Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Analysis of socio-economic dynamics of the Azerbaijan regions

Nusret S. Babayev
Lecturer, PhD student, Department of Finance and Financial Institutions, Faculty of Finance and Accounting, Azerbaijan State Economic University (UNEC). Phone: +994 55 2225243. E-mail: nusret.babayev@gmail.com

Abstract - The regional circle's role is growing in the context of the collapse of centralized governance and liberalization of economic relations, and now several scientists and civil servants are actively implementing methods and tools to address pressing issues of sustainable development of the country and its regions. From this point of view, at a time when large-scale reforms are being carried out, it is named the state's regional economic policy and its regulatory and management mechanisms that set priority and long-term goals for the development of regions and their sectors, and their implementation is stimulated and ensured. The main task of achieving the strategic and current goals set by the regional policy at the modern stage of development is to achieve the development of various forms of economy and more efficient placement in the economic regions by using the productive capacity, natural-economic opportunities, local and foreign investment, scientific-technical and personnel potential of all economic regions of the country. The article analyzes the dynamics of socio-economic development in the regions in recent years and the factors that have changed the quantitative and qualitative changes in them. Indicators of the impact of the new economic and social facilities on the living standards of different economic regions and Baku city were also given, including the Theil index and Gini coefficient for economic regions. The article uses systematic analysis, scientific, logical summarization, economic classification, and other research methods. At the end of the analysis, the relevant findings were substantiated.

Key words: investment policy, economic development index, economic efficiency, economic facilities; economic region, regional development; state program; state regulation.
JEL Classification: H54; P25; I38; G18

Introduction

World experience shows that higher economic results can be achieved with equal inter-regional development. From this point of view, the full revival of Azerbaijan depends on raising each region's economic level. One of the most important problems in different country regions is the importance of reviving the economy based on the free market principle. The promising areas of

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

regional economic development include such priority areas as energy, construction of infrastructure and housing, as well as "modern and high-tech mining and processing of minerals; agriculture, digital technology, exploration, medicine, science and education " (Skobkin et al., p. 263).

The provision of sustainable economic development in the country implies the provision of socio-economic development based on the full and effective use of regions' economic potential of the regions and the reduction of inter-regional differences in this area. The complication of economic relations and "the rapid production and information technologies (IT) development, as well as the promotion of creating added value processes reorienting policy to the services segment" have an impact on regional socio-economic development (Zaripov et al., 2020, p. 33). Therefore, one of the main directions of the economic reforms being implemented in Azerbaijan foris to ensure the socio-economicregions' development. In recent years, the measures taken in the socio-economic development of the regions and the

increase in the state budget expenditures have resulted in an increased rate in the overall output of major sectors (industrial, construction, agriculture, trade, transport and warehousing, information and communications) in the economic regions.

Regional development is interconnected taking into account the principle of competitive advantages, in which "the resources used should be relatively rare, valuable, immobile" (Miethlich and Oldenburg, 2019, p. 7148). It is significant to assume that a regional development program was needed in order to increase the production of agricultural products through the efficient use of regional resources, to ensure the development of the non-oil sector, processing industry, services and other infrastructure, tourism, and to further improve employment. In this regard, the development of the article is important and relevant (Tofaniuk, 2017).

The purpose of the proposed article is to analyze the dynamics of socio-economic development of the regions, make effective use of the existing potential, expand the development of individual sectors of the regional economy and make practical proposals and recommendations to ensure the dynamic development of the country's economy. The subject of the article is the socio-economic development of the Azerbaijan regions. The object of the article is the different regions of the country. The methodology of the article is that along with the methods of systematic analysis and synthesis, the methods of cybernetic calculation, mathematical, graphical, induction, and deduction were skillfully used.

The proposed article had been divided into several sections. Section 2 observes a literature analysis of socio-economic indicators during 2003-2016 years, assumptions, and historical background. In sections 3 and 4, the discussions and results had been observed. Section 5 introduces all the necessary conclusions.

Materials and Methods

A Growth of Gross Domestic Product (GDP) in the country has led to the expansion of domestic sources for financing economic development and the opportunity to attract foreign loans. Thus, the GDP in the country in 2016 increased by 4.5 times compared to 2000, 3.0 times compared to 2003, and by about 1.1 percent compared to 2010. As a result, the volume of capital investments in the country in 2016 increased by 12.0 times compared to 2000, by 3.1 times compared to

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

2003, and by 1.2 times in 2010. Nevertheless, there has been a decline in investments in fixed capital during 2014-2016 (see Figure 1).

Figure 1. Basic overview of Azerbaijan GDP in a period of the first quartal of 2010 to November of 2020. Represented by Trading Economics 2020.

