

SUSTAINABLE DEVELOPMENT AND HUMAN GEOGRAPHY PROBLEMS OF THE REGIONS IN THE AZERBAIJAN REPUBLIC

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The main purpose of the research is to identify the existing disproportion between Absheron where country's capital is located and other regions of Azerbaijan, as well as to define the reasons of uneven development and ways of solution of the relevant problems. Several processes indicating the problems of sustainable development were chosen as the research object. The study has certain practical significance because it allows define ways of sustainable development of the regions of Azerbaijan and also ways of reduction of economic inequality between Absheron and other regions, as well as determines the most optimal regional policy.

Keywords: *region, regional policy, sustainable development, economic, regional, state program*

УСТОЙЧИВО РАЗВИТИЕ И СОЦИАЛНО-ИКОНОМИЧЕСКИ ПРОБЛЕМИ НА РЕГИОНИТЕ В РЕПУБЛИКА АЗЕРБАЙДЖАН

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Абстракт: Основната цел на изследването е да се идентифицира съществуващата диспропорция между регион Абшерон, където се намира столицата на страната, и други региони на Азербайджан, както и да се определят причините за неравномерното развитие и начините за решаване на съответните проблеми. За предмет на изследването са избрани няколко процеса, показващи проблемите на устойчивото развитие. Проучването има определено практическо значение, тъй като позволява да се определят пътищата за устойчиво развитие на регионите на Азербайджан, както и начините за намаляване на икономическото неравенство между Абшерон и другите региони, както и да определи оптималната регионална политика.

Ключови думи: *регион, регионална политика, устойчиво развитие, икономическа, регионална, държавна програма.*

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INTRODUCTION

The spatial arrangement of enterprises across the country depends on many external and internal factors, such as the structure of economy and employment, the geographical location, the proximity to developed region, the social and economic potential of the country, the natural environment, the resources and the development of regions. Development of regions is considerably defined by the historical and geographical features, human resources and qualified personnel, conducted regional policy and its financial provision. In the meantime, the strengthening of these factors depends on the level of country's socio-economic development, geographical conditions and supply of natural resources. Therefore, there are significant differences in the level of development of country's regions. Disproportion in economic development is one of the topical problems of economic and social research. The results of research in this field have practical importance and can be directly applied.

Along with the mentioned factors, labour skills of the population, as well as environment conditions and geographical location play an important role and define living standards and level of incomes of the population of different regions of country (Zvereva, 2004).

The measures undertaken for development and progress of regions give positive results. Due to funds, allocated by government and private sector, new enterprises are created, and free economic zones are established. At the same time, foreign investments also play very important role.

In most of the Asian, African and Latin American countries, the population and main economic enterprises are concentrated in the capital city or around it. Weak economic potential, high ratio of rural population, restriction in development of mining industry, the absence of enterprises for processing the resources slow the development of economies. Most of the countries depend on the export of agricultural products and natural resources while this factor makes them dependent on the prices on world market and leads to unequal development of their regions. The role of the capital and its surrounding may constantly increase. In many cases, all economic and demographic potential of the country is concentrated in those areas.

In many cases, the historical and geographical features become the main reason for unequal distribution of economic potential between regions. The end of the nineteenth century and the first half of the twentieth century are known as the era of the industrial revolution, characterized by the depletion of natural resources in developed countries, as well as the decrease in demands for raw material base, technological obsolescence in the regions that used to have high rate of economic development.

Those processes had turned well developed regions into recessive ones, and slowed the process of country's economic development. This can be illustrated with the examples of the US Appalachian region, Alsace and Lorraine in France, Ruhr and Saar in Germany, and the UK's coal-metallurgical industry. In order to reduce the negative effect of the economic depression, certain policy was implemented, due to which the industry was restructured and redeveloped.

The contemporary structure of the economy of the regions of Azerbaijan started to develop in 1930s when the planning of new settlements was conducted. Since then the cities started to grow rapidly in Azerbaijan. The growth of cities has accelerated in the second half of the twentieth century. The industrialization process has gone

intensively in 50es in Azerbaijan. It affected the growth of previously existing cities like Baku, Ganja, Sheki, Nakhchivan, as well as new industrial centers. This industrialization process enforced the establishment of new big cities, such as Sumgait, Mingechevir, Shirvan, Yevlakh, and also many small and medium-sized cities, stimulating the creation and development of different sectors of economy and industrial enterprises in the regions (Fig. 1 – appendix). As a consequence, the growth and concentration of the population in these centers was observed. Until that period, rural population used to concentrate in regional centers, whereas from 50es, their population migrated to cities. This process increased the urbanization process, namely the share of urban population in overall population started to increase rapidly.

The demographic development of cities of Sumgayit, Shirvan and Mingachevir was intensified by the end of 70es. Thus, in 1959-1970, the population of the city of Sumgait increased from 24.5 thousand to 51.5 thousand people (or by 2.4 times as much), in Shirvan from 13.4 thousand to 33.8 thousand (by 2.5 times), in Mingachevir from 19.9 thousand to 43.1 thousand people (by 2.2 times) (Union Census of Population Council, 1970 year). In the following years, the growth rate of urban population slowed down.

Despite the economic achievements in the different regions of Azerbaijan in 1970-80s, the disproportion between the capital city and other regions in terms of industrial and socio-economic output did not decreased but in contrast became larger. Baku city, its suburbs and surrounding districts experienced rapid development and investments much more than other regions of the country. In the centralized socialist economical model established and implemented in Azerbaijan for many years, all stages of social and economic development was planned and regulated by the State Planning Committee. According to this model, all large industrial facilities were built in those areas where the number of labor resources was higher. All the mentioned factors were typical for Baku city, which was playing the main role in country's economy.

Another reason why Absheron became the major industrial center of the country was related to the structure of economy that already was developed in this region. The development of the oil and gas industry affected the development of petroleum engineering, oil refining and petrochemical industry, while the rapid development of related enterprises led to the establishment and development a lot of other secondary businesses.

