REPUBLIC OF AZERBAIJAN

On the rights of manuscript

ABSTRACT
of the dissertation for the degree of Doctor of Science

INVESTING IN PRODUCTION AREAS AND DEVELOPMENT OF A REGIONAL ECONOMIC-GEOGRAPHICAL MODEL OF SUSTAINABLE DEVELOPMENT IN AZERBAIJAN

Specialty:	5401.01 – Economic geography
Field of science:	Geography
Applicant**:**	**Zaur Tahir Imrani**

Baku – 2025

The work was performed at the Institute of Geography named after Academician Hasan Aliyev, Ministry of Science and Education of the Republic of Azerbaijan.

Scientific consultant: Doctor of Sciences in Geography, Prof.
Zakir Namin Eminov

Official opponents: Doctor of Sciences in Geography, Prof.
Shovgisafa Yusifziya Goychayskiy

Doctor of Sciences in Geography, Prof.
Ahgazeynal Ali Gurbanzada

Doctor of Sciences in Geography, Docent
Mahammad Abdu Abduyev

Doctor of Sciences in Geography, Docent
Tatyana Ivanovna Zabortseva

BED 2.51 Disposable dissertation council of the Supreme Attestation Commission under the President of the Republic of Azerbaijan operating at the Baku State University

Chairman of the Dissertation Council: Doctor of Sciences in Geography, Prof.
Chingiz Niyazi Ismayilov

Scientific Secretary of the Dissertation Council: PhD in Geography, Doc.
Sahila Abish Allahverdiyeva

Chairman of the Scientific Seminar: Doctor of Sciences in Geography, Doc.
Aydin Ismayil Ibrahimov

Azərbaycan Respublikasının Elm və Təhsil Nazirliyi
BAKI DÖVLƏT UNİVERSİTETİ
BDU ELMİ KATİB
SCIENTIFIC SECRETARY
İmzanı təsdiq edirəm:
"16" 04 2025

GENERAL CHARACTERISTIC OF THE WORK

The relevance of the topic and level of research on the topic. In our contemporary epoch, structural and organizational alterations in the world economic system, as well as uncertain dynamic processes accompanied by global economic crises, have created a number of complex and multifaceted problems in ensuring the sustainable socioeconomic and ecological development of countries. In the search for effective solutions to these challanges, the fundamental and leading tool is to increase the efficient work activity of production sectors. Because it is production sectors that satisfy the spiritual needs of people by creating material benefits from natural resources. In this regard, the research study examines the territorial organization of the leading sectors of production, industry, agrarian industry and tourism industry, investments allocated to them, as well as the role of production sectors in sustainable development.

The socio-political events that took place in the country in connection with the independence of the Republic of Azerbaijan led to several significant changes in its economic structure, economy and socio-demographic situation. These changes had a negative impact on the functioning of regional economic systems, and the disruptions in the activities of production sectors due to the disruption of traditional economic relations caused the country to face serious problems. Thus, some production sectors ceased their activities, economic losses, job losses, deterioration of the social situation, depreciation of the national currency occurred, which, as a logical consequence, required the need to transition to sustainable development at the expense of internal sources.

In a short period of time, namely on September 20, 1994, the "Contract of the Century" was signed to achieve efficiency in the production and transportation of oil, as well as the creation of a favourable investment environment. The resulting revenues gave impetus to the implementation of a number of internationally important projects: Baku-Tbilisi-Jeyhan oil pipeline (2006), Baku-Tbilisi-Erzurum gas pipeline (2007), Chirag oil project (2010), Southern gas corridor (2014), etc., and laid the foundation for the

creation and development of new production areas in the country[1]. The production sectors, taking advantage of these merits, acted as the leading driving force of sustainable development, acting as the economic and geographical paradigm of the regions. Sustainable economic development strengthened the evolutionary process against the background of the integration of production relations into the world economy and the expansion of foreign trade relations. The socioeconomic changes taking place in the country reflected the strategic order in the structure of regional political relations.