Source: (Trading economics, 2020)

It has been the result of a decline in the country's revenues as a result of oil production and a decline in world prices. Thus, oil production in the country in 2016 fell by 5.0 percent compared to 2013, and the price of Brent crude oil in the world market decreased from $ 53.07 in January 2014 and down to $ 37.87 in December 2016. In work represented by authors, Ikiz and Ahmed Salih had mentioned that Azerbaijan was working to improve the regulatory system in the following period. However, the process had been inhibited by limited transparency and allegations of corruption. Nevertheless, as a result, international investors could lead to investment activities without the prohibition of the law (Salih, 2018). Other work represented by the World Bank has shown recent developments of GDP during the COVID-19 world crisis. The work had admitted that the decline of oil prices and the Central Bank of Azerbaijan's inflation leads to a reduction of financial flows in tourism and reverse buffers to control macroeconomic depts of the country (Quliyeva & Qizi, 2020). After the mitigation of short-term economic shocks, the Azerbaijan policy will be concentrated in a private section to stabilize the uncertainty, which is observed worldwide (International Bank for Reconstruction and Development, 2020). In addition to this, E. Ahmadova had shown cyclic dependencies and trends of the economy in view of models and econometric analysis. The following basis allows investors to predict socio-economic indicators in a period of the short and long term (Ahmadova, 2020). With taking into account some economic observations of Africa regions, it is significant to assume some good perspectives of Hostel chains, received by the entrepreneurship of Afrika in 2020. Renewed hostel business strategies can attract new ways of finance capitalization and hospitality business growth in third-party countries and Azerbaijan (Skobkin et al., 2020).

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Results and discussions

Improvement of key economic indicators in 2003-2016 led to increased demand for the domestic market and increased social welfare of the population. Thus, the volume of the consumer market in 2016 has increased by 5.6 times compared to 2000, by 4.2 times compared to 2003, and by 1.6 times in comparison with 2010. During the mentioned periods, the retail trade turnover increased by 5.0 times, by 3.7 times and by 1.6 times, public catering by 21.8 times, by 13.1 times and 2.3 times respectively, and paid services by 8.0 times, three times and 1.4 times respectively. Also, in households, the nominal increase in per capita income compared to 2001 exceeded the consumer price index by 3.3 times in 2016. Thus, as seen, the country's economic growth in 2000-2016 has had a positive impact on all sides of socio-economic development. Nevertheless, the economic growth being mainly due to the oil factor in the country in 2000-2009, the oil and gas fields being mainly located around the city of Baku, the formation of a significant part of the country's economic potential in the proposed city has increased the role of Baku in the national economy.

It is significant to assume that historically, the differences between the socio-economic development level regions were great, and the differences in the transitional period were slightly increased. After 2000, the rapid development of the oil and gas sector and the growth of state revenues have created opportunities to finance the socio-economic development of the regions. Under such conditions, the government has prepared and implemented a "State Program on Socio-Economic Development of the Republic of Azerbaijan (2004-2008)". According to the State Program on Socio-Economic Development of the Regions of the Republic of Azerbaijan (2004-2008), there are ten economic regions identified in the country except for Baku. Since 2009, the second state program covering the 2009-2013 regional development has been adopted and implemented. Currently, the State Program on Socio-Economic Development of the Regions of the Republic of Azerbaijan for 2014-2018 is being implemented by Decree No 118 of the President of the Republic of Azerbaijan dated February 27, 2014. Nowadays, the current program, "State Program on the Social and Economic Development of Regions – 2019-2023", has been implemented. Over the past two decades

the Republic of Azerbaijan has adopted three national strategy programs to accelerate the country's regions' social and economic development (Huseynow, 2019). Several measures have been designed under these programs to effectively utilize existing labor resources, natural and economic potentials in the regions, to accelerate the development of the non-oil sector, to deepen reforms in the agricultural sector, to increase employment, to reduce poverty, to modernize the infrastructure, to establish favorable investment climate, modern enterprises, new jobs and the main part of these measures have already been implemented.

Recent measures taken in the socio-economic development of the regions and the increase in the state budget expenditures have increased the overall output of major sectors. The calculations show that the average annual growth rate in economic regions in 2004-2016 was 9.3%. For 2003-2010, the average annual growth rate across the country was higher than in the regions, and

Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

since 2011 the regions have developed at a relatively high pace. This was mainly due to the dynamics of oil production in the country. Thus, oil production has dropped since 2011, though it has been rising by 2010 (Table 1).