In 70-80s and the following years, the disproportion between Absheron and other regions in terms of distribution of population and economic development strengthened. It can be connected with the following reasons. The specialization of agriculture in most regions of the country was changed. For example, Aran turned into a main cotton-growing region, while in other regions the area of grapes was increased in contrast to the decrease of other plantations and agricultural fields. As a result, the structure of agricultural lands changed significantly (Nadirov, 2011).

These changes in agriculture went more intensively in the territory of Ganja-Gazakh, Mountainous Shirvan, Nakhchivan Autonomous Republic and Upper Karabakh economic regions. As a result, the changes in existing system of agriculture lead to controversial situation when arable lands used for planting of grains and technical crops suddenly turned into vineyards.

The second major negative consequence of the changes that happened in the agriculture of country's regions is that the harvested crops were processed inside the country only at the initial stages, and mostly were exported in the form of raw materials. This negative factor limited the development of light and food industry and weakened the industrial development of cities, the establishment of social services and other infrastructure facilities such as transport, gas and water supply networks. In this connection, the development of middle- and small-sized urban settlements and growth of urban population stagnated. During this period, the light and food industries were the main industries developed in most of the regions (with the exception of Absheron). With the exception of large industrial cities, in most of the medium and small cities and urban-type settlements, industrial facilities either were not available in general, or were represented by very small number of enterprises (Afandiyev, 2002).

Nevertheless, the operation of mentioned enterprises did not contribute to the growth of employment rate, the income of local population, and overall social welfare significantly. They had only a little impact on the development of other branches of economy. As a result, the concentration of industrial enterprises continued to go in Absheron and this process strengthened the regional inequalities in the country while the elimination of this problem became heavier. Meanwhile, the concentration of population in Absheron continuously increased.

However, the rate of urbanization in the country was relatively slow, which can be explained by emigration (Eminov, 2005). The adverse migration processes affected demographic capacities of cities in various regions. Regional cities could not sustain the demographic loading and did not provide urban living conditions for increasing population (Medkov, 2005).

The level of urbanization in most economic regions is currently low since the cities were growing slowly, having very low increase rate of population. Some relevant examples are remarkable. Thus, the urbanization rate in Guba-Khachmaz economic region was 32.1% in 1970 whereas it made up 33.5% in 2014. In Ganja-Gazakh economic region, the indicators were 40.2% in 1970 and 46.1 % in 2014. In Nakhchivan, the figures made up 24.5% in 1970 and 29.2% in 2014, and in Lankaran-As-tara 24.2% and 27.3% correspondingly (Table 1).

METHODOLOGY

In the former Soviet Union, studies on regions were carried out through making emphasis on centralized planning in connection with ideological principles. The ideological restrictions have been complicating the study of problem and its solution. Therefore despite the existing problems in regional development, only a few researches were conducted in this field.

There were significant differences between scientific schools of the former Soviet Union, Europe and the United States in regard to study of regional development, investment and related problems. In the conditions of transition to a market economy the former socialist countries faced a problem of investment regions had certain regions with poor infrastructure where special privileges should be provided in order to build a network of industrial and service facilities. The elimination of problems in a

Table 1

Distribution of economic and demographic potential between economic regions of Azerbaijan, % (2012)

| Economic regions | Population, thousand people 01.01.2014 | | | Manufactured product | | | Number of workers, thousand people | | Investments, thousand manats | Newly created permanent jobs | |
|---------------------|--|-------|-------|----------------------|----------|-------------|------------------------------------|----------|------------------------------|------------------------------|-----------|
| | Total | Urban | Rural | Total | Industry | Agriculture | Total | Industry | | 2003-2008 | 2009-2013 |
| Baki | 23.0 | 43.2 | - | 73.9 | 91.9 | 0.6 | 44.7 | 53.3 | 64.8 | 28.0 | 37.3 |
| Absheron | 5.8 | 10.0 | 1.0 | 2.0 | 1.5 | 1.7 | 5.1 | 9.5 | 2.5 | 5.3 | 7.0 |
| Quba-Xachmaz | 5.5 | 3.5 | 7.8 | 2.2 | 0.2 | 10.9 | 3.4 | 2.7 | 4.3 | 4.4 | 3.9 |
| Sheki-Zaqatala | 6.3 | 3.3 | 9.6 | 2.5 | 0.2 | 9.8 | 4.8 | 2.8 | 5.0 | 5.0 | 5.5 |
| Daglig Shirvan | 3.2 | 2.0 | 4.4 | 0.9 | 0.05 | 4.7 | 1.9 | 1.0 | 1.1 | 2.3 | 2.5 |
| Aran | 20.1 | 14.3 | 26.8 | 7.2 | 2.5 | 31.4 | 14.5 | 12.3 | 8.3 | 21.0 | 16.6 |
| Gence-Qazax | 12.9 | 11.2 | 14.9 | 4.2 | 1.0 | 18.2 | 9.7 | 6.9 | 5.3 | 11.2 | 11.0 |
| Yuxari Qarabag | 6.8 | 4.2 | 9.8 | 0.6 | 0.05 | 4.1 | 3.0 | 0.7 | 0.5 | 1.7 | 3.0 |
| Kelbecar-Lachin | 2.5 | 1.0 | 4.2 | 0.1 | - | 0.9 | 1.4 | - | - | 0.7 | 1.4 |
| Lenkaran-Astara | 9.3 | 4.8 | 14.5 | 1.9 | 0.2 | 10.7 | 4.7 | 2.4 | 1.5 | 7.7 | 5.4 |
| Naxchivan MR | 4.6 | 2.5 | 7.0 | 4.5 | 2.4 | 7.0 | 6.8 | 8.4 | 6.7 | 4.3 | 5.3 |
| Azerbaijan Republic | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

The data of the table was calculated based on: Regions of Azerbaijan-2012. State Statistical Committee of AR. Baku, 2013 (pp. 40, 41, 44, 45); Industry of Azerbaijan – 2012 (pp. 152-153); and Population of Azerbaijan. Bulletin of State Statistical Committee of AR. (pp. 72-80). Baku. 2014.

short period would be possible if government use the state funds to cover the necessary expenses. From this point of view, after the independence theoretical and methodological approach to the regional study must be changed dramatically comparing with soviet period. This article presents the study of Azerbaijan's regions with a new approach for the first time. The analysis of regional problems and their solutions was conducted based on theoretical and methodological methods of researches common for scientific schools of the United States and European countries.