In order to ensure the sustainable development of production areas at the new stage, it is necessary to apply management mechanisms based on market principles. Because the efficiency of production is based on the application of modern forms of management equipped with innovative tools. Despite the fact that local manufacturing enterprises have practical skills, it is very urgent to introduce innovative modern technologies to them. Such an approach method was associated with the regional economic-geographical model of sustainable development within the framework of the territorial organization of production areas and the creation of an investment resource environment. That is, the sustainable and stable development of production areas that form the basis of the national economy was possible through the joint development of regional policy and economic-geographical synergetic parallels. Thus, the production process should be a flexible system that supports regional policy, creates and applies competitive innovations, and determines socioeconomic development. However, the inconsistency that still exists between the economic regions of the Republic of Azerbaijan hinders regional sustainable development to a certain extent. Attracting investments in line with socioeconomic interests within this country, assessing the level of development of regions from an economic and geographical perspective requires the application of new approaches. That is, determining the essential criteria of socioeconomic development, clustering the current state of production

[1] Shaban, I. Azeri-Chirag-Gunashli, Contract of the century, 1994-2022: Facts, documents and collection of figure / I. Shaban. – Baku, TEAS Press, – 2023. – 236 p. (In Aze.)

areas, applying various sustainable development models, classifying regional strategic directions and drawing conceptual conclusions based on other assessments form the basis of the research work, and is distinguished by its scientific relevance.

In terms of the level of research development, it becomes explicit that the scientific and theoretical-methodological foundations of this field have been studied from a fairly wide paradigm based on conceptual logical criteria. The concept of sustainable development was developed by: U.K.Alakbarov, Sh.Y.Goychayli, A.A. Gurbanzade, Ch.N.Ismayilov, Z.N.Eminov, N.A.Pashayev, Z.T.Imrani, A.G. Abdullayev, M.P.Todaro, E.Holden, J. Elkington, R. Jovovich, M.Munasinghe, G.B.Asheim, Y.I.Vaysman, L.N. Rodionova, T.V.Uskova, E.S.Gruznev, E.V. Rassadina, N.A. Iskakov, O.S.Shimova, L.G.Melnik, N.G.Pustokhina, O.V. Mikhalev and others; investment in regional policy studied by: S.Z.Isayev, H.B.Allahverdiyev, N.S.Majidov, G.A.Azizova, S.H.Rizayeva, T.Huseynov, Z.T.Imrani, L.J.Gitman, U.F.Sharp, D.O.Ledenyov, N.T.Laopodis, C.Hamelmann, M.Baker, R.Banerjee, E.Saak, M.I.Lisitsa, L.L.Igonina, B.A.Koltynyuk, L.I.Yuzvovich, V.M.Askinadzi and others; local and foreign scientists have widely covered this issue in their research works and have provided numerous development models. Scientific research has been conducted by scientists such as A.M.Hajizade, A.A.Nadirov, Z.A.Samadzade, A.Kh.Nuriyev, T.G.Hasanov, M.Kh.Mammadov, F.A.Farajov, S.K.Huseynov, M.S.Huseynov, Z.T.Imrani and others in the field of territorial organization of production areas, regional differences and diversification of the production structure in Azerbaijan.

Object and subject of the research. The object of the research is the production sectors of Azerbaijan and ensuring their sustainability, and the subject is the economic and geographical justification of investments allocated to production, the creation of a sustainable development model, the assessment of territorial-spatial clusters, and the study of the innovation-oriented output.

