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GEOGRAPHICAL ASPECTS OF DEVELOPMENT OF REGIONAL CENTER AKTOBE

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Abstract

This article considers the social and economic situation of the Aktobe region as well as discusses the prospect of industrialization growth. The paper presents a SWOT-analysis that determines strengths and weaknesses of the development of the Aktobe agglomeration. The results can be used by school teachers in teaching a special course in local history, in the activities of architecture department, in the akimat for planning the economic development of the city. In the course of the study, a differentiated assessment of social and economic factors of the Aktobe city was provided.

Key words

regional development, zoning, Aktobe, Kazakhstan.

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1. Introduction

The collapse of the system of socialist states and disintegration of some of them caused a number of transformation processes of a political, social, and economic nature in a large area of Europe and Asia (see Bunce, 1999; Norkus, 2012). One of these processes is the changes in the role and importance of cities called post-socialist cities (Hirt et al., 2016; Sailer-Fliege, 1999). It can be concluded that, as a consequence of these processes, the traditional industrial centers have lost significance (Haase et al., 2016; Mykhnenko et al., 2010), while the country capitals

and cities attractive for tourists and those being a multifunctional economic base gained in significance (Marszałek, 2017; Salukvadze, Golubchikov, 2016; Stetsiuk, Michalski, 2012). It is no different in Kazakhstan, where the old industrial centers, such as Karaganda and Shymket, have lost their meaning, and cities located in the western part of the country: Aktau, Atyrau and the discussed here Aktobe (Terterov) are benefiting from the changes.

The Aktobe region, as a large industrial region of Kazakhstan, has acquired the status of a border area (it borders on the Russian Federation in the north). The economic development of the region is

predetermined by several factors, including the economic-geographical factor (Baranskij, 1980).

This research focuses on the influence of the geographical position on development of the production potential of the Aktobe region. While preparing this article, general scientific methods were used, such as generalization, systematization, system analysis, synthesis, system-structural approach, as well as specific geographical methods.

The paper describes the influence of geographical location on the economic development of the Aktobe region at the present stage. We used a comparative geographical approach to reach it. E.N. Percik (1991) classified major cities following the principle of regional structure. According to this classification, the historical core, central, external, suburban zones were allocated in Aktobe city, the regional center of the Aktobe region. We defined the position of Aktobe in classifications and typologies by N.N. Baransky's method (Baranskij, 1980; Percik, 2009).

2. Analysis

The geographical position of the Aktobe region is a favorable factor to its sustainable economic development. According to the methodology of the international SWOT analysis, we determined the strategic potential of Aktobe. The aim of the project was to assess the role of geo-economic factors in the economic development of the Aktobe region.

To achieve the goal, we set the following tasks: to consider the theoretical aspects of a geographical location, in particular approaches to assessing the economic and geographical position; to show the influence of the economic and geographical position on the regional economy; to analyze the impact of geographical features of the area on industrial development and economic sustainability; to consider prospects for further development of the production potential of the Aktobe region due to economic factors (Manak, 1985).

E.N. Percik (1991) classified major cities following the principle of regional structure. Based on this classification, the historical core, central zone, outer zone, suburban zones are allocated in Aktobe city. The historical core of the city is a small territory, where special historical architectural buildings, administrative, cultural and business centers of the metropolitan area are located.

The city consists of three main parts: the old one – on the slope of the Ak-Tyube hill with narrow straight streets, built-up residential houses and public buildings in the center (railway and autobus stations), the new one (the north-western part of the city) – green, well laid out with the same type of multi-apartment well-appointed buildings, and the northern part of the city – the industrial part (where large factories are concentrated: the Aktyubinsk factory of chromium compounds, the Aktyubinsk factory of ferroalloys, the Aktyubinsk X-ray factory, the Aktobe chemical alcohol factory, and other small