Table 1. Dynamics of gross product output on key industries in economic regions (2003=100)

Region	Year											
	2004	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Baku city	114.3	130.9	212.4	229.1	250.2	282.0	272.4	278.1	290.4	308.7	314.8	313.9
Total for economic regions	110.3	123.3	162.4	205.9	192.5	214.1	259.7	299.7	317.0	304.7	307.4	316.6
Absheron	136.2	129.3	176.8	256.3	182.8	191.5	236.4	287.9	327.9	367.6	353.2	362.1
Ganja-Gazakh	113.4	134.0	150.5	184.8	180.0	199.4	231.2	273.0	293.5	286.4	284.4	291.5
Sheki-Zagatala	111.7	125.8	190.1	223.9	208.0	229.9	299.3	409.1	378.0	275.2	298.6	305.8
Lankaran	109.9	126.2	156.0	175.6	160.7	176.1	198.5	222.9	242.5	253.9	270.2	296.6
Guba-Khachmaz	103.7	115.1	165.1	280.8	213.1	270.2	304.8	304.2	295.1	277.7	270.7	293.2
Aran	105.0	112.6	145.4	167.7	163.7	171.0	202.8	226.2	247.0	242.8	241.6	234.6
Upper Garabagh	97.3	144.9	219.2	259.4	190.9	229.1	212.6	255.1	251.8	275.2	250.7	314.9
Kalbajar-Lachin	70.6	65.3	66.2	70.6	73.9	84.3	92.5	126.4	149.6	102.3	101.7	94.4
Mountainous Shirvan	109.3	126.6	163.7	213.0	231.3	247.8	247.5	282.4	290.3	295.0	313.3	337.7
Nakhchivan	116.2	149.3	234.5	318.6	388.8	467.7	706.6	821.1	874.5	862.3	899.3	939.8

Source: author's illustration

As had been observed from the Table 1 data, during 2003-2016, gross product production in economic regions increased more than three times. Simultaneously, except for the economic regions of Nakhchivan and Kalbajar-Lachin, the growth in other economic regions was close to the country level. This factor did not substantially decrease the proportion of gross commodity output per capita on major sectors in economic regions across the country. While this ratio was 3.0 in 2003, it was 3.8 in 2008, 3.6 in 2010, and 2.9 in 2016. It should be noted that in the period of high oil and gas production in the country and rise in oil prices on the world market, Baku has significantly exceeded the economic regions by the volume of gross output per capita. In 2010, oil production in the country was 50838 thousand tons, while in 2011 it was 45626 thousand tons, in 2012 - 43375 thousand tons, and in 2016 - 41050 thousand tons. This factor had a significant impact on the dynamics of the overall output in Baku (Table 2).

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Table 2. Growth dynamics of general product and its elements in economic regions (excluding Baku) (2003=100)

Product elements	Year									
	2004	2007	2008	2010	2011	2012	2013	2014	2015	2016
Production in the main areas	110.3	162.4	205.9	214.1	259.7	299.7	317.0	304.7	307.4	316.6
Industry	113,0	148,0	165,0	197,2	253,3	293,8	300.7	318.9	302.3	332.2
Agriculture, forestry, and fishing	104,6	117,6	124,7	126,2	133,5	142,0	150.8	148.7	158.7	162.4
Construction and installation works	139,8	666,6	1333,9	1264,6	1899,4	2506,5	2686.0	2154.8	1931.8	1909.0
Transportation and storage	106,6	147,3	193,1	234,4	275,2	298,1	298.2	316.8	325.3	368.7
Information and communication	120,4	208,1	257,6	353,1	371,1	404,9	430.7	490.1	521.9	568.6
Trade services	112,7	176,8	207,4	247,9	277,2	300,0	318.1	341.8	363.5	375.1

Source: author's illustration

As can be seen in Table 2, the highest growth in the economic regions in 2003-2016 was in the field of construction. Namely, construction has had a significant impact on the development of the construction materials industry in the regions. Twelve power plants with a total capacity of 1619 MW were constructed in the regions, 19929.5 km of gas lines were constructed and repaired within the gasification works, 890 km. Roads of republican significance, 2172.5 km roads of local significance were constructed and repaired, 790.4 thousand lineal meters of the collector-drainage network, 1196.2 thousand lineal meters of irrigation canals, 39,2 thousand lineal meters of stone concrete pavement, 2950.5 km of water, and 1738.8 km of sewer line were installed, 13 water and sewage pumping stations and 76 water reservoirs were built and reconstructed, and 39.3 km of heating lines were laid, 59 boiler-houses were built and repaired, 239 post offices were built, 175 electronic ATSs were commissioned, 113,426 numbers have been increased, and other measures were implemented in 2004-2012.

Large-scale investments were also implemented in the social sphere. Thus, 663 school buildings, 83 therapeutic and diagnostic centers, hospitals, polyclinics, doctors, and other
medical institutions, and 17 Olympic sports complexes were constructed and repaired in 2009-2012 (Statement of the Cabinet of Ministers of the Republic of Azerbaijan, 2013). The process continued in the years to come. Thus, the Aluminum Plant complex in Ganja, Azerbaijan Steel Production Complex Closed Joint Stock Company, Sumgait Chemical Industrial Park, Gazakh, and Nakhchivan cement production, Gold and Copper Processing in Gadabay, and other facilities were put into operation in 2013-2016. Apparently, large-scale work has been done to develop both social and production infrastructure. Implementation of these activities and direct

Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

investment in the regions have also contributed to the growth of employment and income. As a result, the volume of trade turnover in the regions in 2016 increased by 4.3 times compared to 2003, and the volume of trade services increased by 3.8 times (Table 3).

