Improvement of indicators of socio-economic development of the regions of Kazakhstan

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Abstract. This article presents a comparative analysis of the socio-economic development of the regions of the Republic of Kazakhstan for ten years from 2011 to 2020. The analysis was carried out on the basis of statistical data of the main macroeconomic indicators such as: Gross regional product, the share of the region in the GRP structure, the growth rate of the region's economy, GRP per capita. On the basis of the analysis carried out, imbalances in regional economic development were identified, in particular, donor regions that make the greatest contribution to the structure of the country's GRP and recipient regions that make the least contribution to the country's economy were identified. The regions with the fastest growing GRP growth rates over the last decade and regions showing low rates of economic development were also identified. In addition, the main macroeconomic characteristic of the region is the GRP per capita indicator, reflecting the level of well-being of the region's population. As a result of the analysis, the regions with the highest and lowest levels of GRP per capita were identified. Thus, on the basis of a comparative analysis of the regions over the past 10 years, imbalances in regional development, existing economic problems reflected in the different dynamics of the main macroeconomic indicators have been identified. Based on the analysis, recommendations were proposed for further improvement of the state policy of regulating the socio-economic development of regions in the Republic of Kazakhstan.

1 Introduction

Socio-economic development of the regions of the Republic of Kazakhstan is a particularly relevant issue of state regulation of the economy at the present time. In the modern scientific literature, the issues of regional development, the problems of regional economic diversification, the imbalance of regional development, the problems of the standard of living of the population, the transition from a resource-intensive to a more sustainable economic model that promotes national growth while increasing the well-being of the local population are widely considered.

Taking into account the diversity of climatic, geographical, and economic conditions of

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production in different regions, the socio-economic development of regions in the Republic of Kazakhstan is characterized by certain features and characteristics of development. In this regard, the purpose of this study is to conduct a comparative analysis of the socio-economic development of the regions over the last decade, namely for 2011-2020. The main data sources are the statistical data of the Committee on Statistics of the Republic of Kazakhstan [1]. The main objectives of this study are to conduct a comparative analysis of the socio-economic development of regions based on the analysis of the macroeconomic characteristics of regions, including such basic macroeconomic indicators as Gross Regional Product (hereinafter - GRP), the region's share in the GRP structure, GRP growth rates or volume index, GRP per capita and other macroeconomic indicators [2-4].

The study used general scientific research methods, a dialectical approach to the study of economic phenomena and processes, which involves a comprehensive identification of patterns, trends and interdependencies. Specific research methods are methods of systematic and logical approaches, the method of normative and logical analysis, statistical method, method of comparative analysis, expert assessments, etc.

2 Method and methodology

In Kazakhstan, the socio-economic development of the regions is carried out according to the program-target method, which cover all sectors of the economy.

In recent years, the State has adopted a number of strategic documents on the main directions in the field of regional policy. In particular, in December 2019, the "Regional Development Program for 2020-2025" was adopted, the main goal of which is to increase the economic competitiveness of the regions and improve the quality of life of the population through managed urbanization [5]. The main objectives of this state program are: the development of functional urban areas - agglomerations with centers in large cities of the country, the development of functional urban areas with centers in regional centers, the development of single-industry towns, the development of border mono- and small towns with adjacent territories, the development of rural settlements.

As part of the state regulation of regional development in 2019, the "Forecast scheme of the country's spatial development until 2030" was also adopted, which is a strategic document defining the long-term vision of the country's development at the regional level [6]. Spatial planning is designed to regulate the distribution of economic activity and the settlement of the population in the country, is designed to ensure the rational use of land resources, balance the needs of economic development of the regions. The forecast scheme was developed in order to implement the Strategic Development Plan of the Republic of Kazakhstan until 2025 [7].

In the article, based on the statistical method, the analysis of macroeconomic indicators for 2011-2020 was carried out, imbalances in regional economic development were identified.