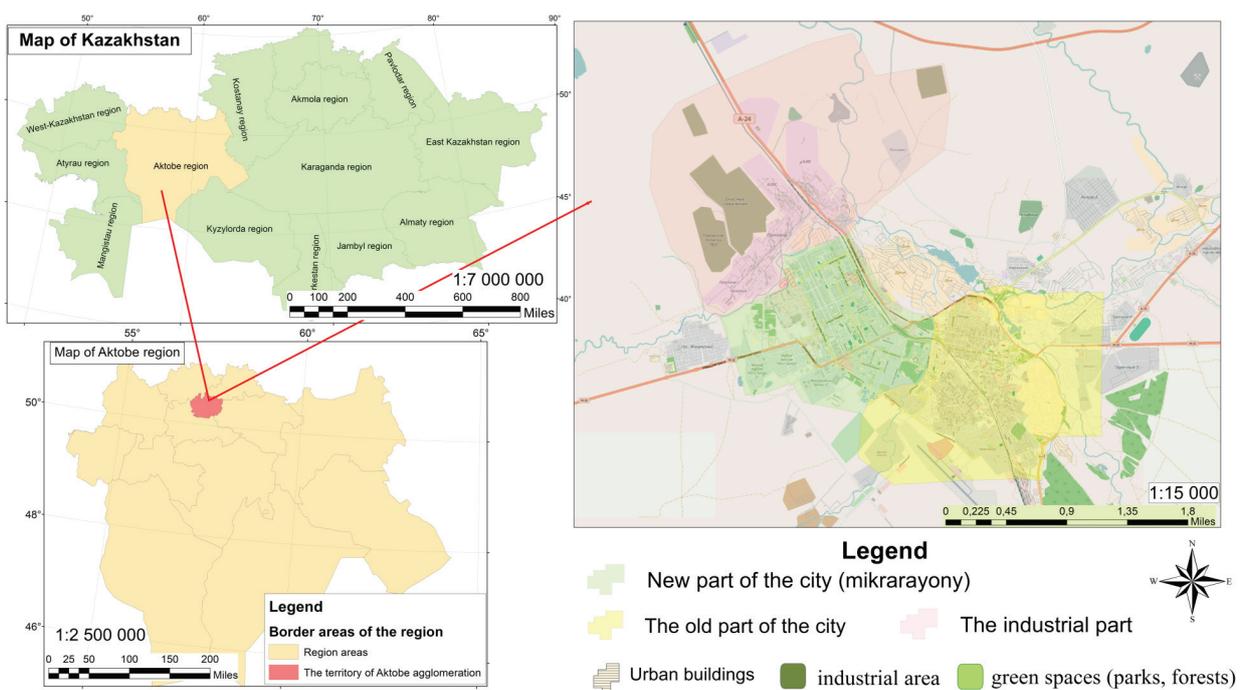


Fig. 1. Aktobe zoning map

Source: Own study.

production) with private buildings (fig. 1) in the sanitary protection zone (Svod pamâtnikov..., 2010).

Consider the place of Aktobe in classifications and typologies by N.N. Baransky's method (Baranskij, 1980):

1. Classification of the urban population in terms of size: small cities up to 20 thousand people, average from 20 to 100 thousand, large ones from 100 to 500 thousand, the largest ones inhabited by over 500 thousand people are metropolises. According to this classification, Aktobe city belongs to large cities. The population of the city was 420,151 people (as of 01/01/2018).
2. Typology of cities by their socio-economic position: Aktobe is located in a large industrial region (mining of chromium, nickel, gas, oil, copper, vanadium, etc.).
3. Classification and typology of cities according to their functions: Aktobe city is a multifunctional city that performs administrative, political, cultural and economic functions.
4. Typology of the city in the regional social division of labor: The following sectors have been identified in the sectors of urban economy:
 - developed electric power industry;
 - developed ferrous and nonferrous metallurgy;
 - oil industry;
 - mining industry;
 - metal production;
 - oil refining and chemical industry;
 - light and food industry.
5. Typology of the city by development strategy: now Aktobe city has become center of the agglomeration, a major industrial and socio-cultural leader in the republic. In 2015, Aktobe was among the five huge centers of agglomerations. The Aktobe agglomeration is developing in the industrial-innovative direction (Poslanie Prezidenta..., 2018).

The pattern of development and growth of the territory: the territorial growth of Aktobe and the rise in the population are interrelated with the growth of industry. Every year, young people who come to get higher education remain in the city after graduation.

The work on preserving the dynamics of economic growth and improving the citizens' well-being will continue to develop in the light of the tasks set by President in Message to the people of Kazakhstan on January 10, 2018.