Table 3. Share of economic regions in product output in the country (by percentage)

Product elements	Year											
	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Product output in major areas	25,4	20,4	19,8	20,5	22,0	22,8	24,0	26,1	27.7	26.9	29,7	28.3
Industry	12,6	8,0	6,6	5,9	6,0	6,3	7,0	7,9	8.4	9.8	12.2	13.1
Agriculture, forestry, and fishing	99,6	99,4	99,4	99,4	99,5	99,4	90,8	90,3	99.5	99.6	99.6	99.5
Construction and installation works	9,3	19,4	29,4	37,2	27,6	38,2	40,3	44,1	47.9	35.1	34.2	32.3
Transportation and storage	11,6	8,5	6,6	7,6	7,6	7,4	8,3	8,2	8.4	8.9	8.0	6.7
Information and communication	7,7	6,7	5,3	7,1	7,4	6,7	6,4	6,2	6.0	6.2	6.3	6.8
Trade services	53,4	55,2	55,8	55,0	55,8	56,6	57,3	56,6	54.4	53.0	50.8	50.7

Source: author's illustration

As can be seen in Table 3, economic regions have a significant share in the three regions of the country. These are agriculture, construction, and trade services. Agriculture has been developed in the economic regions as it is linked to land plots and natural factors. Thus, most of the economic regions are rural areas. Moreover, the opportunities for the development of agriculture are limited in Baku city. In recent years, the increase in the volume of construction works in the economic regions has been mainly due to the investment activity of the state. As a result of this activity, the volume of investments invested in the economic regions has sharply increased. As a result, the share of economic regions in total capital investment in the country increased from 5.5% in 2003 to 34.5% in 2013 and amounted to 25.4% in 2016. The partial increase in the share of economic regions in trade services has been affected by the increase in the income of the local population as a result of the increase in this investment activity as well as the increase in pensions and social benefits. However, Baku has surpassed the economic zones by increasing the trade turnover rate in 2003-2016. As a result, there was no significant rapprochement in the per capita trade turnover. The role of the economic areas in other fields is limited in the country's economy. Thus, the industrial potential of the country is mainly concentrated in Baku. In recent years, the state has been implementing measures to establish industrial enterprises in the economically-vulnerable regions. Thus, the construction of power plants in the economic regions has been carried out, and non-ferrous and ferrous metallurgy plants are being constructed in

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Ganja-Gazakh economic region, construction materials, food, and light industrial enterprises have been established, and so on. However, the share of oil and gas production in industrial production is high. Thus, in 2016, this figure was approximately 62.1 percent. This factor has also increased the share of Baku in industrial production. In 2016 the volume of agricultural production in the economic regions increased by 1.6 times compared to 2003. It is reasonable to admit that it is possible to increase the volume of production by strengthening the material and technical basis of the agricultural sector and the improvement of the structure of the produced products. The number of minority agricultural producers reduces their interest in the consumption outcome and limits the effectiveness of building productive relationships with processing facilities. Despite the high development rates of transport and warehousing areas in economic regions, the big role of Baku in these areas is since a significant part of economic activity in the country is concentrated in this city. Transport and warehousing are mainly service areas (especially production service), and the demand for these services is high in regions with high economic activity. The share of economic resources in information and communication services is low in the country. Thus, the total number capacity of ATSs in economic regions in 2016 increased by 1.8 times compared to 2003, while the share of economic regions in this period decreased from 51.2% to 50.1%. Also, according to the number of apparatus falling to every 100 families in 2016, the economic regions fall behind about two times compared to Baku city (Table 4).

Table 4. Structure of the general product output on key areas in economic regions of the country (total by percentage)

Region	Year													
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total countrywide	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Baku	74,0	74,6	77,5	79,6	80,2	79,4	76,0	77,2	76,0	73,9	72,2	73,1	70,3	71,7
Total for economic regions	26,0	25,4	22,5	20,4	19,8	20,6	24,1	22,9	24,1	26,1	27,8	26,8	29,7	28,3
Absheron	2,0	2,7	2,1	1,9	2,0	2,2	1,8	1,6	1,8	2,0	2,2	2,4	2,7	2,9
Ganja-Gazakh	4,6	4,5	4,2	3,9	3,5	3,5	4,2	4,0	4,0	4,3	4,6	4,3	4,8	4,5
Sheki-Zagatala	1,8	1,7	1,6	1,3	1,4	1,4	1,8	1,7	1,9	2,5	2,3	1,7	1,9	1,8
Lankaran	2,4	2,3	2,0	1,8	1,9	1,6	2,0	1,8	1,8	1,9	2,1	2,2	2,5	2,5
Guba-	2,2	2,0	1,9	1,7	1,7	2,4	2,3	2,4	2,3	2,2	2,2	2,1	2,1	2,0