To remove the inequalities in regional development and defense the strategic interests of a state, as well as to ensure sustainable development, the priority is given to the development of social infrastructure, and service sector in accordance with the world standards.

The following methods were applied to conduct the research: descriptive method, analytical, statistical and mapping methods. Data was collected from literature sources, data analysis, field work materials and results of settlement planning carried out before, the results of the survey were also used.

OBJECT OF RESEARCH

The spatial organization of the economic enterprises in different regions of the country faces the main problem – disproportional distribution: most of enterprises were located in Absheron and concentrated in the capital. Ineffective policy implemented over the years caused Absheron to be industrially developed compared to other regions while those were far behind of the industrialization process. Sharp regional inequalities were observable in the territory of country. 28.8 % of the country's population, as well as 53.2 % of the urban population is currently concentrated in Absheron region (Demographic indicators of Azerbaijan, 2013). Absheron claims 93.4% of country's industrial production, 88.3 % of the main industrial funds and 62.8% of industrial workers. The use of natural resources, processing of agricultural products and job opportunities for population, as well as the provision of socio-cultural services are the important component of the economic structure of the population.

These factors have led to uneven economic development and population density by the regions of country, as well as increased migration. In order to solve the problem, "State program on social and economic development of the regions" (2004–2008 and 2009–2013 years) was adopted. However, even this step is not completely enough to solve the economic, social and demographic problems in the regions.

There are 10 economic regions in Azerbaijan: Absheron, Guba-Khachmaz, Sheki-Zagatala, Shirvan, Aran, Ganja-Gazakh and Upper Karabakh, Kalbajar-Lachin, Lankaran-Astara and Nakhchivan. In connection with historical and geographical features, the economic structure of the regions is established under the impact of natural and geographical factors and demographic potential. However, regions are different in terms of their economic potential, since the related opportunities are not the same.

CONTEMPORARY STAGE OF PROBLEM

Absheron economic region is considered the country's economic, socio-cultural and demographic core. The territory includes the capital city and its suburbs as well as the plenty resources of oil and gas besides with the same resources in the Caspian shelf. Such branches of economy as petroleum engineering, metallurgy industry, as well as education, science and cultural facilities are concentrated in Absheron.

During the transitional period, the unemployment in the regions of Azerbaijan and also the problems characteristic for the operation of economic enterprises caused outbound and internal migrations to grow. The concentration of population in the capital and its surrounding areas were intensified.

Since the mid-90s, the rapidly growing economy and the concentration of population in Absheron was connected with the discovery of oil and gas deposits in shelf zone of the Caspian Sea (Imrani, 2014). Thus, the extraction of oil and gas with support of foreign investors, as well as the establishment of service facilities in this area seriously affected the concentration of services and enterprises (Fig. 2 – appendix).

Although the industry of *Absheron* can be characterized as the undiversified, it has the leading role in the economy of Azerbaijan in all years. The region has the largest share of manufactured. The other regions have a small share of industrial goods and some of them do not have their own enterprises to manufacture products.

As a result of the implemented economic reforms in the country, most industrial enterprises were built in Absheron and consequently the share of production is very high: machinery and metallurgy make up 76–82%, while chemical industry's share is 71.0%. The indicator is 42.5% by construction materials, 43.2% by light industry, and 64.1% by food industry. Absheron contributes 57% of enterprises operating in the industrial sector and 88,3% of the industrial funds of the country (Table 2-3).

Sheki-Zagatala economic region locates in the southern part of the Greater Caucasus Mountains. The economy of the region was formed on the basis of cultivation and processing of agricultural products. The reforms carried out in recent years aimed to restore the enterprises and focused on rural economic growth. However, it appears very difficult to restore the traditional branches of agriculture such as tobacco, fruits and silkworm breeding.

Currently, the share of manufactures in total industrial production is 55.7%, of which the food industry's share is 39.1%, and textile industry's share is 7.2%. Gabala and Balakan regions have the highest share in food industry due to fruit and vegetable plants. The role of light industry partially maintains its significance due to the operation of the Sheki-based silk plant. Commissioning of the new module-type thermal power station near Sheki city enabled increase the share of energy up to 40.1%. In 2012, the region's share in country's industrial production was only at 0.2%, while the share of production in the processing industry (0.7%) increased a little. Weak economic base had negative impact on population growth and employment rate. That's why the growth rate of population is lower in the region.

Guba-Khachmaz is an economic region, crossed by transport routes connecting Azerbaijan and Russia. Its geographical position has positive impact on its economic development and structure of economy. The advantages include the location along the Caspian Sea coast, the availability of oil and gas reserves and also resort and recreation resources. The climate condition favors the development of agriculture such

Table 2

The structure of industry of Azerbaijan and its economic regions, in percent (2012)