Purpose and objectives of the research. The purpose of the research is to conduct an integral assessment of production areas to ensure the sustainability of development. Taking into account the high

degree of importance of economic efficiency, social equality, innovative activity, investment attractiveness and other aspects as the primary features of sustainable development, the following tasks were set:

- development of a sustainable development model, as well as a regional economic-geographic model of sustainable development;
- to substantiate the essence of the investment and determine its advantages from a theoretical and methodological point of view;
- substantiation of an innovative modern approach to production areas in accordance with world experience;
- determining the integration of production sectors into the world economy and the dynamics of foreign trade relations;
- determining regional differences in industrial production and development directions;
- identifying techniques to optimize the potential of agro-industrial production;
- analysis of the attractiveness and development pace of the tourism industry from an economic-geographical paradigm;
- calculating the sustainability of production areas using the Cluster and Territorial Development Index;
- conducting a SWOT analysis of the development aspects of the regional strategy;
- study of territorial-structural and economic-geographic synergetic parallels of the coastal regions of the Caspian Sea;
- analysis of the role of the Strategic Roadmap and state programs in the formation of sustainable production sectors.

Research database and methods. The information base of the study is made up of reports of the Ministry of Economy of the Republic of Azerbaijan, collections published by the State Statistical Committee of the Republic of Azerbaijan, stock materials of the Institutes of Geography and Economics of the Ministry of Science and Education of the Republic of Azerbaijan, the existing legislative base of the Republic of Azerbaijan, scientific works and methodological instructions of scientists who have conducted research in this field, as well as the results of the author's scientific research work conducted over several years.

As in existing geographical studies, modern functional research methods such as historical-geographical approach, systematic-structural, mathematical-statistical, regionalization, logical-grouping, synergistic effect, cluster, SWOT, field observations and others were used in the implementation of the work. With the help of the selected methods, the tasks set were solved, and unique maps were compiled using Geographic Information Systems (GIS).

The historical-geographical approach helped to analyze chronological periods from an economic-geographical point of view and to connect territories; the systematic-structural approach involved production areas in a comprehensive study; mathematical-statistical comparison helped to systematize data, process them and draw practical conclusions; regionalization allowed for the analysis of the problem on scientific grounds; logical-grouping characterized information close to each other in the selection of production areas and helped in grouping; the synergistic effect was reflected in the management strategy and the integration compatibility of production products; the cluster approach determined the comparative quality indicators of production areas; SWOT analysis studied the strengths and weaknesses of production areas, and the work to be done regarding threats and opportunities was explained. In addition, in the research work, I developed and applied the "Regional Economic-Geographical Model of Sustainable Development" and the "Model of Investment Climate Formation in Production Areas".

Primary provisions putted forward for defense.

1. Constructive foundations of investment models in sustainable development and production sectors.
2. Sustainable territorial structure and regional differences of production sectors in Azerbaijan.
3. Formation of the investment climate and attractiveness of investment in production sectors in Azerbaijan.
4. Modern innovative approach to production sectors in Azerbaijan and sustainable aspects of its integration into the world economy.
5. A role of the Strategic Roadmap and state programs in ensuring regional sustainable development in Azerbaijan.

Scientific novelty of the research:

– sustainable development and regional economic-geographic functional models of sustainable development were studied and new constructive models were proposed for the first time;

– for the first time, the primary principles of the model for forming an investment climate in production areas were analyzed in the context of sustainable development and a strategy for using natural and socioeconomic potential was developed;

– changes in the socioeconomic development of regions, regional uneven development and trends was proved based on the anamorphic maps;

– the sustainable economic and geographical efficiency of the territorial organization of production was analyzed in the context of the synergistic effect of the agro-industry, and it was confirmed that systemic-structural approaches in the agro-industry are unsustainable and that the problem of food security may arise;

– against the background of functional diversification, the competitive environment of the tourism industry and the use of its resource potential were examined with a logical approach, and it was determined that there have been declines in the tourism industry in recent years and that tourists coming to the country are dependent on one region;

– the Caspian Sea coastal region was grouped based on a complex socio-economic analysis and was found to be more developed than other regions of the country, internal regional differences were also confirmed to be sharp;

– although the integration of production areas, as one of the important factors, has developed with positive dynamics, it has been found that the trend of innovative approaches in production areas has become negative;

– foreign trade policy has led to sustainable economic growth, but it has been proven that priority is given to innovative development in production, since the basis of export products is raw materials;

– assessment of the situation validating a sharp decline in investment will culminate in serious changes in the structure of production sectors were conducted.

