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Conference on Land Economy and Rural Studies Essentials**SOCIAL AND INDUSTRIAL INFRASTRUCTURE  
DEVELOPMENT IN RURAL AREAS OF THE AMUR REGION**Natalia P. Kuzmich (a)\*  
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Russia, kuzmiz@list.ru**Abstract**

Social infrastructure in countryside unites housing and communal services, healthcare, education, culture, physical education and sports, etc. The article emphasizes that the solution of the issues of rural population outflow to the cities and the development of social and industrial infrastructure remains a strategically important state task. The author discusses the possibility of industrial construction, which serves as a means to ensure effective and sustainable socio-economic development of rural areas. The main directions of agricultural production construction in the Amur Region are small farms in small farm enterprises. The construction of industrial agricultural buildings is especially important for the region, since the functioning of agricultural sectors, primarily animal husbandry, depends on their availability. The implementation of projects for the construction of agricultural buildings will allow the region to meet both the needs of its own population and the processing industry of the Amur Region and the Far Eastern Federal District. Although the state has adopted programs of socio-economic development, the whole range of problems has not been taken into account, which makes the topic of the development of social and industrial infrastructures of rural areas relevant. The author used such general scientific research methods as abstract-logical and systemic approaches, generalization method and economic-statistical method.

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*Keywords:* Agriculture, Amur region, industrial infrastructure, infrastructure, rural areas

## 1. Introduction

The Amur Region is an agricultural region. Agriculture is its strategic industry. A narrow specialization dominates in the economic activity of agricultural enterprises, since their main purpose is to cultivate cereals and soybeans. For the further development of agricultural production, the Amur Region has appropriate soil and climatic conditions. Livestock breeding is also developed in the Amur Region. Rural employment is mostly seasonal.

In addition to the provision of housing, the development of a comfortable environment for the life of rural population implies equal accessibility of educational services, training and retraining of professional personnel in demand in rural areas etc. The presence and quality of regional and local roads connecting local settlements is extremely important for the quality of life of rural population. Therefore, the problem of transport accessibility of settlements should be solved. In villages with a higher level of social infrastructure, the final indicators of agricultural production are also more significant (Putsenteilo et al., 2020). The prospects for rural areas depend primarily on the development of agriculture.

## 2. Problem Statement

The direction to food independence and security requires the intensification of the socio-economic basis of rural areas. Nowadays, the most problematic factors in the livelihood of the population of rural areas are the low income of rural residents, decrease in the rural population, problems with employment, lag in the level of social services compared to urban ones, limited access to information and communication resources, etc. The transport network is poorly developed.

Settlement in the Amur Region is extremely uneven. A feature of rural settlement is the combination of continuous settlement with the focal nature of development. As of 2019, only 32.3% of residents of the Amur Region live in rural areas, which is 254.9 thousand people. The rural population in the Amur Region is steadily declining. According to statistics, from 2015 to 2019, the decrease occurred by 3.4%, while the resident population of the Amur Region decreased by 2%. In addition, the number of not only the rural, but also the entire population of the region is decreasing due to migration to the western part of the country. The problem of population outflow is associated with the fact that a significant part of the population has negative expectations about their future and the future of the territories where they live. Over the decade, 21.7% of the population left the Far Eastern Federal District.

The economic activity of agricultural enterprises in the region is dominated by a narrow specialization, since they focus mainly on the cultivation of cereals and soybeans. Rural employment is mostly seasonal. To date, there are 613 agricultural organizations in the Amur Region, of which 381 are small enterprises, i.e. peasant (farm) households.

In recent years, state support has intensified the agricultural activities of peasant farms and individual entrepreneurs in the region. It is necessary to further orient state economic support to the development of small forms of farming in agriculture, to encourage cooperation. This will generally have a positive effect on the development of rural areas.

For the high-quality economic development of rural areas, it is necessary to form higher standards of quality of life, which are determined by the availability of comfortable housing with a developed communal and social infrastructure.

Transport accessibility is an indicator of the attractiveness of the territory for rural residents, young professionals, agricultural producers and investors. At present, the problems of the development of road transport infrastructure are practically the same in all regions of the Far Eastern Federal District. The main one is the construction of country roads, which are close to regional roads in terms of comfort. The most significant problems in this area are the underfunding of road construction; poor quality of road construction; decrease in passenger traffic; poor equipment of roads with road service facilities, etc. According to statistics for the period 2015 – 2019, passenger turnover in the Amur Region decreased by 24.5 million passenger-km.

Road construction in the Amur Region has its own characteristics in comparison with similar works in the central part of Russia and Western Siberia. This is due to the climatic features of the region and the presence of permafrost in most of it, and in some areas, high seismicity.

