

## Regional development: input-output analysis, issues of improvement

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**Abstract.** This article deals with current issues of regional development of Kazakhstan's economy using the example of Aktobe Region. There were analyzed the outcomes of social and economic development of this constituent region, outstanding problems of its economy specifying targets and measures aimed at the improvement of social and economic development of Aktobe Region. The negative aspects of the development of Aktobe constituent region being considered in the present article make the case for implementation of comprehensive set of measures to be focused on creating conditions and provision of incentives for economic diversification, strengthening of competitive performance of local commodity producers, improvement of activities of natural monopolies in terms of increase in labor productivity and cost reduction, settlement of outstanding problems of professional and full-time manpower resources of this constituent region, diversification of the agricultural sector as well as small and medium enterprise development.

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### Introduction

In his Message to the people of Kazakhstan «The Kazakhstani Way-2050: Shared objectives, united interests and integrated future» N.A. Nazarbayev pointed out the importance of strengthening a trend of innovative industrialization [1], because the industrialization of economy is directly connected with setting up of economic growth centers, i.e. with efficient and sustainable development of constituent regions [2, 3, 4, 5].

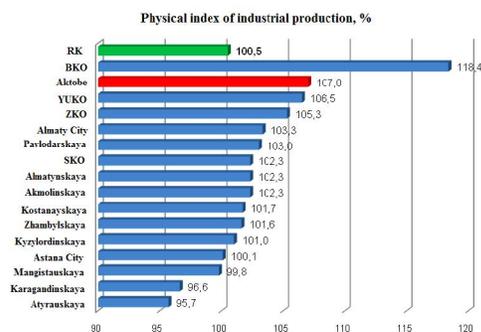
The new approaches and priorities of regional policy of Kazakhstan were determined in a long-range plan of territorial and spatial development of the country up to the year 2020 «Development of constituent regions» approved by the Presidential Decree of the Republic of Kazakhstan in the year 2011 within the scope whereof there will be granted financial support for the most significant initiatives of this region related to the development of infrastructure, human capital assets, implementation of innovative opportunities and environmental enhancement as well as local self-governance. The government support will be rendered to projects making provisions for the construction of engineering infrastructure, setting up of production facilities and industrial zones within the framework of Program «Development of constituent regions» [6]. In October 2012 there were introduced amendments and supplements into the Program «Development of constituent regions» as related to the development of urban agglomerations in Kazakhstan. As being prospective ones there were defined five

agglomerations centered at the cities of Astana, Almaty, Shymkent, Aktobe and Aktau.

In his Message N.A. Nazarbayev also pointed out the following: «We should provide for dynamic development of an infrastructural triad – agglomerations, transport and electric power industry. Agglomerations are outlines for a science-intensive economy of Kazakhstan. Their establishment and development appear to be a crucial issue taking into account a vast territory of the country and sparsely populated areas. The first up-to-date urban centers of Kazakhstan will become the largest cities – Astana and Almaty, and then – Shymkent and Aktobe. They should also become centers of science and attraction of investments and population, and provide high-quality educational, medical, social and cultural services» [1].

An analysis of the development of Aktobe constituent region highlights an industrial-production growth ensured first and utmost by accelerated development of an industrial complex, a construction engineering sector as well as by service industries – trade and transport.

A physical index of production sector and that one of its constituents exceed an average republic-wide level and they amount to the following: production sector, grand total — 107% (throughout the Republic of Kazakhstan – 100.5%), mining industry – 107.8% (100.2%), processing industry – 106.9% (100.7%)



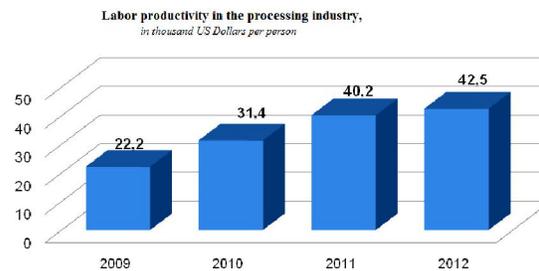
**Fig. 1. Physical index of industrial production, %**

The volume of investments into fixed capital amounted to 430.5 billion KZT (107.9% compared to the level of 2011). It is more than 4.1 percentage points on the average throughout the Republic of Kazakhstan. Hereby, the attracted foreign investment capital was 17.8% more than in the year 2011.

It exceeds multiply a republic-wide growth level (2.9%) as per scope of construction that amounted throughout the region to 23.8%. All-in-all there were performed civil engineering works amounted to 127.0 billion KZT.