Theoretical and practical significance of the research. Sustainable and innovative development of production sectors, state investment policy, formation and attractiveness of the investment environment, regional policy and assessment of the socio-economic development of regions, and other issues constitute the scientific-theoretical part of the research, and the results obtained in the research process may be of practical and theoretical importance in developing a knowledge system related to investment for the sustainable development of production sectors.

The practical significance of the study lies in providing scientific and practical recommendations within the framework of implementing an investment policy aimed at stimulating the positive effects of investment in production sectors and regions, as well as in the possibility of using the materials presented in the study in the development of state programs and projects on the transition to sustainable development at various levels, as well as as a visual aid in the educational process.

Approbation and application. In accordance with the direction of the research work, research results were reported at the following scientific-practical conferences and seminars: 8th Bacsa International Conference on the topic "Climate changes and chemicals – the new sericulture challenges" (Shaki, 2017), Republical Scientific Conference on the topic "Comtemporary challenges of Geography" (Sumgait, 2019), International scientific and practical conference on the topic "Region – 2020: socio-geographical aspects" (Kharkiv, 2020), International scientific and practical conference on the topic "Region – 2020: Strategy for Optimal Development" (Kharkiv, 2020), the XIII International Scientific Symposium "Science and education: preserving the past, creating the future" (Kars, 2021), the XVII International scientific symposium "Karabakh: way to victory" (Gothenburg, 2021), Online conference on "Biodiversity, land and water resources of Karabakh: past, present and future" (Baku, 2021), V International Scientific and Practical Conference on the topic "Tourism and Recreation in the 21st Century: Problems and Prospects" (Baku, 2021), 7th International EMI Entrepreneurship and Social Sciences Congress (Tashkent, 2022), International scientific

and practical conference "Modern problems of geography: integration of science and education" (Baku, 2022), International scientific conference on the topic "Modern Eurasia: socio-geographical analysis" (Ulan-Ude, 2023), 10th International Symposium on "Turkic World Studies" (Almaty, 2023).

The research work was implemented in the project of the Science Development Foundation under the President of the Republic of Azerbaijan entitled "Assessment of the degree of risk of being hit by the population living in the frontline zone and its impact on the socio-economic situation using GIS technology" (EIF/MQM/Elm-Tehsil-1-2016-1(26)-71/02/2-M-14).

The name of the organisation where the dissertation was implemented. The work was conducted at the Institute of Geography named after Academician Hasan Aliyev, Ministry of Science and Education of the Republic of Azerbaijan.

The volume, structure, and primary content of the dissertation. The dissertation consists of 5 chapters, conclusion and references. The volume of the dissertation is 289 computer pages. The work consists of 11 maps, 31 graphs, 33 diagrams, 1 figure, 14 tables, 365 references. The introduction is – 8 pages, I chapter – 38 pages, II chapter – 66 pages, III chapter – 57 pages, IV chapter – 42 pages, V chapter – 36 pages, conclusion – 5 pages, references – 34 pages. There are 400800 characters in the dissertation without tables, graphs, figures, and references.

PRIMARY CONTENT OF THE RESEARCH

The introduction provides information about the actuality and research level on the topic, object and topic of the research, the purpose and missions, methods, the main provisions to be defended, scientific novelty, the theoretical and practical significance of the research, approbation and application.

The first chapter of the dissertation is dedicated to **"Theoretical and methodological foundations of sustainable development and investment policy"**. In this chapter, the theoretical and methodological foundations of the concept of "sustainable

development" in economic and geographical research, the essence of investment in regional policy, and the methods of scientific and methodological approaches to the concept of dependence were analyzed, and logical criteria of fundamental importance were developed and prepared.