It is necessary to note that the implementation of infrastructure projects is within the power of only the state and big business, since the construction of these facilities is a rather expensive initiative (Andreeva et al., 2019; Calazova, 2019). The assumptions are that it is possible that rural economy will be able to diversify as a result of coronavirus pandemic, as the demand in society for living in places where it is safer to live has increased. However, in order to return people to village, it is necessary to simply improve the infrastructure, to make the Internet and cloud technologies and innovative postal services accessible etc.

### **3. Research Questions**

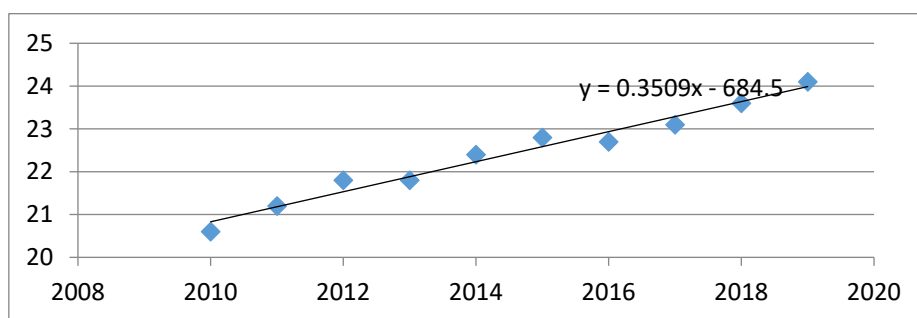
In rural areas of the Amur Region, there are the following social infrastructure facilities: preschool educational institutions (kindergartens); educational organizations (schools); rural health post (RHPs); cultural and leisure institutions, etc. It is necessary to note that the technical condition and the degree of improvement of most existing social infrastructure facilities in the countryside is in an unsatisfactory condition, they require reconstruction and major repairs.

Within the framework of the regional program "Development of the system of providing primary health care" of the national project "Health" for 2020-2021, it is envisaged to build 26 feldsher-midwife stations. They are going to replace those that are in disrepair. They have already been partially built in 13 municipal districts of the region, in 26 settlements of the Amur Region. 360 million rubles have been allocated for these purposes. The main tasks of the development of health care in the countryside remain the provision of high-quality and timely medical care to the population, a decrease in the high level of morbidity, etc.

Currently, the region is implementing state programs aimed at the improvement of the living conditions of rural residents among other things. Housing mortgages contribute to the growth of affordable housing for the general population. Thanks to the development of mortgage lending, an increase in the volume of construction and modernization of production are observed, and problems of social instability are decreasing. But it should also be noted that residential mortgages have worked well

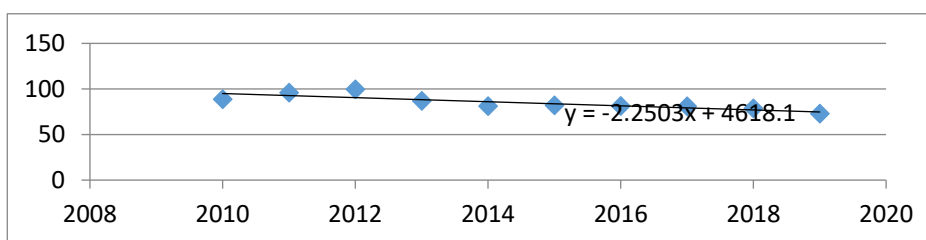
in cities, but low-income rural people are unlikely to take out, albeit preferential, but still expensive loans. Low incomes and unemployment contribute to widespread rural poverty. In turn, banks are also very scrupulous in calculating their risks.

In recent years, from 2010 to 2019, the increase in the rural housing stock has been observed in the Amur Region (Figure 1). However, there is a very low level of house improvement. Thus, in 2019, only 39.2% of the rural housing stock was equipped with a water supply system, 31.6% - with centralized heating, 25.9% - with hot water supply. In rural areas of the region, the housing stock is improved more than 2 times worse than urban housing stock.



**Figure 1.** Housing stock per inhabitant on average, m<sup>2</sup> in rural areas

As a production infrastructure, agricultural enterprises use more livestock facilities, which are very diverse. This diversity is dictated by the fact that the countryside requires buildings and structures of various functional purposes, constructed using various design and planning solutions. This requires different buildings or premises. Therefore, production agricultural buildings are diverse.