The main efforts will be focused on the modernization and dynamism of economy, the production of competitive products, the identification of new points of economic growth, support for entrepreneurship, and the steady improvement in the quality and social standards of the local population.

A diversified industrial complex has been established in Aktobe city, focused on the use of natural resources and the development of basic industries. The industrial potential of the region is determined by large export-oriented industrial companies. The city has sufficient potential for the development of enterprises of machine-building and metal-working industries (Social'noe razvitiye..., 2017). Specialization of city's industry is formed on this basis. Currently, Aktobe is the center of industrial and cultural development. In perspective, Aktobe, having this industrial and cultural potential, can become a leading center not only in Kazakhstan, but also in Central Asia.

2.1. Transport and communication potential

Aktobe is the largest transport hub of Western Kazakhstan with a transit specialization. The junction of Europe and Asia establish a favorable geopolitical location of the region. Aktobe is one of the largest industrialized regions of the country. The uniqueness of the economic and geographical position of the region lies in the fact that the most important air routes, railways and highways connecting the states of Central Asia and Europe pass through its territory (Almaty «Aruna», 2010).

The Aktobe region takes part in the implementation of an international investment mega project "Western Europe – Western China". The total length of the corridor is 8,445 km, including 2,787 km that cross the territory of Kazakhstan. As known, 628 kilometers of this transport corridor are laid across the territory of the Aktobe region. At present, 14 bridges have been built, and 46 culverts have been installed (Prognoz..., 2019).

Using N.N. Baransky's approach (1980) we applied the method of ball estimation of roads passing through the city, namely: the road of international importance (estimated at 5 points) which is the transit corridor "Western Europe – Western China"; roads of national importance (estimated at 2 points), for example, the Samara-Shymkent highway; local roads (3 points), namely: Aktobe-Astana, Aktobe-Almaty; permanent international bus stations (3 points), for example bus stations „Sapar” and „Express”; railway stations (4 points), airports (3 points).

When all points are summed up, the transport hub is estimated at 20 points. In comparison, the Uralsk hub that consist of a republican road passes through the city (2 points); local roads (2 point); bus stations of international importance (1 point); railway stations (3 points); airports (3 points); river ports (0 point) gained a total of 11 points.

Currently, within the framework of implementation of the program for the modernization and

development of ground infrastructure facilities, airport of Aktobe has been reconstructed and now has the First category according to the standards of the International Civil Aviation Organization (ICAO).

2.2. Industrial potential

The basis of the industry of the Aktobe region is the mining industry. Its share is 77.9%, and its components include: mining of fuel and energy minerals (66.7%), mining, not including fuel and energy minerals (11.2%), mining of metal ores (9.8%), other branches of the mining industry (1.4%) (Social'noe razvitie..., 2017).

The basis of the manufacturing industry is made up of the following sub-sectors: the metallurgical industry and the production of finished metal products (with a share of 7.4% in the industry), the production of food products, including tobacco (4.2%), the chemical industry (1.8%), mechanical engineering (1.4%), manufacturing of other non-metallic mineral products (1.2%), production of rubber and plastic products (1.2%), production of coke, petroleum products and nuclear materials (0.6%), pulp and paper industry and publishing case (0.3%), and other industries (0.1%) (Prognoz..., 2019).

The share of the manufacturing industry in the total industrial potential of the region is 17.5%. Food industry includes: production of meat and meat products, milk, flour, vegetable oil, wine and vodka products. Light industry is based on manufacturing garments, while the pharmaceutical industry releases a wide range of drugs (Prognoz..., 2019).

Assessing the geography of the city's industry is the definition of the raw material base of the fuel and energy complex, oil and gas pipelines. The Aktobe region is a center of sustainable growth in the quality of life with a favorable business environment based on hydrocarbon and mineral raw materials, dynamic manufacturing industry with the development of priority sectors of the region (construction industry, chemical industry, engineering, and processing of agricultural products) and a developed transport and logistics center in West Kazakhstan.

A diversified industrial complex is located in Aktobe city. Aktobe is one of the main industrial centers of Kazakhstan. Beside traditional industrial enterprises and the extraction of hydrocarbon raw materials, large-scale industry is developed here, which makes Aktobe one of the major industrial centers of the CIS.