| Branches of industry | Azerbaijan | Economic regions | | | | | | | | |
|---|--------------|------------------|---------------|----------------|----------------|--------------|--------------|------------------|-----------------|--------------|
| | | Absheron | Guba-Khachmaz | Sheki-Zaqatala | Daglig Shirvan | Aran | Ganja-Gazakh | Yukhari Karabakh | Lankaran-Astara | Nakhchvan |
| The mining industry, including | 74.1 | 80.5 | 4.6 | 0.1 | 0.7 | 28.8 | 25.4 | 0.2 | 0.4 | 0.1 |
| Mineral fuel extraction | 71.6 | 78.2 | 3.8 | - | - | 23.9 | - | - | - | - |
| Relevant services | 2.1 | 2.2 | - | - | - | 3.0 | - | - | - | - |
| Other mineral resources | 0.4 | 0.1 | 0.8 | 0.1 | 0.7 | 1.9 | 25.4 | 0.2 | 0.4 | 0.1 |
| Manufacturing industry, including | 20.3 | 15.0 | 34.8 | 55.7 | 39.0 | 36.5 | 56.3 | 16.6 | 57.7 | 92.8 |
| Products of oil refinery | 6.9 | 7.6 | - | - | - | - | - | - | - | - |
| Metallurgy | 1.5 | 1.3 | 0.2 | 0.2 | 0.2 | 0.1 | 29.4 | 2.5 | - | 3.7 |
| Machine-building | 1.6 | 1.4 | 0.1 | 2.1 | 7.5 | 4.7 | 14.7 | - | 0.1 | 0.5 |
| Chemistry | 0.7 | 0.7 | 1.1 | 0.9 | 1.9 | 2.9 | 0.5 | 1.2 | 0.8 | 7.4 |
| Construction materials | 0.9 | 0.8 | 0.7 | 2.5 | 0.5 | 1.8 | 1.0 | 0.5 | 2.7 | 39.2 |
| Food | 8.0 | 2.8 | 32.0 | 39.1 | 27.0 | 21.7 | 8.8 | 3.0 | 21.2 | 27.4 |
| Textile | 0.4 | 0.2 | 0.3 | 7.2 | 0.4 | 5.0 | 1.4 | 8.4 | - | 3.8 |
| Forestry, timber production, printing | 0.3 | 0.2 | 0.4 | 2.2 | 1.3 | 0.3 | 0.4 | 0.6 | 32.9 | 6.6 |
| Other sectors | 0.0 | 0.0 | 0.0 | 1.5 | 0.2 | 0.0 | 0.1 | 0.4 | 0.0 | 4.2 |
| Production of energy and extraction of natural gas | 5.0 | 4.0 | 55.6 | 40.1 | 47.3 | 33.2 | 15.5 | 55.8 | 39.0 | 6.6 |
| Water supply and waste | 0.6 | 0.5 | 5.0 | 4.1 | 13.0 | 1.5 | 2.8 | 27.4 | 2.9 | 0.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

The table was compiled based on the data of “The industry – 2012” (Bulletin of Azerbaijan State Statistical Committee). 2013. Baku.

Table 3

Industrial output of the economic regions, in percent (2012)

| Branches of industry | Azerbaijan | Economic regions | | | | | | | | |
|---|------------|------------------|---------------|----------------|----------------|------|--------------|------------------|-----------------|------------|
| | | Absheron | Guba-Khachmaz | Sheki-Zagatala | Daglig Shirvan | Aran | Ganja-Gazakh | Yukhari Karabakh | Lankaran-Astara | Nakhchivan |
| Mining industry, including | 100.0 | 98.7 | 0.01 | 0.0 | 0.0 | 1.0 | 0.3 | 0.0 | 0.0 | 0.0 |
| Mineral fuel extraction | 100.0 | 99.2 | 0.01 | - | - | 0.8 | - | - | - | - |
| Relevant services | 100.0 | 96.6 | - | - | - | 3.4 | - | - | - | - |
| Other mineral resources | 100.0 | 24.7 | 0.4 | 0.04 | 0.1 | 11.3 | 62.7 | 0.02 | 0.2 | 0.6 |
| Manufacturing industry, including | 100.0 | 77.8 | 0.4 | 0.7 | 0.1 | 5.0 | 3.1 | 0.04 | 0.6 | 12.3 |
| Products of oil refinery | 100.0 | 100 | - | - | - | - | - | - | - | - |
| Metallurgy | 100.0 | 76.2 | 0.03 | 0.03 | 0.01 | 0.1 | 18.1 | 0.1 | - | 5.5 |
| Machinery production | 100.0 | 82.4 | 0.02 | 0.3 | 0.2 | 7.2 | 9.1 | - | 0.02 | 0.8 |
| Chemistry | 100.0 | 71.0 | 0.3 | 0.2 | 0.1 | 7.9 | 0.6 | 0.1 | 0.2 | 19.6 |
| Construction materials | 100.0 | 42.5 | 0.1 | 0.3 | 0.01 | 2.5 | 0.6 | 0.01 | 0.3 | 53.7 |
| Food | 100.0 | 64.1 | 1.8 | 2.1 | 0.3 | 12.8 | 2.1 | 0.03 | 1.0 | 15.8 |
| Textile | 100.0 | 43.2 | 0.1 | 3.7 | 0.04 | 28.2 | 3.1 | 0.8 | - | 20.9 |
| Forestry, timber production, printing | 100.0 | 42.9 | 0.2 | 1.1 | 0.1 | 2.0 | 1.0 | 0.1 | 15.3 | 37.3 |
| Other sectors | 100.0 | 74.3 | 0.02 | 20.1 | 0.4 | 0.1 | 3.3 | 1.0 | 0.5 | 100.0 |
| Production of energy and natural gas | 100.0 | 71.6 | 2.5 | 1.7 | 0.1 | 15.8 | 3.0 | 0.5 | 1.5 | 3.1 |
| Water supply and waste | 100.0 | 79.8 | 1.9 | 1.6 | 0.9 | 6.2 | 4.7 | 2.0 | 1.0 | 1.9 |
| Total | 100.0 | 93.5 | 0.2 | 0.2 | 0.04 | 2.5 | 1.0 | 0.04 | 0.2 | 2.4 |
| Industrial funds | 100.0 | 88.3 | 1.1 | 0.6 | 0.1 | 5.6 | 2.0 | 0.2 | 0.4 | 1.7 |
| Number of workers in industry | 100.0 | 62.8 | 2.7 | 2.8 | 1.0 | 12.3 | 7.8 | 0.7 | 2.4 | 8.3 |
| Number of working enterprises | 100.0 | 57.0 | 3.1 | 4.5 | 1.6 | 13.5 | 10.7 | 1.2 | 3.0 | 5.4 |

The table was compiled based on the data of “The industry – 2012” (Bulletin of Azerbaijan State Statistical Committee). 2013. Baku.

as fruit-growing and vegetable planting. Consequently, Guba-Khachmaz economic region is specialized on the fruit and vegetable processing and canning industry.