Despite the adopted state programs in the field of regional development, problems of inequality of socio-economic development of regions, low standard of living of the population in some regions of the republic, slow rates of economic development of some regions in recent years and other economic problems of regional development continue to persist at local and regional levels. In this regard, within the framework of this study, we consider the problems of socio-economic development of regions at the level of macroeconomic indicators of the regions over the past 10 years from 2011 to 2020 and present the main results of the study.
3 Results

The main consolidated macroeconomic indicator at the regional level is the Gross regional Product, which is a generalizing indicator of the economic activity of the region, characterizing the process of production of goods and services for final use. At the same time, GRP represents the gross value added created by residents of the region, and is defined as the difference between output and intermediate consumption, GRP is calculated in current basic prices [8-11]. Table 1 shows the dynamics of the Gross Regional Product for 2011-2020 by regions of the Republic of Kazakhstan. As can be seen from the table, GRP in the republic as a whole in 2020 increased by 43 billion tenge or 2.6 times compared to 2011. The greatest growth in economic development over the past decade has been observed in the capital Astana - 3.7 times, Shymkent – 3.5 times, Almaty – 2.8 times. The smallest growth was observed in the Kyzylorda region – 1.4 times. Differences in the socio-economic development of regions arise due to objective and subjective reasons [12]. The objective ones include natural and climatic differences, favorable geographical location, availability of mineral resource potential, excess labor resources, etc. The subjective ones include insufficiently effective regulation of the mechanisms of action and promotion of economic interests that affect the regional policy, ineffective use of competitive mechanisms, inefficient use of available material, natural, labor and other economic resources.

Table 1. Gross regional product for 2011-2020, billion tenge [1]

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Republic of Kazakhstan</td>
<td>27 527</td>
<td>45 623</td>
<td>70 649</td>
<td>43 122</td>
<td>2.6</td>
<td>100%</td>
</tr>
<tr>
<td>Akmola</td>
<td>805</td>
<td>1 344</td>
<td>2 284</td>
<td>1 479</td>
<td>2.8</td>
<td>3.2%</td>
</tr>
<tr>
<td>Aktobe</td>
<td>1 562</td>
<td>2 071</td>
<td>2 957</td>
<td>1 395</td>
<td>1.9</td>
<td>4.2%</td>
</tr>
<tr>
<td>Almaty</td>
<td>1 237</td>
<td>2 190</td>
<td>3 731</td>
<td>2 494</td>
<td>3.0</td>
<td>5.3%</td>
</tr>
<tr>
<td>Atyrau</td>
<td>3 792</td>
<td>5 201</td>
<td>7 738</td>
<td>3 947</td>
<td>2.0</td>
<td>11.0%</td>
</tr>
<tr>
<td>West Kazakhstan</td>
<td>1 358</td>
<td>2 033</td>
<td>2 736</td>
<td>1 378</td>
<td>2.0</td>
<td>3.9%</td>
</tr>
<tr>
<td>Zhambyl</td>
<td>634</td>
<td>1 183</td>
<td>1 901</td>
<td>1 268</td>
<td>3.0</td>
<td>2.7%</td>
</tr>
<tr>
<td>Karaganda</td>
<td>2 388</td>
<td>3 712</td>
<td>6 100</td>
<td>3 712</td>
<td>2.6</td>
<td>8.6%</td>
</tr>
<tr>
<td>Kostanay</td>
<td>1 134</td>
<td>1 522</td>
<td>2 872</td>
<td>1 738</td>
<td>2.5</td>
<td>4.1%</td>
</tr>
<tr>
<td>Kyzylorda</td>
<td>1 139</td>
<td>1 308</td>
<td>1 645</td>
<td>506</td>
<td>1.4</td>
<td>2.3%</td>
</tr>
<tr>
<td>Mangystau</td>
<td>1 868</td>
<td>2 463</td>
<td>3 074</td>
<td>1 206</td>
<td>1.6</td>
<td>4.4%</td>
</tr>
<tr>
<td>Pavlodar</td>
<td>1 520</td>
<td>1 975</td>
<td>3 120</td>
<td>1 600</td>
<td>2.1</td>
<td>4.4%</td>
</tr>
<tr>
<td>North Kazakhstan</td>
<td>667</td>
<td>918</td>
<td>1 572</td>
<td>905</td>
<td>2.4</td>
<td>2.2%</td>
</tr>
<tr>
<td>Turkestan</td>
<td>797</td>
<td>1 441</td>
<td>2 384</td>
<td>1 588</td>
<td>3.0</td>
<td>3.4%</td>
</tr>
<tr>
<td>East Kazakhstan</td>
<td>1 621</td>
<td>2 794</td>
<td>4 606</td>
<td>2 985</td>
<td>2.8</td>
<td>6.5%</td>
</tr>
<tr>
<td>Astana</td>
<td>2 146</td>
<td>4 865</td>
<td>7 975</td>
<td>5 829</td>
<td>3.7</td>
<td>11.3%</td>
</tr>
<tr>
<td>Almaty</td>
<td>4 860</td>
<td>10 601</td>
<td>13 860</td>
<td>8 600</td>
<td>2.8</td>
<td>19.1%</td>
</tr>
</tbody>
</table>
The GRP structure by region shows what contribution each region makes to the overall economic development of the country, therefore it is an important economic indicator when considering regional socio-economic development [13-14]. Figure 1 shows a diagram of the GRP structure by region. As a comparative indicator, we took the average value of the GRP share of the region for ten years or for the period 2011 to 2020. As can be seen from the diagram, Almaty occupies the largest share in the GRP structure of the regions, on average, 20.1% for the period under study. Further, as follows from the diagram, Atyrau region (11.6%), Astana (10.2%), Karaganda region (7.8%) occupy large specific weights in the amount of 7-11%. The smallest share in the GRP structure is occupied by the Kyzylorda region (2.2%), North Kazakhstan (2.3%), Zhambyl (2.5%), Akmola (2.8%) regions.

