

## **DESCRIPTIVE ANALYSIS OF THE SYSTEM OF STATISTICAL INDICATORS REPRESENTING THE SUSTAINABLE DEVELOPMENT OF REGIONS**

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### **Introduction**

Economically sustainable development of regions encourages to increase the economic, social, cultural and environmental well-being of vulnerable areas (cities and districts) through the full use of their resources and the potential of its population. Wealth creation through the expansion of sustainable economic development increases the quality of life, which is a necessary condition for regional development.

Particular attention is paid to the issues of effective placement of production facilities in the regions, taking into account local resources and potential, modernization of existing production facilities, technical and technological re-equipment, activation of business and investment activities, creating favorable conditions, improving quality

### **ABSTRACT**

*In this article, a descriptive analysis of the system of statistical indicators that characterize the sustainable development of the regions, econometric models of the transformation of the sustainable development of the regions into the standard of living of the population, statistical evaluation of the sustainable development of the Khorezm region's economy are studied.*

and living conditions. Sustainable development indicators need to be improved through focus.

We will consider the descriptive analysis of the national goals of sustainable development and the system of indicators to achieve it by each indicator and region.

Descriptive analysis - this type involves a descriptive presentation of individual variables (indicators). This includes compiling a table of variables, calculating statistical characteristics, or making graphical presentations.

There are several steps to carry out this analysis. These are, firstly, the determination of frequency values (Measures of Frequency), secondly, the separation of central tendencies (Measures of Central Tendency), thirdly, the central indicators formed as a result of the studied



phenomenon are analyzed variance (Measures of Dispersion), fourthly, the indicators of variation (Measures) of Position), fifthly, the determined indicators are placed in the table (Contingency table), sixthly, based on this data, a diagram (Scatter plot) is drawn.

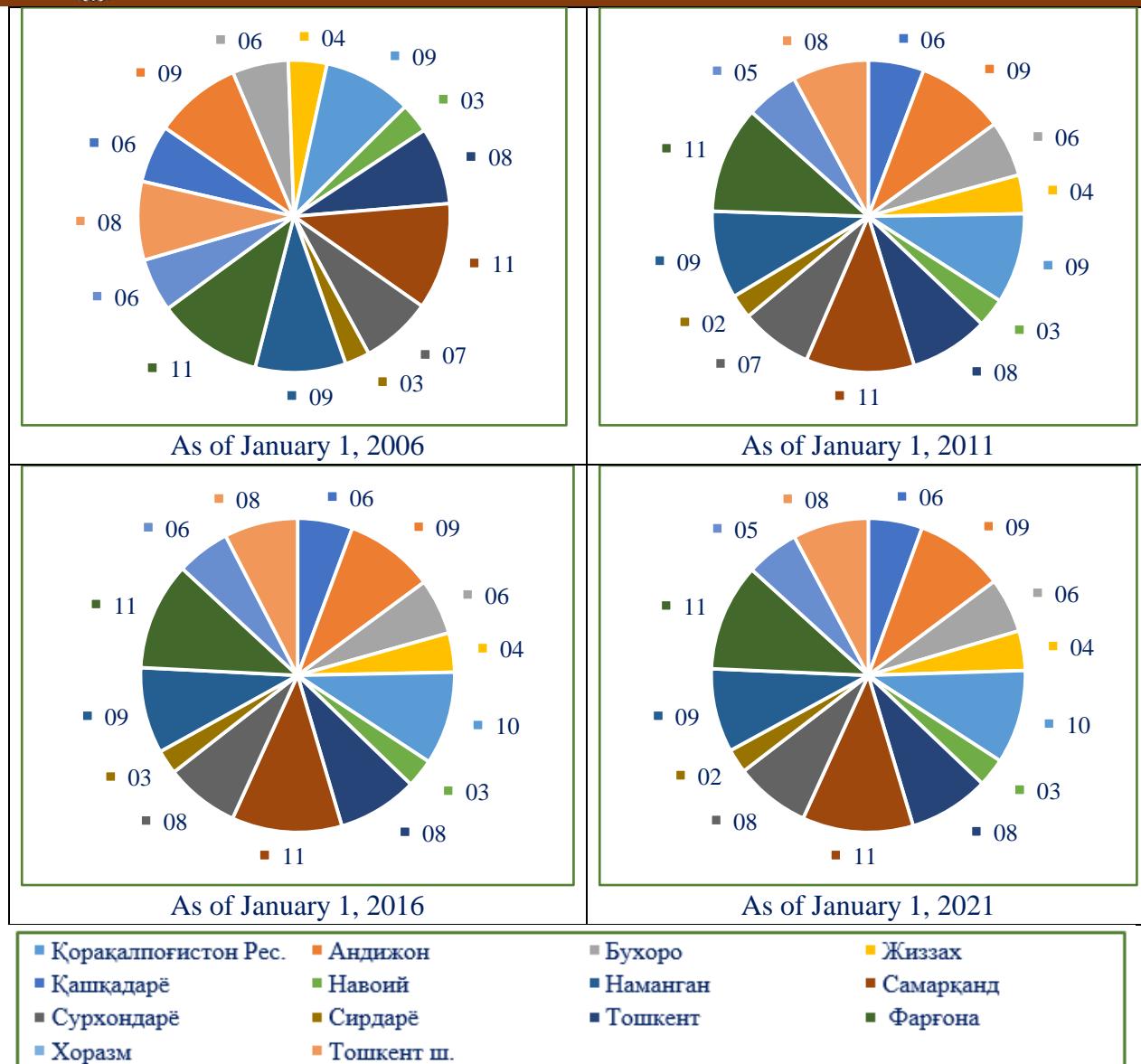
This method of analysis is very accurate in the analysis of a system of statistical indicators or indicators that represent the sustainable development of the regions we are studying, and it is possible to draw conclusions based on them.