7

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Khachmaz														
Aran	9,4	8,5	7,1	6,5	6,2	6,0	7,2	6,5	6,8	7,2	8,0	7,9	8,7	7,8
Upper Garabagh	0,8	0,7	0,7	0,6	0,6	0,6	0,6	0,6	0,5	0,6	0,6	0,7	0,6	0,7
Kalbajar-Lachin	0,1	0,1	0,1	0,1	0,0	0,0	0,1	0,1	0,1	0,1	0,2	0,1	0,1	0,1
Mountainous Shirvan	0,9	0,9	0,8	0,7	0,7	0,8	1,0	0,9	0,8	0,9	0,9	0,9	1,0	1,0
Nakhchivan	1,9	2,0	2,0	1,9	1,8	2,1	3,1	3,2	4,0	4,5	4,8	4,6	5,3	5,0

Source: author's illustration

As can be seen from the table data, the share of economic regions in the total output of the last two years has increased significantly. Nevertheless, the main part of production in the country is concentrated in Baku. One of the key factors that attract Baku city to the private sector is the high density here. So, 1049 people fell to 1 sq. km in Baku by the end of 2012, whereas in economic regions, this figure was 89 people, one sq. km. The retail trade turnover was AZN 7750.2 thousand and AZN 161.1 thousand correspondingly. In addition, the volume of retail trade turnover per capita of Baku city exceeded the figure of the economic regions by 4.1 times in 2016. Apparently, the market density in Baku is relatively high compared to economic regions. This factor reduces sales costs of products produced relative to economic regions. Also, while 2.5% of the country's territory and 23.0% of the population fall to part of Baku, in 2016, 52.5 percent of automobiles in the country, including 42.7 percent of freight cars, 41.6 percent of freight traffic, 90.0 percent of the country's information and communication services fell to this city. These factors make it ideal for placing production in Baku. The idea behind Krugman's price level, which is expected to be relatively low in the region where there are many industrial enterprises compared to the regions with less industrial enterprises, was not justified in Azerbaijan (Krugman, 1991). Thus, the prices for consumer goods and services in the country in 2016 increased by 71.6% compared to 2007, while in Baku, this figure was 76.3%. In our view, this is due to the structure of consumption of the population. Since the prices of products and services (light, water, gas, transport, etc.), which are directed to other significant consumption costs, are regulated by the state and are largely determined by the same level throughout the country, food prices have a significant impact on the consumer price index. In these regions, the prices were relatively low, as the agricultural sector, which is the main source of food supply, is located in the economic regions (Table 5).

Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Table 5. Gross product output per capita on key areas in the economic regions (AZN)

Region	Year									
	2003	2004	2007	2008	2010	2012	2013	2014	2015	2016
Total country-wide	1301.5	1544.4	4084.4	5453.6	5428.6	6792.1	7058.4	7104.8	6446.5	7223.2
Baku	4261.3	5015.7	14652.3	19253.2	16981.6	19888.3	20755.1	20528.8	18200.9	21163.1
Total for economic regions	436.9	509.8	1013.1	1438.8	1520.6	2226.2	2354.9	2295	2331.7	2519.7
Absheron	543.6	786.1	1609.4	2374.9	1331.6	2255.6	2504.6	2794.8	2805.6	3407.1
Ganja-Gazakh	437.1	511.7	1007.6	1375.8	1547.9	2109.6	2258.4	2179.8	2200.6	2371.8
Sheki-Zagatala	353.2	399.6	926.6	1257.9	1373.1	2529.1	2355.7	1718.9	1876.3	2007.2
Lankaran	328.8	373.1	679.2	918.1	998.8	1302.8	1434.7	1515.1	1618.8	1793.3
Guba-Khachmaz	506.4	552.5	1170	2294.8	2229.2	2595.3	2528	2388.1	2294.9	2511.5
Aran	585.5	639.4	1186.7	1561.2	1631.5	2309.9	2542.8	2520.8	2509.6	2566.1
Upper Garabagh	165.4	180	413.3	565	537.4	708.7	706.3	772.5	688.7	855.7
Kalbajar-Lachin	34	45.3	79.4	92.8	119.3	364.3	434.1	298.6	296.9	277.5
Mountainous Shirvan	370	432	879.8	1248.3	1505.6	1794.5	1853.5	1821.9	1925	2104.2
Nakhchivan	534.1	703.3	1651.8	2421.9	3607.6	6336.4	6661.9	6517.4	6842.6	7371.8

Source: author's illustration

As can be seen in Table 5, the volume of gross output per capita in both Baku and in economic regions has increased dramatically over recent years. Thus, in 2016, this increase was five times higher in Baku than in 2003 and 5.8 times in the economic region. Considering that in the period under review, the deflator of the GDP was 2.6 times, we conclude that the real increase exceeded two times. In addition, the city of Baku has significantly exceeded economic zones by the volume of gross product per capita. Thus, the volume of gross output per capita in Baku was 9.8 times more compared to economic regions in 2003, 11.2 times in 2010, and 8.4 times in 2016, respectively. The Theil index is used to estimate the interregional disparity in the country.

Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

This indicator is calculated as follows (Raevneva & Bobkova, 2010):

$$T = \sum_{i=1}^{N} \frac{Y_i}{Y} ln \frac{Y_i / P_i}{Y / P} \quad (1)$$

Here, Y – country's total product;

Y_i –total product of region i ;

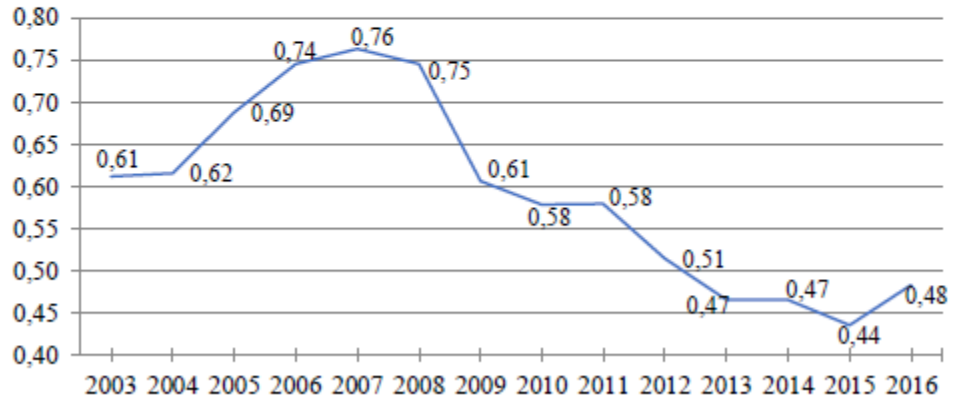
P – population of the country;

Pi - population of region *i*.

The Theil index is equal to zero if the total production output per capita in different regions of the country is similar to each other. If all the country's product output is implemented in a region having the least population, the Theil index will reach its maximum level $T_{max} = ln\left(\frac{P}{\min_i P_i}\right)$.

Below are the dynamics of the Theil index throughout the country.

Figure 2. Dynamics of Country Theil Index



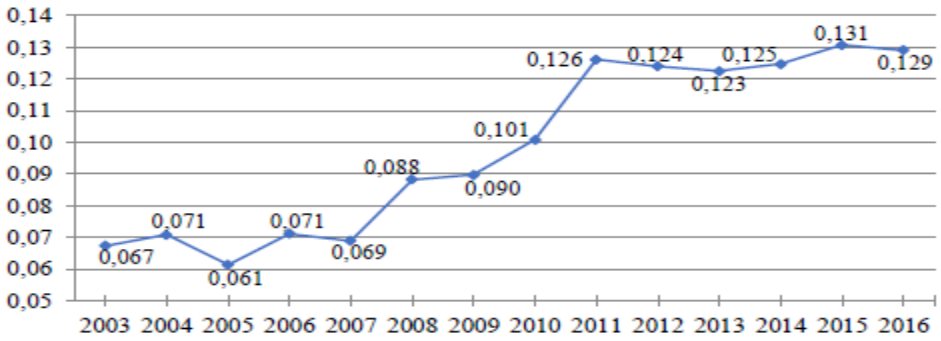
Source: author's illustration

As can be seen from Figure 2, the Theil index has grown steadily in 2003-2007 and has started to decline since then. Changes in the value of this index have been affected by the volume of oil and gas production and the price of oil, as well as the volumes of funds directed to the regions in recent years. It should be noted that in 2003-2016, if the total product in the country had been concentrated in Baku, then the value of the Theil coefficient would have ranged from 1.339 to 1.489. Apparently, this indicator remains high in the country. However, the inequality between economic regions (excluding Baku) is relatively low by socio-economic development level compared to the country's indicator.

Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Figure 3. Theil Index for Economic Regions (excluding Baku City)



Source: author's illustration

As can be seen from Figure 3, the level of inequality between economic regions is very low. In 2016, the Theil Index for economic regions was about four times less than the national average. Also, the Theil Index shows an increase in inequality in economic regions in the 2007-2016 (Azerbaijan regions, 2017).

While the maximum level of the Theil index, which reflects the inequality between the economic regions according to the level of socio-economic development, depends on the interregional distribution of the population, the maximum indicator of the Gini coefficient is equal to one.