The term "sustainable development" was proposed by German foresters in the 19th century as the idea of "reproduction of the forest ecosystem without loss". This term has come to mean that the exploitation of resources during the use of nature can be continued indefinitely. This term, which sounds like "sustainable development" in English, was first used in scientific literature in the mid-20th century in nature management[2]. In a broader sense, the term sustainable development was used at the UN International Conference on the Environment held in Stockholm, Sweden, in 1972. The Commission defined "sustainable development" as development that meets the needs of the present and future generations without compromising the ability of existing resources to meet their own needs[3]. At this conference, it was proposed to develop programs related to the concept of sustainable development, thus starting to use the term on a wide scale. In 1987 "Brundtland Comission" put forward the Sustainable Development Conception.

Based on the principles established at the International Conference on the Environment, 27 principles of environmental protection and sustainable development were declared at the international conference held in Rio de Janeiro, Brazil in 1992, and the Rio de Janeiro Declaration: Convention on Biological Diversity and Climate Change, Framework Conference on Climate Change, Global Consensus on Forest Management, Conservation and Sustainable Development were adopted[4]. Some time later, on June 20-22, 2012, at the international conference "Rio+20: Sustainable Development", the

[2] Sustainable Development: New Challenges / Editor V.I. Danilov-Danilian, N.A. Piskulova. – Moscow: Aspect Press, – 2015. – 336 p. (In Russ.)

[3] Our Common Future / Report of the International Commission on Environment and Development. – New York: UN, – 1987. – 374 p. (In Eng.)

[4] The concept of sustainable development and the local agenda for the 21st century / editors D.A. Golubeva, N.D. Sorokina. – Saint Petersburg: Union of Artists, – 2003. – 480 p. (In Russ.)

principles initially established were reviewed and an attempt was made to assess the progress made in world building based on these principles. The motto of the international conference Rio+20 was "A Planet for Living People: The Future We Choose"[5]. After this conference, interest in sustainable development has gradually increased worldwide. Azerbaijan also adopted the "Sustainable Development" agenda on September 25, 2015, based on the principles of sustainable development, and selected 17 goals, 88 targets and 119 indicators as priority directions by considering the economic, social and environmental aspects of sustainable development[6]. From this it can be identified that the essence of the concept of sustainable development is aimed at improving the quality of life of people currently living in different regions of the world and preserving equal living conditions for future generations.

The concept of "sustainable development", which is distinguished by its universality in modern times, is characterized in various aspects: sustainable socioeconomic development, sustainable ecological development and its management, sustainability of production activities, etc. In scientific literature, the term sustainable development is used for various purposes. For example, N.A.Iskakov and L.N.Rodionova note that the category "sustainable" is interdisciplinary, is used in various fields of science and scientific research, and its meaning may change over time. That is, the term "sustainable" has formed the term "continuous", and means "solid foundation" or "beginning"[7]. J.Elkington bases the concept of sustainable development on three dimensions of sustainability (ecological, social and economic) in its evolution. This requires the following in the development process: 1) ecological sustainability - protection of the environment for economic activity and quality of life;

[5] Morkovkin, D.E. Socio-economic aspects of sustainable development of territorial economies // – Moscow: Bulletin of the Moscow University named after S.Y.Witte. Economics and Management – 2014. Series 1, 1(7), – pp. 4-10. (In Russ.)

[6] United Nations and Government Sustainable Development Cooperation Framework 2021-2025. – Baku: UNSDCF, – 2021. – 96 p. (In Eng.)

[7] Rodionova, V.M. Financial stability of the enterprise in the conditions of inflation / V.M. Rodionova, M.D. Fedotova. – Moscow: Finance and statistics, – 1995. – 320 p. (In Russ.)