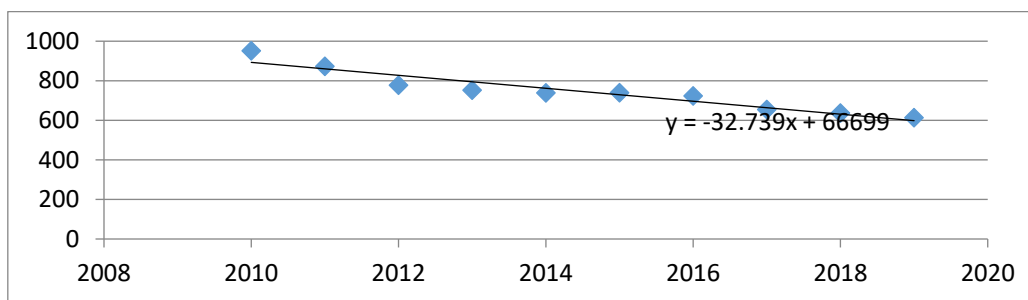


**Figure 2.** Cattle livestock in farms of all categories, in thousand heads

In the Amur region, there is a decrease in the volume of animal husbandry, which was caused by the difficult conditions for the development of this industry. In particular, there was the increase in diseases of farm animals with dangerous infectious diseases. Nevertheless, agriculture provides more than 80% of the regional needs for agricultural products. A negative trend is that the volume of production in livestock farming in the Amur Region is decreasing. The number of agricultural enterprises decreased in the region from 2010 to 2019 (Figures 2 and 3).

A number of socio-economic problems of rural areas can be solved by the implementation of federal target programs, including the federal target program “Formation of a comfortable urban

environment”, “Safe and comfortable roads”, etc. The Far Eastern Hectare program is a state program that helps to attract people to develop the territory of the Far East.



**Figure 3.** Number of agricultural organizations in the region, units

Nowadays, the agricultural enterprises of the Amur Region face the issue of milk production. Due to the fact that the provision of the population with these food products is necessary, the role of state financial support for agricultural producers should be intensified. Several agricultural investment projects are currently being implemented in the Amur Region. It is planned to build 9 livestock complexes for meat and dairy production by 2023. The construction of these complexes will further increase the volume of milk production. The construction of livestock complexes, due to the provision of state support, will increase the volume of milk production from 53% to 70%. The regional government is ready to subsidize 25% of capital construction for farmers developing dairy and meat business. The stimulation of the development of animal husbandry in the region helps to reduce the costs of economic entities, which has a beneficial effect on the investment climate of the region as a whole. The implementation of such measures will strengthen the market position of small agricultural enterprises.

The negative aspect is that at present there are no design institutes that would be engaged in the design of exclusively agricultural buildings and structures, as it was in Soviet times. It is necessary to note that in agriculture, innovative factors are not fully used, since there is a low level of effective demand for innovative products and leading agricultural enterprises are trying to acquire foreign scientific and technical means. In addition, agricultural enterprises have little information about new technologies, etc. (Arkhipova & Sirotnin, 2019; Dyatlov et al., 2018). The main difficulty in the development of digital economy is the emergence of a “smart” society, which takes into account, first of all, human needs, flexibility, creativity and ability to quickly respond to changing market conditions.

The development of innovative agricultural production, using digital technologies, is possible only with the consolidation of efforts and interaction of authorities, science, education and business (Barzola et al., 2020; Dubrova et al., 2019) In these conditions, highly qualified creative work becomes a determining factor in development. All these aspects are inextricably associated with changes in labor market, healthcare and education. Continuing education and advanced training is becoming an obligatory and necessary condition for the development of economy. The increasing demand for information technology requires the improvement of information and technological literacy of population (Platonova & Pakusina, 2020).

One of the elements of the formation of the attractiveness of territories is transport accessibility to social benefits. The main characteristics of the road network affect the speed of cargo transportation, accident rate and the number of human victims, the profitability of agricultural production, etc. However, underfunding of road construction works inevitably leads to an even greater deterioration in the condition of highways. To improve the road transport infrastructure in rural areas, it is necessary to increase financial investments in road construction and repairs. This will give certain results, such as improving the safety of transportation of passengers and goods, improving the quality of roads. It is necessary to constantly monitor rural highways for their quality and accessibility for use.

#### **4. Purpose of the Study**

The purpose of the work is to study trends and specific measures for the development of rural in order to preserve rural population.

#### **5. Research Methods**

During the research the following general scientific methods were used: abstract-logical and system approaches, generalization method, economic-statistical method.

#### **6. Findings**

The industrial and social infrastructure in the region is developing, but not enough to make countryside attractive for living. Social infrastructure creates the necessary conditions for improving the quality of life in the countryside and indirectly stimulates the effective functioning of agricultural enterprises and the attractiveness of the territory for the population, therefore, investments in the development of social infrastructure should be considered as profitable investments. The need for special attention to the socio-economic problems of agriculture requires giving it a priority status. It is important to recognize fundamental state support for rural development as a single principle of agrarian policy. The living of peasantry, no matter how their share in the population decreases, largely forms the fundamental basis for the development of economy and society as a whole, since it produces food. Thus the implementation of investment projects for the development of social and industrial infrastructure will allow the region to meet both the needs of its own population and the processing industry of the Amur Region and the Far Eastern Federal District.

#### **7. Conclusion**

Thus, the maintenance of stable development of rural areas implies the preparation of a long-term strategy for their sustainable development, some of the essential and main directions of which are: provision of efficient and sustainable production, creation of competitive market for agricultural products.

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