The development of the agro-industrial complex of transboundary regions within the territory of Greater Altai

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Abstract. In this article, the subject of the research is the prospects of integration relations in the border region of Russia based on the concept of polarized development of the territories. In particular, we focus on the Altai Krai with the adjacent territories of the Republic of Kazakhstan. Our analysis of the existing prerequisites and the current state of the integration processes, as well as the specifics of the development of the regions, shows the possibility of using the agriculture sector as a propulsion industry. More than that, an algorithm for creating a cross-border development axis was proposed.

1. Introduction

Under market conditions, the regional division of labor in border areas of neighboring countries acquires crucial importance, which determines the rational use and integrated development of the productive forces of individual economic regions, as well as promotes regional cooperation and the development of interregional economic cooperation with least cost. The formation of new economic realities caused by the increasing inter-regional competition, as well as the increasing trend of international economic integration, leads to the interdependence of regions to such an extent that the actions of one of them affect the interests of neighboring countries [5]. At the same time, border regions acquire particular importance, for which a specific system of state planning and management should be developed, taking into account their cross-border features and the potential of neighboring regions.

The territory within the Altai Mountains or the territory of the Great Altai, including the border regions of the six adjacent regions of Russia, Kazakhstan, China, and Mongolia, in the context of international cooperation, taking place in the framework of the interstate program “Our Common Home - Altai”, can be defined as a complex of several large cross-border regions modern management tools that should be specific. In this study, as an example of the cross-border development of the border regions of the Greater Altai are considered the Altai Krai and the neighboring region of Kazakhstan – the East Kazakhstan region. For the Altai Krai, as a border region, located away from the main transit corridors, the development of foreign economic relations will compensate for its distance from the main world markets [6].

The Altai Krai closely cooperates with the Republic of Kazakhstan in the trade, economic, scientific, and cultural spheres. Traditionally, for a long time, Kazakhstan is the main foreign trade partner of the Altai Krai. Kazakhstan’s share in the total turnover of the Altai Krai is about 30%. As can be seen in the graph (Figure 1), the trade turnover between the Altai Krai and the Republic of
Kazakhstan has grown significantly in 2017. However, such dynamics are relative, especially if we analyze a longer period, which is much more objective when it comes to foreign trade, the volume of trade is now only approaching the level of the pre-crisis period of 2014. Now we see a picture of growth in the context of 2015-2016, when the drop in mutual trade was about 40%.

![Graph showing trade turnover of the Altai Krai and the East Kazakhstan region (mln. USD)](image)

Of course, such a decline in commodity turnover in 2015 in monetary terms was also influenced by the growth of the dollar against the ruble at the end of 2014, without taking into account this factor, a decrease in commodity turnover in physical terms in 2015 would not be so big. In recent years, the currency rates have been more stable, business concerns related to the volatility of the national currencies of Russia and Kazakhstan have decreased, and the Central Bank’s refinancing rates have decreased as compared to the level of 2015, which leads to a revival of the economic activity of business, promising relations of the Altai Krai and the Republic of Kazakhstan to a new qualitative level.

2. Materials and Methods

As was noted, the border regions play a special important role in the economy of their states as a liaison with world markets; therefore, it is necessary to take into account the specific conditions and possibilities for their development [7].

The factor analysis of the indicators of socio-economic development of the Altai Krai and the East Kazakhstan Region confirms the possibility of using an integrated approach in regional planning in the cross-border area under consideration. Most of the development factors of border regions largely characterize them as a similar cross-border territory, as part of the Great Altai with a similar landscape, climate, population, socio-economic problems of the regional economy becoming in market conditions, allows considering these border regions as an integrated economic system and developing proposals for the integrated use of resources for the development of the agro-industrial complex [2].

A cross-border region is interpreted as “adjacent border territories of states characterized by a certain natural, economic, socio-cultural, ethnic unity” [5]. To study the potential of socio-economic development of border regions and comprehensive planning of their regional economies, we propose to use the technique of “cross-border growth poles” and “cross-border development axes.” At the same time, the cross-border propulsion industry is understood as “a set of enterprises of the same industry located in the local territories of the neighboring states, which are able to perceive innovations and have a positive impact on the development of economies of border regions” [5].

The algorithm for creating a cross-border development axis in the border region should include three stages (Figure 2).

An analysis of regional economies has shown that the point of growth or the “cross-border propulsion industry” can be the agriculture sector.
Figure 2. An algorithm for creating a cross-border development axis [5].

3. Results

The Altai region has a unique natural and economic potential, its land area is 16.8 million hectares, among which 11 million hectares are of agricultural land, including 6.5 million hectares of arable land [8]. In the agricultural sector of the region, 5.6% of all available agricultural land in Russia is used, 5.5% is arable land, more than 1.5% of labor resources are used, 4.5% of the total cattle livestock are contained. Crop production is one of the main branches of the agro-industrial complex of the region.