At present, the administrative-territorial<sup>1</sup> division of the country is as follows (as of January 1, 2021): 14 territories (Republic of Karakalpakstan, Tashkent and Andijan, Bukhara, Jizzakh, Kashkadarya, Navoi, Namangan, Samarkand, Surkhandarya, Syrdarya, Tashkent, Fergana and Khorezm regions), in these areas there are 175 districts, 120 cities, including 32, 1067 towns, 10 996 rural settlements under the jurisdiction of the republic and regions. The total area of the country is 448.9714 thousand square kilometers, with a population of 34 558.9 thousand people. In particular, the total area of Khorezm region<sup>2</sup> is 6.05 thousand square kilometers, with a population of 1,904.3 thousand people (January-June 2021). There are 11 districts (Bagat, Gurlan, Koshkopir, Urgench, Khazarasp, Khanka, Khiva, Shovot, Yangiarik, Yangibazar and Toprakkala), 2 cities (Urgench and Khiva), 526 mahallas and 347,111 apartments in this area [1].

The figure below shows the share of the population living in the regions in the republic.

<sup>1</sup> <https://stat.uz/uz/rasmiy-statistika/demography-2>  
(State Statistics Committee of the Republic of Uzbekistan)

<sup>2</sup> <https://www.xorazmstat.uz/uz/> (State Statistics Committee of the Republic of Uzbekistan Khorezm regional department of statistics)