The construction of Khachmaz power plant in recent years must have positive effect on economy of the region. This influence is reflected for example by the growth of production in Khachmaz canning factory. However, other significant changes in the structure of region's economy were not observed by 2012. As it can be assumed, the share of Guba-Khachmaz in country's industrial production is only 0.2%. The situation concerning industrial growth is not changing by recent years. The share of industrial funds in the region continues to decline, dropping from 1.9% in 2000 to 1.1% in 2012.

Daghlig Shirvan (Mountainous Shirvan) economic region is located near Absheron – the economic region with a highly developed industry. The potential of industry of Daghlig Shirvan is not fully used. Shamakhi and surrounding areas historically played a significant role in the economic development of Azerbaijan. However, the delay in adoption of needed regional policy impeded the region's social, demographic and economic development, while its natural condition is very favorable for the development of industrial areas.

Recession in the machine-building industry observed until 2012, was followed by the decrease of share of processing industry in region's economy to 39.0%, whereas 27.0% of this figure was contributed by the food industry. The reduction of enterprises of secondary sector resulted in the increase of share of distribution of natural gas (47.3%) and water (13.0%) in the overall industrial production (Table 2). The share of Daghlig Shirvan in country's industrial production is only 0.1%. The same figure concerns the industrial fund of the region, while the manufacturing industry as well as the production and distribution of electricity, gas, water and makes up 0.3%. Nevertheless, the role of Daghlig Shirvan in country's economy continues to decline.

Aran is the country's second largest region for the available economic output. The economy is presented by production of cotton, fruit and vegetable, whereas the related canning plants were commissioned here in the last years. However, many enterprises are operating in part or closed in general. This negatively affects the economic base of cities. Although Aran includes the country's important industrial centers like Mingachevir, Yevlakh and Shirvan, the available economic, social and cultural potential of the region is not fully used as well. The role of Aran might be much higher in country's economy. Mingachevir is the largest city in the region and the fourth largest in the country. The city is known as the "energy center" of Azerbaijan since 1948 when the status of city was granted. It used to be one of the most important industrial centers of the country for many years, though the transition period led to the stagnation in development of local industrial facilities. In order to eliminate recession, certain programs were implemented but additional measures are still needed regarding sustainable development. After the second half of the 90es, Mingachevir did not grow demographically, whereas the city's share in Aran's urban population fell from 6.1% to 5.3% in 1989–2013. One of the main problems in socio-economic development of Mingachevir is that the city's industry is undiversified. The share of production and distribution of electricity, gas and water in city's total industrial production made up 98.3% in 2000 and 93.5 % in 2005. Shirvan is the second industrial center of the region. Development of the exploitation of oil and gas fields in its surroundings, as well as the construction of a power plant at the end of

the 1960s, and also the establishment of enterprises of construction materials, light and food industries in subsequent periods had a positive impact on the development of Shirvan. Nevertheless, almost all industrial production of this city is shared by its energy sector.

The current situation and economic policy conducted in the country led to a decline of the industrial share of Aran economic region. Aran shares 2.4% of country's total industrial production (in 2012), while the processing industry shares 5%. Of this figure, 28.2% is contributed by light industry, 12.8% by food industry, and 7.2–7.9% by chemical and mechanical engineering. In 2000, region's industrial funds made up 9.9% by the country, whereas the figure was 5.4% in 2005.

The economic potential of the western part of Azerbaijan is concentrated in **Ganja-Gazakh** economic region. There are some significant problems regarding the spatial distribution and efficient structural organization of economy in this region. With the second place among country's regions, Ganja-Gazakh has not well-developed industrial sector actually, since the output of this sector is very compared to all country, whereas its share is constantly decreasing. In 2000, Ganja-Gazakh's share in country's industrial production was 1.6%, while it made even 0.9-1% in 2007-2012 (Industry of Azerbaijan, 2013). During the same period, the share of industrial funds dropped from 4.8% to 2%. However, the number of enterprises increased from 8,3% up to 10.7%. Since the industrial production reduced much rapidly in recent years, its share in domestic product of Ganja-Gazakh fell down. The same happened with exploitation of raw materials. The contribution of Ganja-Gazakh to Azerbaijan's industry has fallen from 23.5% to 13.1% in 2000-2007, whereas it made up 0.3% in 2012. The share of the economic region in processing industry of Azerbaijan makes up 3.1%. The establishment of a series of processing industries like metallurgy, engineering and textile lead to the increase of share of secondary industry up to 6.1% in 2012 (Industry of Azerbaijan, 2013). Relatively higher figures are fixed by metallurgy (18.1%) and machinery industry (9.1%). Food (2.1%) and light (3.1%) industries play lesser role in the economy of Ganja-Gazakh.

Ganja city is the main center of the western part of Azerbaijan in terms of economic output, population number and influence on surrounding areas. In recent years, the process of reconstruction of existing enterprises, plants and factories was at the center of attention. The new aluminum plant was established. However, the problems in supply and cost of raw materials, needed fuel and energy does not allow enterprises to operate at full capacity. In 2012, the share of metallurgical industry and production of metal-made goods increased up to 53.6% (Industry of Azerbaijan, 2013).

Upper Karabakh region has very advantageous geographical location. For many years, it was one of the country's most important crop and livestock regions of Azerbaijan. Food and textile enterprises were widely spread here. However, the ethnic conflict and following military actions destabilized the situation in the region at the end of the twentieth century. This conflict negatively affected the structure of region's economy and the demographic situation.

In 2012, the share of processing industry in the region's economy made up 16.6%, 8.4% of which fell to the share of light industry. The rest part was contributed by distribution of electricity, natural gas and steam (55.8%), and also facilities of water distribution, water supply and waste processing (27.4%). The contribution of the region to country's industrial production is extremely low (0.04% in 2012), as Tables

2 and 3 reflect. Therefore, it is very important to develop the processing industry and use industrial potential of Upper Karabakh. The establishment of agro-processing facilities, electricity, gas and water supply seems necessary, too.