It surpasses an average republic-wide indicator at 3.7 percentage points as well retail trade volume. So, for instance, a physical index of trade throughout the region has reached 116.6% (throughout the Republic of Kazakhstan — 112.9%). All-in-all there were sold commodities amounting to 294.4 billion KZT.

The main issue of development of the region's economy appears to be an industrial and innovative program. Totally on the part of Aktobe Region there were 73 investment projects amounting to 632.8 billion KZT to be included into the Card of industrialization of Kazakhstan. Therefrom, there were put into operation 64 facilities amounting to 188.2 billion KZT, and 5 thousand people were provided with permanent jobs. From the moment of their commissioning there were produced commodities for an overall amount of 207 billion KZT (17% from the entire volume of manufactured industrial products of this region). In 2012 there were implemented 13 projects amounting to 4.5 billion KZT. As a whole, within 3 years the investments into the processing industry have increased by 1.5 times and amounted to 77 billion KZT. Consequently, labor productivity in the processing industry has increased by 2 times in comparison with 2009 amounting to 42.5 thousand Dollars per one employee, and a share of products in the processing industry in a structure of GRP (Gross Regional Product) — from 7.1% up to 8.8%.



**Fig. 2. Labor productivity in the processing industry,**

*in thousand US Dollars per person*

There has been upgraded a Card of Industrialization, where only priority projects aimed at manufacturing of high-technology products are fitted into. Furthermore, executive authorities render them certain assistance all the way to reaching the project capacity.

The government authorities undertake measures aimed at creation of an industrial zone where there will be located a number of high-technology industrial clusters, whereby one of the first among them is going to be a glass cluster (This year it is planned to commence construction of a glass manufacturing plant having a capacity of 600 tons of products per 24 hours with a volume of investments amounting to 172.0 Mio EURO. Its construction shall exercise a multiplicative effect and shall promote to set up new production facilities aimed at manufacturing of required components for the main production, i.e. a plant for manufacturing of caustic soda, a factory on enrichment of quartz sand and other production facilities. In 2014 a plant for manufacturing of energy-efficient and fail-safe double-glazing units with a capacity of 300.0 thousand m<sup>2</sup> per year will be put into operation by SPK «Актобе» jointly with a leading domestic company «KazStroySteklo»).

There sparks interest in the information about expansion of a cluster of building materials (construction of a new integrated house-building factory with a capacity of 40 thousand m<sup>2</sup> of housing per year; putting into operation of a complex facility for manufacturing of pre-stressed hollow-core slabs (Stroydetal Ltd.), commissioning of a plant for manufacturing of dry mortar mixtures (Alina PRO JSC), a workshop for manufacturing of arched metal supports (AZM Ltd.) and others [7].

Besides, we would like to draw your attention to a large-sale project being implemented by Transport Technologies Ltd. with the participation of KTZH Scientific Complex with a total volume of investments amounting to more than 100 billion KZT. This project will be realized in two stages:

- In 2012-2014: Construction of a rail and beam plant with a capacity of 430 thousand tons of products per year. Hereby, within the framework of this stage there will be built a gas-turbine power plant (GTPP) with a capacity up to 40 MW;

- In 2016-2020: Construction of an electric steel works with an expansion of the electric power station up to 140-150 MW. The works' capacity will be 560 thousand tons of liquid steel and 540 thousand tons of high-quality as-cast billets.

This project will be rendered substantial government support with regard to providing for engineering infrastructure. The implementation of rail and beam facilities will enable to meet the demands of Kazakhstan as well as those ones of neighboring countries in large-size rolled metal, to cut energy shortage in the region and to create approximately 900 working places.

Special attention is paid to development of the most competitive branch of industry in the region, namely metallurgy. Under completion is the construction of ferroalloy plant No. 4 in the City of Aktobe with a capacity of 440.0 thousand tons of high-carbon ferrochrome to the value of 111.0 billion KZT where there will be embedded the up-to-date innovative technologies having no counterparts in the whole world. In the plan view of Kazchrom TNK there is construction of the fifth plant.

An outstanding world-class strategic partner will be involved into projects (having no counterparts in the country) on the deposit development of nickel-cobalt ores in the Kargalinskyi region with the construction of nickel plant.

Kazkopper Ltd., having implemented the first stage of a unique project on the production of cathode copper with a capacity of 7.0 thousand tons, is planning to expand its capacities up to 20 thousand tons per year.

Underway is also implementation of the project on the construction of Dore bead gold extraction factory with a capacity of 7 tons (Yubileynoye Ltd.).

Besides that, there is being realized a project (SNPS Aktobemunaygas JSC) on the construction of the second and third part of the Zhanazholskiy natural gas processing plant with a volume of investments of ca. 1.0 billion US Dollars. Moreover, in the coming years SNPS Aktobemunaygas JSC is planning to build gas turbine electric power stations with a total capacity of 160 MW, and a bitumen plant.