The agro-industrial complex of the Republic of Kazakhstan has good prospects for further development: export positions of the oilseed and meat sectors are increasing. For the export of grain and flour, Kazakhstan is among the largest exporting countries in the world. In 2017, agriculture in the share of GRP of the East Kazakhstan region was 8%. For 14 out of 15 districts of the East Kazakhstan region, agriculture is the basic sector of the economy.

In the Altai region, with seven natural-economic zones, the concentration of production of dairy and meat raw materials was uneven. The livestock of cows and the production of raw milk are concentrated in five natural-economic zones: Kulundinskaya, Prialeiskaya, Biysko-Chumyshskaya, Priobskaya and Prialtayskaya. Among these zones, the Biysk-Chumysh zone has the smallest area of agricultural land. Due to this fact, the indicators of the density of the original livestock and output per 100 hectares of agricultural land are among the highest in the region.

The livestock of agricultural animals and the production of raw meat are concentrated in the Priobskoy and Kulundinskaya natural-economic zones. These disproportions are one of the main reasons for the loss of raw materials during transportation and storage, as well as high-cost production as a whole. Consequently, there are reserves for increasing the livestock of farm animals and the production of dairy and meat raw materials in each natural-economic zone of the region.

The region has all the necessary prerequisites for the further development of agricultural production and increasing its efficiency, meeting the population’s need for basic foodstuffs through local production, which is one of the main tasks of the region’s agricultural sector. The main volume of milk (more than 80%), harvested in the region, is processed by three large producers of whole-milk products: Barnaul Dairy Plant JSC (Barnaul), Kholod LLC (Zarinsk), Altai Burenka LLC (Zonalny District) [1]. Products of Altai milk processing enterprises are exported to the following republics: Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan; the volume of shipments is insignificant.

The largest producers of meat products in the Altai Krai are: Prutskoy LLC (Pavlovsky district), Altayskiy Meat-Processing Plant LLC (Kosikhinsky district), Aleyask Meat-Processing Plant LLC (Aleysk), Rubtsovsk Meat-Processing Plant JSC (Rubtsovsk), Brukke LLC (German National District), Zarinsk Meat-Processing Plant LLC (Zarinsk), and others.

Dairy and meat products production capacity is less than 50%; therefore, there are significant reserves to increase the production of final products. The concentration of various capacities of the dairy and meat industry in the territory of the region, without taking into account the location of the raw material base, leads to the loss of dairy and meat raw materials, its unsustainable transportation and low utilization of the production potential.
In the Altai region, the arable land occupies an area of 6.5 million hectares, there are 5.5 million hectares in acreage. Therefore, a significant increase in the acreage is possible [4].

4. Discussion

For cross-border regions, as part of the Greater Altai, the development of the agro-industrial complex is a way to resolve the acute problems of budget revenues at all levels, household incomes, increasing the investment attractiveness of agriculture, increasing employment, developing and arranging rural life. Prospects for developing the agricultural production due to the presence of effective demand for the products of the industry [3].

Favorable prerequisites for the formation of the conditions necessary to accelerate the innovation process in the agro-industrial complex of the region can be created on the basis of support by the governing bodies of the regional agro-industrial complex, not individual organizations and enterprises, but their aggregates. Associations created taking into account the climatic, historical, and social factors are considered the most productive. This approach is reflected in the concept of particularly significant agrarian territories of the Russian Federation.

Analyzing the state of the cross-border region’s agro-industrial complex, it can be concluded that the main reasons for the lack of competitiveness of products and the factors hindering the industrial development are:

- A low equipment with modern technological equipment does not allow to produce high-quality products that meet standards and reduce production costs;
- A highly expensive, energy-intensive, technically backward production, designed for processing large quantities of agricultural raw materials;
- Inaccessibility of long-term, concessional lending and high interest rates when lending production;
- Large distances for the transportation of dairy and meat raw materials are several times higher than the optimal performance.

For the development of a cross-border region, an important fact is the prospects for the complementarity of agricultural development. The East Kazakhstan region traditionally specializes in animal husbandry, the development of which in Kazakhstan is inherently associated with the expansion of the feed base. Therefore, the development of crop production in the Altai Krai can serve as a complement to the Kazakhstan feed base become a factor in the development of animal husbandry in the East Kazakhstan region. Moreover, the products of Russian agrarians can find a large market for Kazakhstani agricultural producers.

5. Conclusion

Speaking about prospects, in the first place, it is important to remember that the Altai Krai is a border region and the strategic planning of its development is impossible without taking this factor into account. The lack of an integrated approach in the strategic planning of cross-border areas in practice leads to an unacceptable disregard for the advantages of the location of border regions, their particular geopolitical significance for states and, as a consequence, the omission of a number of promising development directions that cannot be realized within just one border region. Therefore, the prospects for cooperation, if we talk about a new qualitative level, we see in the orientation towards the joint development of points of growth, priority sectors, the development of joint industrial facilities, for example, in the field of agriculture.

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