Kalbajar-Lachin economic region is located between the Upper Karabakh and Armenia. For many years this region was specialized on pastoral farming. Kalbajar-Lachin was characterized by the lack of manufacturing and weak development of processing industries.

Lankaran-Astara economic region is considered to be country's south gate. Lack of mineral resources restricts the development of economy which in its turn causes to lag of social development. High rate of natural increase causes the surplus of workforce in the region. Lack of job opportunities and demographic loading lead to the increase of the migration flow from the region. Now the main agricultural crops of Lankaran-Astara include mainly grains, vegetables, potato, citrus fruits. There are many challenges concerning the creation of processing enterprises which would adopt yields in large amount. Therefore, the social and economic base of the region is weak and the netnegative migration is ongoing. In 2012, the share of processing industry in total industrial production was 57.7%. Forestry and timber production made up 32.9%, while food industry 21.2%. The share of the production of construction materials is lesser – only 2.7%. Due to commissioning of the module power station in Astara, considerable progress was observed in the production and distribution of electricity (39.0%). Nevertheless, the share of Lankaran-Astara region in country's total industrial production does not exceed 0,2% as the data of recent years indicate. Processing industry (0.4–0.6%) as well as energy and natural gas production (1.5%) have smaller share as well.

Nakhchivan is located apart from the main part of the country. Therefore, industrial and agricultural enterprises are oriented in supply of the local market, and aimed at meeting domestic demand. In recent years, a large number of enterprises in processing industry was established. This resulted in the increase of the share of this economic area up to 92.8%. Of this figure, industry of construction materials contributes 39.2%, food industry – 27.4%, forestry and timber processing and also furniture – 6.6%, chemical industry –7%, and distribution of electricity and natural gas – 6.6%.

However, the heavy weight of Nakhchivan in country's secondary sector is lower (2.3% in 2012). The newly-commissioned power units allowed to increased production and distribution of electricity, natural gas and water up to 3.3%. In 2012, manufacturing industry of Nakhchivan saw growth and contributed 12,3% of the total production. The region's share for this indicator is higher compared to other regions of the country. The share of Nakhchivan in industry of construction materials of the country is 53.7%, while the forestry and timber production makes up 37.3%, light industry – 20.9%, food industry – 15.8% and chemical industry –19,6%.

WAYS OF SOLUTION OF PROBLEM

Demographic, social and economic development of the regions is among country's most important strategies. Uneven economic development of the regions entails the high concentration of population and economic activities in the capital area,

which in its turn create additional challenges in the Absheron peninsula. It's not by chance that the country's largest urban-type settlements are situated in Absheron. The territory of them is being expanded. This is responsible for the changes in land use, overgrowth of urban population, resettlement of the population in suburban areas, etc. Spatial enlargement of settlements creates also serious economic problems and increases the price of land. Relatedly, serious problems are typical for industrial facilities and housing as well. Housing is very important problem for Baku. Along with the rapid development of the city area, owned, low-quality and typically not suitable one- or two-storey buildings in the core city still remain. Most of the newly constructed multistorey houses are built without considering principles of city planning, and typically are too close to each other, while this conditions challenge the regulation of urban life in general. Meanwhile, environmental factors such as risk of landslides and tectonic activations, prevalence of heavy northern winds as well as possible sources of air pollution were not taken into consideration in city planning. Many parks and recreation areas, as well as playgrounds and entertainment areas have been turned into residential areas. It is important to ensure efficiently the territorial organization of the available labour force in the country. In order to decrease the inequalities in development of the capital city area and other regions, allocations of subventions for the regions seem very necessary. This would accelerate the full use of their economic, social and demographic potential.

The main results of the study on socioeconomic development of countries regions as well as the related recommendations can be formulated as follows.

1. The establishment of a *modern network of tertiary sector in the regions*. This process should be supported financially by government. Reconstruction of transportation and communication network and also electricity supply are among the urgent issues. Meanwhile, natural gas, water, heating and hot water supply is at a very low level in the regions, while the existing enterprises and facilities are insufficient to operate permanently. Moreover, transport network and system of communications of all regional and administrative centers should be connected with the capital city. The more effective providing of internet in the regions must be achieved as well. The regional centers and remote villages should be connected with the high-quality motorways. Although a lot of works on development of tertiary industry has been done in the country, the construction of highways of second and third importance is not completed yet while the establishment of the modern transportation system is one of key requirements for the economic progress. Another issue is the network of storages for agricultural products in country's regions. Certain works have been done in this direction. Demand for storages at present exceeds the available supply. Lack of storages is one of factors that slowdown agricultural production in the regions. The establishment of regional system of multifunctional storages must decrease the loss of harvested crops, increase the interest of farmers and their income, and also allow supply the market of regions with fresh and good quality agricultural products on the regular base. These measures as well as the implementation of the State Program on Food Security will promote to the development of agriculture, the creation of new jobs and the increase of income of population.

2. Economic development and its specialization, as well as the qualified labor supply and its contribution to the economy at country and regional scales depend considerably on the use of *natural conditions and resources*, since the regions of

Azerbaijan are significantly different in terms of the nature and availability of natural reserves of different kinds. Mountains, plain areas and Pre-Caspian areas have different conditions and have a certain impact on the economy. This is reflected in agricultural production, proportion of planting and livestock farming, development of tourism and recreation centers. As we think, preferences in agriculture should be given to the cultivation of those crops that have higher yields under the existing conditions of soil and climate.

It is very difficult to establish large processing enterprises operating based on fuel resources of the Caspian Sea in the coastal zone. The creation of primary industry facilities is difficult also in low and middle mountainous areas with plenty reserves of iron ore, polymetallic ore and other minerals. Small enterprises in areas with similar environment can operate much profitably as the experience of many countries proves. For example, rock salt, copper and polymetallic ores of Nakhchivan area, gold reserves of Dashkasan and Ordubad regions, as well as polymetallic ores in Shaki-Zagatala region can be processed at small enterprises. The same concerns the production of construction materials of various kinds. Several plants have been established already in the regions. They were commissioned based on the use of local mineral resources. Gazakh and Garadagh cement plants, Gadabay gold plant, Ganja aluminum plant and many enterprises of construction materials (sand, gravel, stone and etc.) represent the primary industry of Azerbaijan.