From this point of view, an analysis of regional inequality based on the Gini coefficient is also important. Gini coefficient (G) is based on Braun's formula as follows:

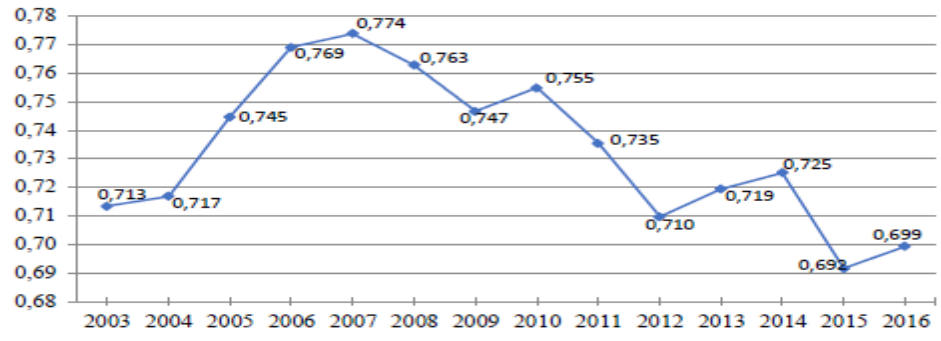
$$G = \left|1 - \sum_{k=2}^{n} (X_k - X_{k-1})(Y_k + Y_{k-1})\right| \quad (2)$$

Here, X_k - the cumulative share of the regions, with revenues revamped in the increasing range, in the country's population;

Y_k - the share of revenues from X_k.

Yk - the share of revenues from Xk.

Figure 4. Dynamics of Gini coefficient on Azerbaijan's economic regions (including Baku city)



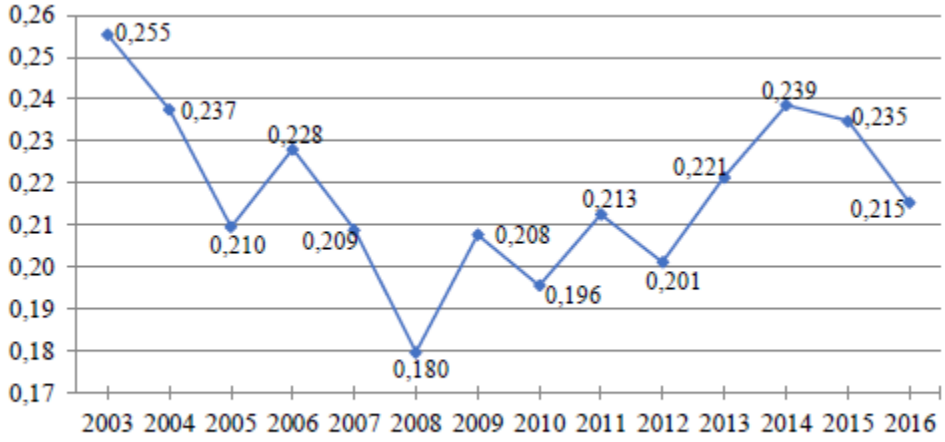
Source: author's illustration

As shown in Figures 2 and 4, both the Theil Index and the Gini Index show a tendency in the dynamics of interregional inequality. The Gini Index also shows the high level of regional inequality in the socio-economic country's development level.

Journal of Contemporary Issues in Business and Government Vol. 27, No. 2,2021
https://cibg.org.au/

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Figure 5. Dynamics of Gini coefficient on Azerbaijan's economic regions (excluding Baku city)



Source: author's illustration

According to the Gini coefficient, despite little difference between the economic regions, it was changeable. While investment in the country is one of the key economic growth factors, investment is the most volatile element of the overall product. In particular, the possibility of continuously maintaining economic activity through state investment is limited. Thus, the fact that public investment is mainly focused on the construction of social facilities and the limited financing of private sector development is a factor that adversely affects the development of the region. For example, in 2012, the number of small entrepreneurship subjects per 1000 population in Baku was 34, while this figure was 16 in economic regions. As a result, in 2015, 50.3 percent of small businesses and 61.2 percent of their production fell to Baku. In our opinion, the shortage of jobs in the economic regions

leads to the country-wide migration of the economically active population, which in turn causes the society to meet some of the losses. In such circumstances, ensuring the sustainable growth of production in the economic regions and increasing the number of constant jobs are one of the most important issues ahead.

It should be noted that, in addition to the high share of Baku city in the economy, its share of the social sphere also remains high. Thus, 26.5% of the country's hospitals, 41.6% of hospital beds, 17.0% of the outpatient clinics, 62.1% of the employed doctors, and 37.7% of the country's middle medical workers fell to the shared Baku city in 2016. In recent years, the measures taken for the development of secondary education have led to the distribution of educational institutions to the country's needs. In secondary schools, the proportion of the pupils of the first shift to the total number of pupils was 85.4% in 2016-2017, which is 20.1 percentage points more than in the 2000-2001 academic years. This indicator was higher in the economic regions than in Baku. However, the number of preschool educational institutions does not meet the requirements. So, about 14.2 percent of children were covered in preschool education in 2016. In addition, 33.4 percent of children attending preschool education in the country in 2016 fell to the share of Baku city.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Conclusions