The leading enterprises of the manufacturing industry that determine the level of development of production include:

- in the metallurgical industry, during 2017 Aktobe ferroalloy Factory JSC "TNC Kazchrome" increased

the production of ferrochrome (377.5 thousand tons), which is more than 40% in the total volume of the manufacturing industry (Progamma razvitiâ..., 2017);

- in the chemical industry, "Aktobe Chromium Compounds Plant", with a total design capacity of 103.27 thousand tons, is the only manufacturer of chromium compounds in Kazakhstan (Prognoz..., 2019);
- 85.8 thousand tons of chromium salts were produced in 2017 (Social'noe razvitie ..., 2017).

The range of products includes technical chromic anhydride, technical metallurgical chromium, technical sodium dichromate, chromium sulfate (basic), technical potassium dichromate, technical pigment chromium oxide based on chromite ores mined in the Aktobe region (Prognoz..., 2019).

Mechanical engineering, JSC "Aktyubinsk Oil Equipment Factory" manufactures oil field equipment, JSC "Aktyubrentgen" produces medical equipment, JSC "Civil Aviation Plant No. 406" provides aircraft equipment repair services, and JSC "Aktyubinsk Metal Structures" manufactures finished metal products (Prognoz..., 2019).

Light industry is mainly represented by small enterprises. At the same time, factories are equipped with outdated equipment, the workload of which is no more than 30–40%. There are plans to implement projects "Production of primary processing of wool with the release of felt and insulation boards" with a capacity of 3,500 tons per year, and creating 130 new jobs for locals is planned (AK-RUNO LLP) (Prognoz..., 2019).

In the production of other non-metallic mineral products, "Aktobe Non-Metallic Pipes Factory" JSC manufactures pipe products; "Stroydetai LLP" produces concrete structures made of concrete, silicate and ceramic bricks, and cellular concrete blocks are produced by brick factories "Silikat" LLP -A, "Basalt" LLP, "Ecoton-Batys" LLP, "Sital-2" LLP (Prognoz..., 2019).

Since the beginning of 2018, there has been a positive trend in the regional economy. In January–November 2018, industrial production increased 2.2 times compared to the corresponding period of the previous year, of which in mining – by 34.7%, and in manufacturing – by 39.3% (Prognoz..., 2019).

The dynamics of foreign trade in the Aktobe region indicates an increasing role of other countries in the region's foreign trade, which is a positive fact from the point of view of geographic diversification of exports. The creation of the Customs Union and the formation of a single economic space of Kazakhstan, Russia and Belarus in 2014 appear to be the qualitative changes arising from the taken

Tab. 1. SWOT analysis of the strategic potential of the city, taking into account the realities of the external environment

	Strengths	Weaknesses
1.	Favorable geographical location, the presence of an external border with the Russian Federation.	Growing energy shortages and high levels of network losses that limit industrial development.
2.	Significant transport, logistics and transit potential along the Europe-Asia route.	Sectorial imbalance: the share growth of the mining industry in production and investment, low diversification of small businesses.
3.	The presence of oil and gas reserves and minerals, which creates the basis for the further development of the mining industry.	High dependence of the commodity sector on conjuncture of world prices.
4.	Availability of sources of raw materials for the development of the chemical industry.	Presence of many current and historical sources of environmental pollution.
5.	Significant economic potential in the field of ferrous and nonferrous metallurgy. Significant potential for the development of mechanical engineering, production of metal products and building materials.	Narrow specialization of the region in the republican division of labor, raw material orientation and a lack of sufficient incentives to develop entrepreneurship in the manufacturing industry.
6.	High demographic potential: a rather "young" population, the predominance of the population of childbearing age, an increase in natural growth.	High degree of uneven infrastructure potential of small cities and villages.
7.	Availability of resources for modern vocational education: infrastructure, professional teaching staff.	Underdevelopment of the agro-industrial complex due to the low level of soil fertility, a lack of irrigation water in most areas, dependence of agricultural production on climatic conditions and remoteness of agricultural producers from sales markets.
8.	Sustainable health development potential: reducing the morbidity of tuberculosis and cancer.	Lack of affordable housing for citizens; Poor quality of district roads.
9.	A high proportion of budget spending on social security. Education contributes to both human capital development and support for domestic demand.	A low level of education of the population in rural areas; A low quality of social infrastructure and services in this area.
10.	Effective implementation of the state policy aimed at consolidation of city residents.	Geographically uneven distribution of income per capita.
	Opportunities	Threats
11.	The cluster model of economic development and the active role of small businesses in cluster structures will increase the vertical diversification of products in traditional export sectors.	Slowdown in the development of the regional economy due to the conservation of energy shortages.
12.	State support under the program of forced industrialization will increase the share of the manufacturing industry and diversify the economy of the region.	Preserving the stagnation of the construction industry due to the instability of the financial and credit system
13.	The intensification of the activities of the SEC and the regional techno park will allow developing small and medium business of industrial and innovative orientation.	Persistence of disproportions in the system of vocational education with a negative impact on meeting the demand for labor resources.
14.	Co-operation of households and peasant (farmer) farms in order to jointly promote products, especially in remote areas with a lack of production capacity.	Reduction of competitive advantages while maintaining the current level of road and transport development.
15.	Construction of new energy generating facilities for local raw materials, reconstruction of electricity transmission networks and integration into the unified energy system of the Republic of Kazakhstan	Environmental degradation in case of low modernization of treatment facilities.