3. Local and regional enterprises were developed in accordance with *State programs* and were financed by Entrepreneurship Development Fund and Public Investment Fund. These entities were established in order to support local businesses and entrepreneurship. These funds provide the loans with low interests to entrepreneurs, who present reasonable, cogent and well-grounded economic projects. However, it will be good practice for development of small businesses if these types of projects could be funded fully by government and then after businesses paid loans back would be privatized. This practice can be implemented in regard to small enterprises of textile and food industries, and also some services (such as recreation and tourism, centers for children).

4. *Tax cuts and tax benefits, additional financial aid and technical assistance* should be introduced in certain areas like border and mountainous areas, or areas of economic stagnation and depression.

Incentives at first can be provided for the period of 3–5 years, and if the business is very profitable then can be prolonged. In this case preferences should be given to the entrepreneurs, whose businesses serve the local population, including social and cultural services, infrastructure, housing, as well as entrepreneurs whose businesses were established on the base of the use of local natural resources.

5. *Another benefits package, such as tax cut or special administrative support* must be given to enterprises and businesses that employ certain number of local people and provide them with jobs and income (enterprises with number of employees at 50-100 or 150-200 people). The number of employees depends on the size of enterprises and size of population and labor resources in certain region. Incentives of this kind can increase the interest of businessmen and stimulate the establishment of local businesses.

6. Establishment of *free economic zones* for development of industry and trade where special conditions will be provided in the form of discounts. Free

economic zones can be established in the bordering areas, or the areas with specific geographical location, such as Nakhchivan, Ganja-Gazakh, Lankaran-Astara, Shaki-Zagatala and Guba-Khachmaz economic regions. In such areas, special tax cut can be introduced for import of new technologies, machines and equipment, as well as for trade and export of the local produced goods. These zones can become country's core of economic and social development and serve as the centers, where new advanced technologies will be introduced and high-quality goods will be manufactured. Manufacturing in these zones will have trade related privileges, favorable terms and conditions for the local and foreign markets. The relevant facilities will establish different forms of labor use, increase demands for qualification of personnel, and expand the use of highly qualified labor force.

7. One of the important conditions for the sustainable development of regions is to provide local population with necessary *social, cultural, welfare and housing conditions*.

First, daily use services and goods should be produced and rendered in the regions themselves. This will reduce or prevent daily long-distance migrations from villages and small towns to the regional centers and big cities. In the meantime, ambulance and health centers, as well as cultural and educational centers must be established, financed and supplied with necessary equipment and qualified personnel as well. Fresh water supply is another problem typical for the regions. The majority of the population of the villages uses water from opened water sources, often directly from the rivers and canals. In fact, there is no control over the quality of used water. Supply of hot water is not provided in most of regions. Quality of water is a serious problem even in Baku.

8. The economy of most of the country's regions bases on *agriculture*. Agriculture has the largest share in the national economy. Population of the country is engaged mostly in the agriculture.

Therefore, it is important to ensure the permanent *growth of agricultural products* to ensure the sustainable development of the regions, the engagement of labor force, the increase of income of local people and strength economic base settlements. This can be achieved through the establishment of storages for crops, adjustment of prices of agricultural production in accordance with the market demand and supply, and the development of local facilities for processing the harvested crops. "Agro-leasing" JSC is the main company responsible for the provision of the logistics, machinery, equipment and mineral fertilizers for agriculture. However, this company is de-facto unable to provide local agricultural activities with above mentioned components, including necessary equipment.

Government should increase its support for the development of agriculture, the establishment of new irrigation and drainage systems, providing rural population with high-yielding seed varieties, and high productive animal breeds. Along with mentioned above measures, necessary works should concern also the establishment of laboratories where new modification of seeds must be produced due to governmental support.

9. Taking into account the leading role of agriculture in most of economic regions of Azerbaijan, it is very important to *establish enterprises, capable to produce goods*, ready for use in large villages, as well as medium and large cities in addition to

existing enterprises which is specialized only in the processing agricultural products at the primary stage.

Some important steps on the development of plants network were already made in the framework of the “State Program on Socioeconomic Development of the regions” (2004-2008 and 2009-2013). However, the implemented works were not enough for reaching full manufacturing of export importance. For example, only a few canning plants operating on the processing of fruits and vegetables are available in Ganja-Gazakh, Aran, Lankaran-Astara and Sheki-Zagatala economic regions. Moreover, the number of wineries in mentioned regions should be significantly increased.

The level of development of textile industry is very low. The expansion of production of silk and the establishment of cotton production is the necessary for further sustainable development. Resources of needed raw materials are plenty in the regions. Carpet industry has been reconstructed after the severe recession, but so far domestic demand for carpets is covered by imported products. Development of this area requires a lot of labor force and is regarded as one of important opportunities in solution of unemployment problem.

10. The sustainable development of agriculture is a factor that determines *the social and economic development and distribution of rural settlements*. The local administration, municipalities and large enterprises in rural areas can't solve the problems of water, gas and electricity supply, as well as the problem of construction of motorways due to lack of funds.

For many years the rural population has been the main source of natural increase of population in the country. Hence, the intensive migration flow from rural areas has impeded the demographic potentials of the regions.

Due to such factors as intensive migration, smaller size of families, decrease of the birth rate, rural settlements do not play an important role in the growth of country's population as it was before. Such situation can negatively affect the supply of labor force in cities and different regions of the country.

11. The solution of above mentioned problems depends on the actions, made for *the regulation of the demographic situation*.