It is worth noting that alongside with conventional energy sources there will also gain momentum other kinds of renewable energy in the region, among others wind-power engineering.

In the agricultural sector of the region and diversification of agricultural production being now underway, an emphasis has been shifted onto development of livestock breeding. In the region you could notice substantial activation of works directed at cattle breed transformation, creation of cattle feeding yards and multiplication farms, provision of cattle breeding stock with the help of servicing bulls by making use of government support measures. (Only during two years within the framework of Sybaga Project the cattle farms in the region have purchased 6310 heads of cattle breeding stock. There has been introduced a series of important investment projects, namely a cattle feeding yard for 3000 heads via use of the Canadian cattle breeding technology (Aktop Ltd. of Alginskyi District), a production facility for processing of meat products with a capacity of 100 tons per year в год (AktobeZhylykomplekt Ltd.), a dairy with a capacity of 312 tons of milk products (Bolot Ltd.) and others).

These are subsidies allocated for development of agricultural sector:

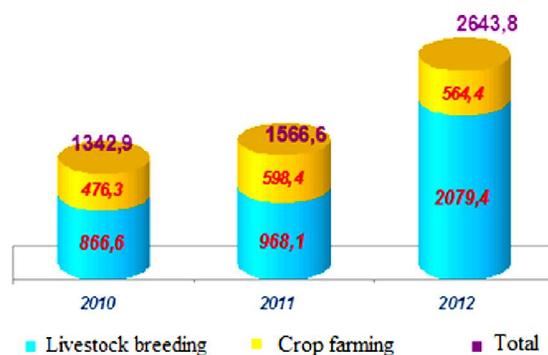
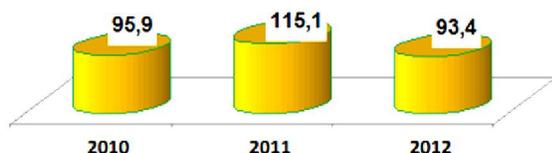


Fig. 3 ■ Livestock breeding ■ Crop farming ■ Total

For the purpose of further development of dairy farming in the region there has been completed the construction of a commercial dairy farm of Andi Ltd. Molochnyye Istoriyi Ltd. in partnership with SPK «Aktobe» is planning to set up a breeding multiplication farm for 3000 heads of cattle breeding stock in the Khromtauskiy District; a breeding multiplication farm for 2000 heads is to be set up by Ak-Tep Ltd. in the Alginskyi Region, and 500 heads each — at family-operated farms (Reimkul in the Martuyskiy District and Zhana Turmys in the Kargalinskyi District).

With the aim of developing distance pasture sheep breeding, the farms of Irgizskiy, Bayganinskyi, Uilskiy and Shalkarskiy Districts have bought 20,3 thousands heads of sheep. For this purpose via Kazagro there were allocated credit funds

amounting to 500.0 Mio. KZT. For the next years to come there has been set an objective to have up to 80.0 thousands of sheep stock and to involve agricultural enterprises of Aytekebiyskiy, Kobdinskiy, Mugalzarskiy and Temirskiy Districts into this project as well.



**Fig. 4. Physical indices of agricultural sector, %**

For akims in the districts and the City of Aktobe there have been set tasks aimed at further construction and modernization of commercial dairy farms, poultry farms, breeding multiplication farms and cattle feeding yards, green house facilities, service centers for agricultural machinery and installation of drip irrigation systems, construction and modernization of infrastructures for pasture stock water.

It 2013 a real sector of economy of Aktobe Region continued its positive dynamics of development. The statistics states that during nine months in 2013 there was growth in the industrial production, fixed capital investments, civil engineering works and retail trade turnover. Please find below brief final results of social and economic development of the region for the period from January to September.

The major demographic indices retain an upward trend in the region. The number of persons born has increased with simultaneous decrease of death rates. In January-August of the current year there came into the world 12 533 babies, and passed away 3 831 people.

In comparison with the beginning of 2012 the population of Aktobe Region has gone up by 7.8 thousand people and as of September 1<sup>st</sup> of the current year it was equal to 803.6 thousand people [8].

There is certain growth in housing construction activities in all districts of the region, except for Mugalzarskiy and Khromtauskiy Districts.

During nine months of 2013 there were built eight comprehensive schools.

An average monthly salary in September 2013 amounted to 92 760 KZT and in comparison with September 2012 it increased by 4.7%.

The size of a take-home pay calculated with account of the consumer price index for goods and services was equal to 99.1%.