2) social sustainability - preservation of society and cultural values; 3) economic sustainability - achieving social and human capital for a high level of income[8]. According to O.S.Shimova, there are two directions of sustainable development. The first direction is the bringing of sustainable development indicators to statistical stability, that is, achieving statistical equilibrium. The second direction is the transition of development dynamics to "sustainable development" against the background of events occurring in a complex socioeconomic system, that is, the increase in statistical indicators is perceived as a change in events occurring in time and space in the development dynamics[9]. T.V.Uskova perceives sustainable development as a very controversial and unresolved problem of the socioeconomic system. In the philosophical sense, sustainable development means that it remains in a stable state, does not change, but is a dynamic component of the socioeconomic system[10]. Sh.Y.Goychayli perceives natural conditions and natural resources as the dynamics of sustainable development, prefers an integrated approach to economic development and ecological situation at the regional level. This, being one of the main indicators of sustainability, creates functional support as an important component of the ecological-economic system[11]. Ch.N.Ismayilov associates sustainable development with the transformation of socioeconomic systems, the occurrence of positive changes in society and the environment, as well as the existence of new forms of interstate governance at the international level[12]. A.A.Gurbanzade includes natural zones, landscape belts, and territorial-production

[8] Elkington, J. Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development // – California: California Management Review, – 2015. 36(2), – p. 90-100. (In Eng.)

[9] Shimova, O.S. Sustainable development / O.S. Shimova. – Minsk: BSEU, – 2017. – 394 p. (In Russ.)

[10] Uskova, T.V. Sustainable development management of the region / T.V. Uskova. – Vologda: ISEDT RAS, – 2009. – 355 p. (In Russ.)

[11] Goychayli, Sh.Y. Economic and ecological foundations of nature use / Sh.Y. Goychayli, T. Ismayilov. – Baku: MBM, – 2009. – 232 p. (In Aze.)

[12] Improving human resource capacity for sustainable development: the Azerbaijani model / Ch.N. Ismayilov [et al.]. – Baku: Science Development Foundation under the President of the Republic of Azerbaijan, 2018. – 252 p. (In Aze.)

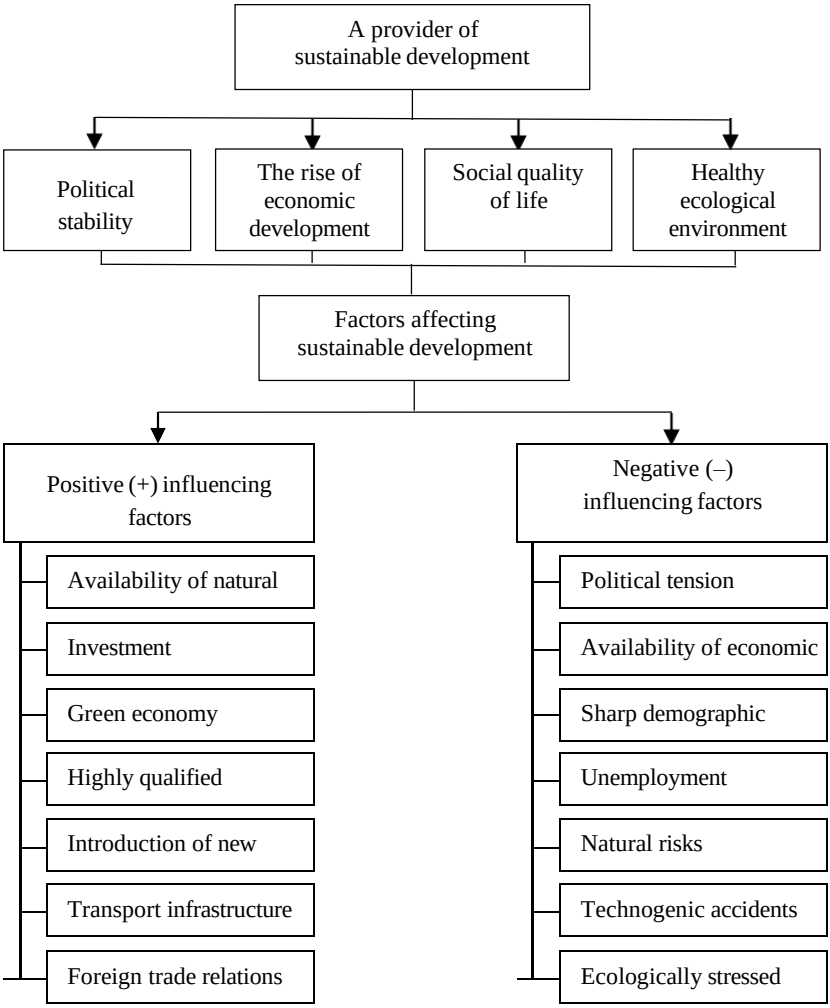
areas in the sustainable development codes, stating that their spatial-temporal relationships have integrative properties[13]. Z.T.Imrani studied the concept of sustainable development, its regional aspects and strengths, examined the development trends of industry and agrarian industry, which affect the sustainability of territorial-production complexes, as well as the tourism industry, which has been developing more rapidly in recent years, and concluded that the regional development strategy is part of the concept of sustainable development[14].