During the first years of the country's independence, the following demographic processes were observed in the country: decline of natural increase among population, intensive migration, changes in gender and age structure of population. The reason of the movement of population from rural areas to cities was related with the crisis happening in economic and social sphere of the regions and less job opportunities. Some part of them left the country and others settled in Absheron. Housing problem was one of the urgent issues in the regions. In order to increase the role of the regions and stop the undesirable migration, some measures were taken in the country such as construction of new apartment houses, development of household services, allocation of mortgage loans and loans with low interest for rural population. In order to encourage the natural growth, series of state laws were adopted and implemented. Thus, the government raised payments for the firstborn child. As we think, the government should cover 25-50% (depending on region) of credits taken by family members if they have third newborn child in the next future. Meantime, new houses for the fourth born infant should be provided for the families. The measures included the development of the network of kindergarten, the increased child

benefits and childcare allowances, as well as saving jobs of women due to their maternity leaves.

12. Demographic, social and economic development in the regions is not achievable without *change of their economic structure and the creation of new jobs*. The created jobs should be in accordance with the number and also sex- and age structure of employees. Economic structure of the settlements define the development, the level of income, the use of economic potential and has a significant impact on demographic situation.

13. *Qualified personnel* as a key factor contributes to the high-quality production, the use of new technology, as well as the provision of services in public health and education. There are not enough doctors, teachers, engineers and other high qualified and experienced personnel in the regions. The reasons for lack of such personnel are low wages, housing problem, etc. The available conditions in the regions almost make impossible engaging people continuously, since attracting the qualified labor force to the regions requires favorable housing and social services.

14. The *wide range of tourism facilities* was established in some regions like Sheki-Zagatala, Guba-Khachmaz and Lankaran-Astara. However, these centers operate seasonally and typically have customers mostly in summer when the prices for offered services exceed their quality. Transport and communication network is out of date and do not meet contemporary standards and requirements. The reason is absence of competition in this sphere: most of the mentioned services are monopolized. The development of areas such as construction of highways, as well as electricity, heat, natural gas and water supply must be conducted at the expense of the state funds. The functioning of the services all year round must be provided through state regulations and incentives as well. All information about regional industry, services, including economic statistics must be collected through the establishment of relevant database in order to facilitate the organization of production and services as well as develop competition.

RESULTS

In order to develop and strengthen economy and also social and demographic potential of country's regions, a few state programs were implemented successfully or are underway.

Many projects have been implemented in the framework State Programs on social and economic development of the regions (2004-2008, 2009-2013 and 2014-2018 years). Within the framework of state programs been achieved concerning the development and improvement of sociocultural services, welfare, healthcare, sport and educational network, while many related institutions were reconstructed, modernized or built. New raw material-processing facilities have been established in the regions based on growing mining industries and increased extraction of natural resources. Regional transportation and communication networks have been established as well.

However all the mentioned above did not affect considerably on regions' economic, demographic and social potential. Migration from other regions to Absheron remains a problem and continues. Over the years, the vast majority of the new enter-

prises and jobs were created in already well developed regions – Absheron, Aran and Ganja-Gazakh.

Regions' historical background and geographical features defined the uneven economic development of Absheron and other regions of the country. In 1920-30s, and then in 1950-60s and following years, large industrial enterprises were placed in the regions while those regions already had the developed services. This factor as well as the lack of attention to social and cultural development of the regions increased the development gap between Baku and other regions of Azerbaijan. Even manufacturing enterprises, operating on the basis of raw materials brought from other regions, were established and concentrated in Absheron. This process continued after the gaining independence. To develop oil and gas resources in the Caspian shelf, a lot of international contracts were signed, as a result of which investments at \$60 billion were made into the oil and gas industry of Azerbaijan. This contributed to the development of services and the creation of numerous jobs for local people and foreigners. At present, oil and gas industry maintains a dominant position in the structure of country's economy. The share of oil and gas industry in country's total industrial production is 71.6%.

Meanwhile, necessary substantial arrangements are made in order to reduce the economic burden on Absheron. In this regard, such works as the movement of Baku-based shipbuilding and ship repairing factory to Sahil settlement, or the construction of a new sea port near Alat settlement, and the movement of other old engineering enterprises and industrial facilities from the core area of Baku city to the suburbs are notable. However, these activities elevate the share of Absheron in the overall industrial production even more, since they occur within the economic region. In the meantime, Sumgait-based chemical and petrochemical plants are expected to move to Garadagh area, where 15-17 new plants more are to be constructed.

The housing related challenges and the lack of job opportunities are the most important issues slowing down the development of regions of the country. The lack of job opportunities and low wages do not allow the residents of regions to solve their housing problem. The analysis of the third stage of the "State Program on socio-economic development programs of regions" (2014-2018) and the related investments years indicate that most attention continue to be made upon the most developed regions of the country (see Table 1). In order to solve this problem and reduce the inequality in development of the regions, the network of enterprises, social services and other facilities should be established. Absheron is listed among the most promising regions in the country in terms of tourism potential. From this view, the creation of infrastructure network, the attracting of foreign investments, the reduction of state monopoly and the mitigation of excessive administrative control, the effective water, power, heat and hot water supply are the urgent issues. Currently, high prices for tourism and recreational services, defined by a small group of monopolists do not allow reach mass character of tourist flows and curb the development of this industry. From this point of view, the state control over this issue should be provided in order to solve it.

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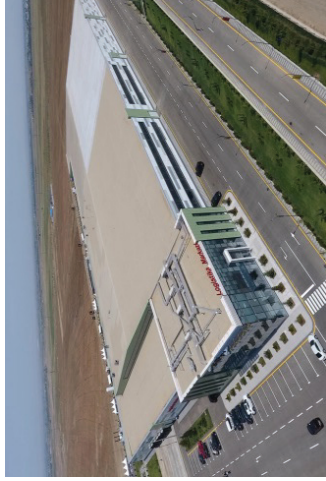
Modernizing Sumgait Petrochemical Industry



Sumgait Technology Park



Alat free economic zone



Shamkir Agropark



Neftshala industrial area



Hajigabul industrial area

Fig. 2. New industrial facilities