**Figure 1. The share of the population of the regions in the population of the Republic <sup>3</sup>,%**

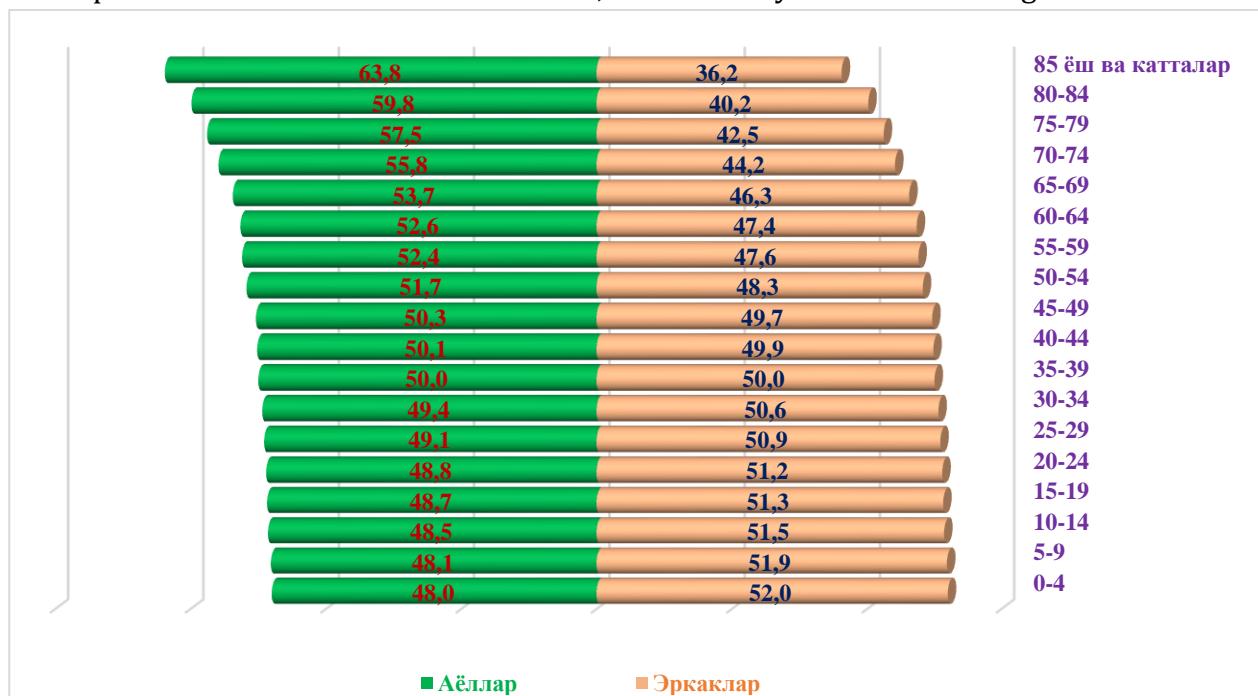
<sup>3</sup>Prepared by the author on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.

From the above picture we can see that the regions with the highest share in the population of the republic are Samarkand, Fergana, Tashkent and Kashkadarya regions. If we divide the regions into statistical groups on the share of population, according to the data of the beginning of 2006 (January 1), Group 1: includes Andijan, Kashkadarya, Tashkent, Fergana and Samarkand regions. According to the beginning of 2021 (January 1), Group 1: from 2.5 to 5.5 percent - including Syrdarya, Navoi, Jizzakh and Khorezm regions.

Group 2: from 5.5 to 8.5% - the Republic of Karakalpakstan, Bukhara region, Surkhandarya region, Tashkent and Namangan region . Group 3: from 8.5 to 11.4 percent - this includes Tashkent,

from 2.6 to 5.4% - this includes Syrdarya, Navoi and Jizzakh regions. Group 2: from 5.4 to 8.2% - this includes Khorezm, Bukhara regions, the Republic of Karakalpakstan, Surkhandarya, Namangan regions and the city of Tashkent. Group 3: from 8.2 to 11.0 percent - this

Andijan, Kashkadarya, Fergana and Samarkand regions . We can say that in comparison with the beginning of 2006, in the beginning of 2021, the share of the population of Khorezm region fell from the 2nd group to the 1st group. In other words, the share of the population has not changed (5.5 percent), and the growth of the population of Khorezm region is very low. These statistical groupings can be clearly seen in the histograms.



**Figure 2. Proportion of women and men in the age structure of the Republic of Uzbekistan <sup>4</sup>,% (as of January 1, 2021)**

<sup>4</sup>Prepared by the author on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.



In our analysis, we found that the share of men in the distribution of the population by age in our country is higher than the share of women. As can be seen from Figure 2 above, the proportion of men aged 0-34 years is high, while the proportion of women aged 40-85 years and older is high. Data from Annex 5 show that while the population aged 75 and over increased from 2009 to 2020, it declined sharply by 2021. The main reason for this is that coronavirus (COVID-2019) disease has a high impact on older people. In particular, the proportion of women aged 85 and older is declining sharply, but the proportion of women at this age is almost 2 times higher than that of men. From Figure 2 above alone, it can be seen that the share of women at this age is 63.8 per cent, while that of men is 36.2 per cent.