As before, the salaries were characterized by differentiation as per types of economic activity. Yet traditionally the uppermost salary was recorded in the production sector — 117 246 KZT, out of which: in the mining industry — 143 556 KZT; in professional, scientific and technical fields of activity — 130 709 KZT; at transport and warehouses — 126 085 KZT; in financial and insurance spheres of activity — 119 092 KZT; in public management — 101 319 KZT [8].

As before, the most low-paid ones remain specialists of agricultural sector (58 773 KZT) and education (61 762 KZT).

The maximum earnings (in the mining industry) exceed by 2.4 times minimum ones (in the agricultural sector).

A rate of inflation on the consumer's market of the region in September of the current year retained at a sufficiently low level amounting to 103.6% compared to December 2012, and remained at the level of September 2012.

Hereby, the price increase for food commodities (by 1.3%) and non-food products (by 1.4%) appeared to be lower than for paid services rendered to the population (8.8%).

Such a result used to take place under the influence of a seasonal factor, because the bulk turn-in of fruit and vegetable products of the new crop caused a noticeable reduction of prices for cabbage (by 13.1%), onions (2.7%), cucumbers (42.8%), tomatoes (43.8%), sweet pepper (22.9%) [8].

There was also a drop in prices for cereals (by 7.4%), flour (6.1%), eggs (14.5%), vegetable oil (1.3%), sugar (1.1%).

Out of non-food products became more expensive such things as clothing (2%), shoes (1.5%), household appliances (1.8%), washing and cleaning products (1%), glassware (2.7%), personal care goods (0.7%), medicine (3.3%), printing matters (2.1%), building materials (2.2%) [8].

Traditionally by the beginning of the school year back-to-school goods got more expensive by 1.4-5% (sketchbooks, textbooks, pens, pencils, paints).

It is a seasonal factor that has an impact on certain kinds of services, too. With due account for a demand during a holiday period there boomed the service prices of sanatoriums and centers for convalescents by 4.3%, and by 1.1% — for excursion vouchers and resort places. There also increased prices for services of restaurants (by 0.4%), hotels (by 2.6%), bath-houses, shower houses and saunas (by 6.8%).

The fares in long-distance trains became more expensive as well (by 15.8%). In addition to that, there got more expensive communication services (by 3.6%), education (2.2%), healthcare (1.6%).

Municipal housing and communal services, being rendered to the population, went up on the average throughout the region by 12.2%, among others cold water — by 89.5%, hot water — by 11.9%, central heating — by 12.9%, electric power — by 4.3%, gas — by 4.4% [8].

During nine months there were made investments of 306 billion KZT into fixed capital stock, and the physical index amounted to 103.3% as compared to a similar period of the previous year. The largest volume of investments into fixed capital stock was mastered in the industrial sector (75%), out of which – 51 % in the mining industry and quarries operation [8].

Our analysis of the development of Aktobe Region enables us to lay emphasis on the following major outstanding issues [9, 10, 11, 12, 13, 14, 15]:

Sector-specific structure of the region's economy

Dependence of region's development from performance results of metallurgy and oil extraction

Existing disproportions in the level of development of region's communities

Tendency of price increase for products and services of natural monopolies

Low competitive performance of local commodity producers (manufacturers)

Imperfection of professional and full-time personnel of region's manpower resources

Irrational branch-wise development of the region's agricultural sector

Unessential role of small and medium business in the innovative and industrial development of the region.

The solution of the above-mentioned problems presupposes consideration of regional advantages of this constituent region, namely: Rich natural potential, advanced fuel and energy sector, developed transport & communication domestic and foreign economic infrastructure of the central and southern districts of the region, civil engineering complex being developed rapidly, availability of productive land use territories, high level of government support and others, and thereupon being able to realize the following assignments:

- Mainstreaming of innovative activities of the entities of regional economics;

- Increase of a share of high-level processing of the region's resources;

- Encouragement of investment activity of market-based business entities;

- Further development of transport and communication networks;

- Active involvement of foreign investments;

- Structural improvement of interregional and international commodity turnover;

- Enhancement of government support aimed at development of small and medium business in the region, particularly in rural areas.

## Conclusions

The specified negative aspects of the development of Aktobe Region make the case for realization of a package of measures directed at providing of conditions and encouragement of diversification of the region's economy, enhancement of competitive performance of local commodity producers (manufacturers), improvement of activities of natural monopolies in terms of increase in labor productivity and reduction of costs, solution of outstanding problems of professional and full-time personnel of region's manpower resources, diversification of the agricultural sector and its transfer «onto innovative rails» [1], development of small and medium business as a «major tool of industrial and social modernization of Kazakhstan in the XXI century» [1].

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