Source: Own study.

political decisions which will significantly advance the economy and living standards of citizens of these countries (Poslanie Glavy..., 2012). Economic cooperation is the main advantage of the Customs Union for the Aktyubinsk region, because the territorial production complexes that were created in the Soviet period still retain their influence. And Aktobe enterprises can rejoin this process to become part of technological chains and use an economic platform in the territory of the CU countries to be able to sell their products on the European market. Also, Russia and Belarus, using the capabilities of the Aktobe region, will be able to supply their products and organize their processing in the region in order to sell them in Southeast and Northeast Asia.

3. Results and discussions

A comprehensive description of the socio-economic results of the city's development is expressed in a SWOT analysis that determines the strengths and weaknesses, limitations and possibilities for its development (tab. 1).

The favorable geo-economic position of the Aktobe region at the junction of significant territorial zones of Kazakhstan as a multi-transport hub on the Central, Southern and Northern axes of growth creates opportunities for the growth of satellite cities and the formation of agglomeration and network settlement in the area of urban concentration. Thus, Aktobe city can be seen as a reference city, integrated into regional and world markets, through the priority development of promising industrial and innovative economic areas, generating the development of new clusters.

The main branches of economic activity, including the development of the mining and metallurgical industry will be aimed at maximum processing of raw materials within the region, production of high value added products, ensuring the development of other industries, such as engineering, construction industry, etc. In 2018–2020, the region is planning to introduce more than 20 projects of the construction industry, such as a factory for the production of gas blocks ("KazKorDrilling" LLP), construction of a lime production plant in Koktau ("IGDANIT" LLP), a mining and processing plant for the enrichment of quartz sand (JSC „NC "SEC "Aktobe"), a factory for the production of rubber products for the system of fiberglass pipelines ("BIEPK" LLP), etc. (Prognoz..., 2019).

4. Conclusion

The Aktobe region today stands out among all regions of Kazakhstan as a major industrial center, with a developed diversified agriculture, fully providing the region with agricultural products.

The new program of development of the agro-industrial complex until 2020 will be aimed at creating conditions for improving the competitiveness of the agricultural sector (Prognoz..., 2019; Poslanie Prezidenta..., 2018). To achieve this goal, work will be carried out in the following four areas: financial recovery, increasing the availability of goods, works and services for agricultural entities, and developing state systems to ensure and improve the efficiency of state regulation in agriculture. At the same time, a special approach will be made to such sub-sectors as cattle breeding and feed production.

The study analyzes the social development of the city and the current economic situation. As a result, the priority role of socio-economic factors is determined in the regional development of the city. These factors will obviously play a leading role in the future development of the city. We believe that the Aktobe agglomeration will be an industrial and innovative center with the predominant development of metallurgy, chemical industry, construction materials industry, transport and logistics center and the center of medical services at an international level.

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