This is also reflected in the life expectancy at birth in our country, which means that women live longer than men. This can be seen in our statistical analysis that it is the same across all regions. During the period under study (2005-2020), the average life expectancy at birth in the country was 73.3 years.

During these years (as of January 1, 2005-2021) the average population growth in the country was 533.6 thousand people. From the Commonwealth of Independent States, this figure increased by an average of 237.8 thousand people in <sup>5</sup>Kazakhstan, <sup>6</sup>decreased by 21.7 thousand people in

Belarus, increased by <sup>7</sup>150.0 thousand people in Russia and <sup>8</sup>decreased by 355.8 thousand people in Ukraine. Abroad <sup>9</sup>, the United States (US) has grown by an average of 2.4 million, India by an average of 15.5 million, China by an average of 8.9 million, and Japan by an average of 109 million. , Decreased by 4 thousand people. In these countries, mainly in the United States, we can see in our statistical analysis that the population is increasing through mechanical movement, while in India and China, the population is increasing mainly through natural movement.

The analysis shows that even in large developed countries, population growth is very large, which contributes to the development of the domestic market, expansion of production and an increase in labor resources. Through this, it is possible to determine from the statistics that the Chinese state has reached its current position in the world. But it is also advisable to increase the internal resources. This is because the increase in domestic resources opens up a wide range of opportunities, otherwise the level of poverty in the country may increase. This could lead to an increase in the Sustainable Development Goal 1 indicators, namely the Poverty Rate (\$ 1.90 per day on SOP) and the Poverty Rate based on the international assessment of extreme poverty.

<sup>5</sup> <https://www.belstat.gov.by/ofitsialnaya-statistika/solialnaya-sfera/naselenie-i-migratsiya/naselenie/> ( Natsionalnyy statisticheskiy komitet Respubliki Belarus )

<sup>6</sup> <https://stat.gov.kz/official/industry/61/statistic/6> ( Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan )

<sup>7</sup> <https://rosstat.gov.ru/folder/12781> (Federal Service for State Statistics)

<sup>8</sup> <http://www.ukrstat.gov.ua/> ( State Statistics Service of Ukraine )

<sup>9</sup> <https://data.worldbank.org/country> ( The World Bank )

In our country, these figures are calculated and published by the State Statistics

Committee. The data for recent years on this can be seen in the diagram below.



**Figure 3. Proportion of low-income population in the Republic of Uzbekistan (low-income level) <sup>10</sup>,%**

<sup>10</sup>Prepared by the author on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.



The data in Figure 3 above were calculated on the basis of sample observations from the State Statistics Committee of the Republic of Uzbekistan. Accordingly, the share of low-income population in the country decreased from 2005 to 2019, and in 2020 this figure increased by 0.5% compared to 2019. The main reason for this increase was the coronavirus pandemic, during which many enterprises stopped working and lost their jobs, resulting in an increase in the share of the poor in the country. This, in turn, has had an impact on both urban and rural areas, with the figure rising in 2020 in both urban and rural areas. In particular, in urban areas it was 8.4 percent in 2019, 9.0 percent in 2020, and in rural areas it was 13.5 percent in 2019, compared to 13.5 percent in 2019.

From the statistical analysis of the above indicators, it can be concluded that demographic changes in the districts of the country's regions have been unstable in recent years, especially at the highest level in the Republic of Karakalpakstan. If the state of demographic change in a country and its regions is not good, the situation of

improving sustainable development goals in such regions will be difficult. This is because in order to improve any economic performance, it is advisable to first study the demographic situation of the place or area being studied. The results of the study are important, firstly, to study the impact of the improvement on economic indicators in the past, and secondly, to develop forecasting options based on it in the future and to take into account needs. Taking this into account, the following measures should be taken: budget funds should be directed to stimulate the poor and socially vulnerable groups of the population, the formation of permanent sources of income, social protection to support human capital potential, continuous improvement of conditions for private entrepreneurship. As a result, it is possible to observe the sustainable development of cities and districts of the regions. Most importantly, living standards will improve, sustainable development will be ensured, and the share of families and people in need of social protection will decrease.

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