Based on the above, it can be concluded that the concept of sustainable development is a system that reflects the indicators of economic, social, environmental, technological, biological and other areas, and seeks to ensure tolerance against internal and external influences that may affect their development. This system requires ensuring sustainable growth by preventing the decline of previously determined indicators characterizing development. The following are the guarantors of sustainable development and the factors affecting it (Graph 1).

In the modern world, the essential provider of sustainable development is the regional development policy pursued by the state. This policy is an integral part of the socioeconomic development of the country's regions and is related to the creation of production areas, operating novel work places, ensuring employment, applying tax breaks, simplifying the investment environment, increasing incomes, etc.

[13] Gurbanzada, A.A. Analytical geography / A.A. Gurbanzada. – Baku: Cooperation, – 2018. – 168 p. (In Aze.)

[14] Imrani, Z.T., Musayeva, M.R. Socio-economic aspects of the concept of sustainable development in the Republic of Azerbaijan // – Dagestan: South of Russia: ecology, development. – 2016. Vol. 11, №2, – pp. 42-49. doi: 10.18470/1992-1098-2016-2-42-49 (In Russ.)



Note: the graph was compiled by Z.T. Imrani.

Graph 1. The providers and influencing factors of the sustainable development

"Investment" aims to increase the investor's income over a period of time by coordinating various types of activities. By investing his savings, the investor seeks to increase his wealth and future

consumption opportunities[15]. This is because *"investment is considered to be a production resource (creation of capital stock) created with the help of economic resources."*[16]. Moreover, "i*nvestment is called a targeted capital investment to generate future income or solve certain social problems as well.*"[17].

Based on the conducted research and the obtained results, it can be enunciated that in order to implement the state's regional policy, first of all, the essence of investments should be justified, a favourable regional investment environment should be created (based on novel approaches). At the same time, the efficiency of investment use should be assessed and continuously improved theoretical and methodological approaches should be harnessed. Such approaches can contribute to the sustainability of the level of economic development by attracting investments to the regions, not only by investing capital and attracting innovative technologies to production areas, but also by managing production and applying progressive methods.

The second chapter of the dissertation is dedicated to **"Attractive geographical environment of investment resource strategy in sustainable territorial organization of production areas in Azerbaijan"**. This chapter analyzes the constructive foundations of investment in the territorial structure of production areas, provides the geography of industrial production and options for applying investment resources, explains the optimal options for territorial organization of agrarian industrial production and the main directions of investment attractiveness, and conducts an economic-geographical analysis of the territorial differences and investment dependence of the tourism industry.