Based on the comparative analysis, it follows that there is a fairly strong differentiation between the regions of the republic. Some regions make a big contribution to the Gross Domestic Product of the republic and are thus donors to the national economy, such as oil and gas producing regions, large urban agglomerations, on the other hand, there are regions that are recipients in regional development, having a small share in the GRP of the republic. In this regard, the question of the need to find new effective approaches and mechanisms in solving the problem of imbalances at the level of regional development, rational and effective development of all territories of the country is the most important issue in the state policy of regulating the socio-economic development of regions, there is a need to modernize policy in this direction on the basis of modern principles and approaches [15-16].

The next most important macroeconomic indicator reflecting the dynamics of regional development is the pace of economic development or the index of the physical volume of GRP regions [17]. Figure 2 shows the dynamics of regional development rates on average for 2011-2020. As can be seen from the graph, the highest average annual rates of economic development over the past decade have been shown by the capital of our state, the city of Astana (6.4%). Almaty (5.2%), East Kazakhstan region (4.5%), Almaty region...
(4.8%), Turkestan region (4.5%), Atyrau region (4.2%) also show high development growth topics. The lowest rates of development over the past decade have been shown by the Kyzylorda region (-0.7%), Mangystau (0.6%), West Kazakhstan region (1.9%), perhaps the volatility of prices for oil and gas products in these regions, which in recent years has been unstable and depended on world energy prices for global commodity markets.