Thus, the analysis shows that the share of economic regions in recent years' total output has increased significantly. As a result, the share of economic regions in total capital investment in the country increased from 5.5% in 2003 to 34.5% in 2013 and amounted to 25.4% in 2016. Also, the volume of agricultural production in the economic regions increased by 1.6 times compared to 2003. However, despite this, the high economic growth in economic regions has not significantly increased their role in the national economy in recent years. Due to the COVID-19 world crisis, the decline of oil prices, and inflation of the Central Bank of Azerbaijan, it led to a reduction of financial flows in tourism and reverse buffers to control macroeconomic depts of the country. After the mitigation of short-term economic shocks, the Azerbaijan policy will be concentrated in a private sector to stabilize the uncertainty observed worldwide. The main part of production in the country is concentrated in Baku's capital city, which leads to the migration of an economically active population, which causes the society to meet some of the losses. In such circumstances, ensuring the sustainable growth of production in the economic regions and increasing the number of constant jobs are among the most important issues ahead.

Conflict of Interest

This research holds no conflict of interest.

References:

Ahmadov, M.A., and Huseyn A.C. (2011) Economic policy of the state. Baku, University of Economics Publishing House, p. 219.

Ahmadova, E. (2020, June 19) "Identification of a cyclical component in the socio-economic development of Azerbaijan". Varazdin Development and Entrepreneurship Agency (VADEA).

Azizova, G.A. (2015) Economic regulation. Baku, University of Economics Publishing House, p. 203.

Azerbaijan regions. (2017) Statistical summary. SSC publication. Baku.

Bayramov, V.S. (2018) Issues of strengthening the financial provision of economic diversification in Azerbaijan. Baku, "Law Publishing House", p. 351.

Ikea, Ahmed Salih. (2018) "Economic Dynamics of Global Energy Geopolitics", Turkey, p. 152

International Bank for Reconstruction and Development. (2020) "Europe and Central Economic Updates, Spring 2020: Fighting COVID-19". Washington DC, p. 41-42.

Huseynow, Yu. (2019) The resilience of the Republic of Azerbaijan and Implementation of the "State Program on the Social and Economic Development of Regions – 2019-2023". *"Ekonomia I Srodowisko"*, 71, 4, pp. 163-175.

Quliyeva, A., and Qizi, E. (2020) On Financial and Investment Problems in the Context of Regional Development of The Republic of Azerbaijan. *"Journal of Critical Reviews"*, 7, 3, pp. 631-641.

Kornai Ya. (2000) "The Way to a Free Economy": Ten Years Later. Economic Issues, 11, p. 153.

Kotilko, V.V. (2007) Regional policy, Moscow, Prior-ed., p. 176.

Krugman, P. (1991) Increasing Returns and Economic Geography. *Journal of Political Economy*, 99, 3, pp. 483, 499.

Kuklinski, E. (2007) Regional development - the beginning of a turning point. *Journal "Regional Development and Cooperation"*, 7, pp. 3-7.

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2021.27.02.590

Miethlich, B., Oldenburg, A. G. (2019). Employment of Persons with Disabilities as Competitive Advantage: An Analysis of the Competitive Implications. In 33nd International Business Information Management Association Conference (IBIMA), Education Excellence and Innovation Management through Vision 2020, Granada, Spain, 10-11.04. 2019 (pp. 7146-7158). King of Prussia, PA: IBIMA Publishing.

Raevneva, E.V., and Bobkova, A.Yu. (2010) Use of the Theil unevenness index in the analysis of disparities in regional development. *BUSINESS-INFORM*, 5 (2), pp. 44-47.

Skobkin, S.S., Miloradov, K.A., and Kovaltchuk, A.P. (2020). "The development of hospitality and tourism industry in Africa". *Journal of Environmental Management and Tourism*, 11, 2(42), pp. 263-270. https://doi.org/10.14505//jemt.v11.2(42).04.

Statement of the Cabinet of Ministers of the Republic of Azerbaijan for 2012. (2013). Baku, (pp. 382-390), 416 p.

"State Program of socio-economic development of the regions of the Republic of Azerbaijan" for 2004-2008, 2009-2013, 2014-2018, 2019-2023. (2019) Baku, Law.

Tofaniuk, O.V. (2017) Features of socio-economic Development of Azerbaijan Regions. *"Municipal Economy of Cities"*, 136, pp. 31-37.

Trading economics (2020). Azerbaijan GDP1990-2019 Data. Available at: <https://tradingeconomics.com/azerbaijan/gdp> [Accessed: October 10, 2020]

Zaripov, R.N., Murakaev I.M., and Ryapukhin A.V. (2020). Industrial enterprise risk management mechanisms aggregation and integrated visualization of risk assessment results. *Revista Inclusiones*, Vol: 7 num Especial, pp. 32-41.