of living.

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## REFERENCES

- Alekseev, A.I., 1990. The many faces of village. A.I. Alekseev (Eds.), Mysl, pp: 266.

- Chugunova, N., 2014. In the countryside of the region: resettlement, the past and an uncertain future. *Socio-Econom. Geog., Bulletin of the Association of Russian geographers-social Scientists*, 3: 122-133.
- Coleman, D.A., 2006. Immigration and Ethnic Change Contemporary in Low-fertility Countries: a Third Demographic Transition. *Population Develop. Rev.*, 32 (3): 401-446.
- Denmukhametov, R.R. and O.V. Zjablova, 2014. Geodemographic situation in the Republic of Tatarstan. *World Appl. Sci. J.*, 30 (11): 1684-1688.
- Denmukhametov, R.R., O.V. Zjablova and M.R. Shtanchaeva, 2014. Development factors of Kazan region recreation area. *Life Sci. J.*, 11 (11): 317-320.
- Denmukhametov, R.R. and O.V. Zjablova, 2012. Current trends of development of the geodemographic situation in the Republic of Tatarstan. *Modern problems of Science and Education*. <http://www.science-education.ru/103-6136>.
- Del Bo, C.F. and M. Florio, 2012. Infrastructure and Growth in a Spatial Framework: Evidence from the EU regions. *Eur. Planning Studies*, 20 (8): 1393-1414. DOI: 10.1080/09654313.2012.680587.
- Komarova, V.N., O.V. Zjablova and R.R. Denmukhametov, 2014. An Infrastructure Factor in Regional Competitiveness. *Mediterranean J. Soc. Sci.*, 5 (18): 355-360. DOI: 10.5901/mjss.2014.v5n18p355.
- Maghsoodi, T.M.J., A. Abdullah, A. Bahauddin and M. Hedayati Marzbali, 2013. Urbanization Review: to Identify the Impact of Policies and Events on the Evolution of Urbanization in Iran. *Middle-East J. Scient. Res.*, 14 (11): 1452-1462.
- Nefedova, T.G. 2012. Major trends in the changing socio-economic environment of rural Russia. *Izvestiya of the Russian Academy of Sciences. Geographical Series*, 3: 5-21.
- Zenka, J., J. Novotny and P. Csank, 2014. Regional Competitiveness in Central European Countries: In Search of a Useful Conceptual Framework. *Eur. Planning Studies*, 1 (22): 164-183. DOI: 10.1080/09654313.2012.731042.
- Zubarevich, N.I., 2013. The transformation of rural settlements and the network of services in rural areas. *Izvestiya of the Russian Academy of Sciences. Geographical Series*, 3: 26-38.