![Index of the physical volume of the Gross regional product, average for 2011-2020, %](image)

**Fig. 2** Index of the physical volume of the Gross regional product, average for 2011-2020, % [1]

Also, one of the important macroeconomic indicators characterizing the standard of living of the population in the region is GRP per capita. If GRP is an important aggregated value of the socio-economic development of the entire region as a whole, then one of its derivatives is GRP per capita, indirectly characterizing the level of well-being of the population in the living territory [18-19]. Figure 3 shows the indicator of the level of GRP per capita in various regions of the Republic of Kazakhstan on average for 2016-2020. As can be seen from the graph, the highest value of GRP per capita over the past five years has been observed in Atyrau region (11,454 thousand tenge), while this indicator exceeds similar indicators of other regions several times. The high values of this indicator are characterized by the fact that the Atyrau region is one of the main oil and gas producing regions of the republic and a kind of donor to the economic development of the country as a whole. Also, high levels of GRP per capita are shown by large urban agglomerations, such as Almaty (6713 thousand tenge), Nur-Sultan (6270 thousand tenge), tenge), as well as western oil-producing regions of the republic, such as Mangystau, West Kazakhstan regions. At the same time, the lowest value of GRP per capita is observed in Turkestan, Almaty, Zhambyl regions, which is mainly due to the densely populated areas of these regions compared to other regions of the republic, and, accordingly, with a decrease in GRP per capita on average.
These disparities in the level of income of the population by region can be reduced by diversifying the economy within the framework of the state program of industrial and innovative development, entrepreneurship development within the framework of state programs of support and development of entrepreneurship, productive employment and small entrepreneurship [20-22].

4 Conclusion

As follows from the above comparative analysis of the regions, the socio-economic development of the regions differs by the size of the economies, by the pace of development of the regions, by the contribution of the region to the overall structure of GDP, by the level of income of the population of the regions. In this regard, it seems appropriate to reduce the imbalances in the economic development of the regions, improve the quality of life of the population, increase the economic competitiveness of the regions and the effective use of available resources.

The state can provide support to economically weak regions in the form of the development of production infrastructure, stimulating the inflow of private investment, some tax and credit benefits and preferences, selective subsidization of enterprises providing employment, etc.

In order to improve the regional development of the economy of the Republic of Kazakhstan, it is necessary to develop interregional competition and cooperation. In this regard, it is relevant to continue comparing regions in the form of a rating based on economic indicators and business survey results. The results of the rating allow us to stimulate competition between regions in terms of economic development, the development of business conditions.

In addition, in order to further improve the assessment of the socio-economic development of the regions of the Republic of Kazakhstan, it is recommended to expand the indicators for assessing the economic activity of regions by such indicators as: creating incentives for the development of cooperation between regions, ease of doing business, productivity growth, technological renewal, digitalization, production of export-oriented
goods, etc. Increasing the competitiveness of the regions will further contribute to improving the competitiveness of the national economy as a whole.

**References**

1. E.A. Koshechkina, Geopolitics and ecogeodynamics of regions 1, (2016)
3. S. Niyazbekova, et al., E3S Web of Conferences 371, 04039 (2023) https://doi.org/10.1051/e3sconf/202337104039
4. A. Mottaeva, L.Kopteva, E3S Web of Conferences 284, 11014 (2021) https://doi.org/10.1051/e3sconf/202128411014
6. O. Fokina, et al., E3S Web of Conferences 376, 05061 (2023) https://doi.org/10.1051/e3sconf/202337605061
7. B. Aslam, K.M.J. Iqbal, et al., Sustainability (Switzerland) 15(9), 7665 (2023)
17. S. Bakreen, et al., Transportation Research Procedia this link is disabled 63, 1431–1443 (2022)
18. S.E. Barykin, et al., Journal of Environmental Assessment Policy and Management this link is disabled 25(1), 2350001 (2023)
19. A. Fedyaeva, et al., Lecture Notes in Networks and Systemsthis link is disabled LNNS 575, 87–96 (2023)
20. O. Fokina, A. Mottaeva, E3S Web of Conferences 371, 05055 (2023) https://doi.org/10.1051/e3sconf/202337105055

23. A. Nikitchenko, V. Artiukh, et al., Lecture Notes in Networks and Systemsthis link is disabled 510, 1593–1601 (2023)