Since Azerbaijan gained its independence (October 18, 1991) and up to the present day, the process of its concentration has been constantly being carried out by shaping the investment environment in

[15] Gitman, L.J. Fundamentals of Investing / L.J. Gitman, M.D. Jonck. – Moscow: Delo, – 1997. – 991 p. (In Russ.)
[16] Koltynyuk, B.A. Investment design of social and cultural facilities / B.A. Koltynyuk. – Saint Petersburg: Mikhailova V.A.., – 2000. – p. 11. (In Russ.)
[17] Investments / Edited by L.I. Yuzvovich. – Ekaterinburg: Ural University, – 2016. – p. 57. (In Russ.)

the country. Thus, in order to regulate the investment activity process, attract foreign investors to the country's economy, and ensure international economic integration, the laws "On Protection of Foreign Investment"[18] in 1992 and "On Investment Activity" in 1995 were adopted. However, these laws were repealed in 2022, and a new Law "On Investment Activities" was adopted based on them[19]. This law has created convenient conditions for regulating the investment climate and attracting foreign investors to the country, in addition to state and local private companies. This, in turn, has allowed for the sustainable development of production sectors and the identification of priorities in many areas.

Compared to the first years of independence, the volume of investments directed to the country's economy has increased by 61,9 times (in 1995-2021). Although this increase covers almost all sectors, certain changes have occurred in domestic and foreign investment. In the first years, that is, between 1995 and 2007, the volume of domestic investments was significantly lower than foreign investments. This was due to the attraction of foreign investors to the country for the extraction of natural resources and the creation of new production areas. However, from 2008-2014, the volume of domestic investments increased slightly, and in 2014 their share in total investments reached 58,1%. In the later period, a mutual trend was observed between domestic and foreign investments. However, the largest difference during the studied years was observed in 2016, when foreign investments accounted for 71,4% of total investments (16.2 billion manats) in that year. In 2021, 25,3 billion manats were invested in the Azerbaijani economy, of which 49,6% was domestic and 50,4% was foreign. Among foreign countries, the United Kingdom took the lead with 31,8%, Switzerland with 11,4%, the United States with 10,9%, Türkiye with 9,0%, and Japan with 8,7%. Investments in fixed assets from these countries were allocated to the following sectors: industry (74,5%, of which 72,5% was in the extractive industry), construction

[18] Law on the Protection of Foreign Investment // Adopted on January 15, 1992. – Baku: Law, – 1992. – 8 p. (In Aze.)
[19] Law on Investment Activities // Adopted on 13 January 1995 (amendments and links as of 22 June 2022). – Baku: Law, – 2022. – 13 p. (In Aze.)

(17,8%), science (3,8%), transport (3,4%) and communications (0,5%)[20]. Lamentably, foreign investors are primarily interested in investments in the search for and extraction of natural resources. Because in this case, investments have a faster return, which reduces the risk factor. It is from this perspective that other sectors of the economy are forced to lag behind the general development trend. This is most evident in the production sectors, the creation of large enterprises and their sustainable operation.

Investment in the sectors of the economy in Azerbaijan is a source for determining the dynamics of sustainable development of production. However, the share of industry in the structure of total investments, as always, takes the first place. While in 2015 its share was 53,3%, in 2021 it decreased slightly to 44,6%. In second place is the construction sector, which is being developed more intensively in our country. With a share of 24,0% in the construction sector, its main provider is considered to be local construction companies. The following places are occupied by transport (17,0%), social security (4,6%), agriculture (2,0%), trade (1,6%), education (1,5%), tourism (1,1%) and other sectors[20].

Investment in the economic regions of Azerbaijan, as always, is notable for its imbalance. An analysis of the regional segments of investment in economic regions in 2015 and 2021 indicates that the inequality between the Baku economic region and other economic regions of the country still remains. In order to slightly reduce the burden of constantly high investment in the Baku economic region, several state programs have been developed, the implementation of which will improve the process of regulating the investment climate in the regions. In 2015, 73,5% of the total volume of investments allocated across the country fell to the share of the Baku economic region. In connection with the development of the non-oil sector on a regional scale, investment in the Baku economic region was relatively reduced in 2021 to 60,7%. As a result of the measures taken by the state in this direction, an increase in investment in other economic regions was observed. The main growth was recorded in the Karabakh

[20] Statistical indicators of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 746 p. (In Aze.)

(8,0%), Eastern Zangezur (5,1%) and Absheron-Khizi (7,3%) economic regions[21]. The "Great Return" State Program was the driving force behind growth in the Karabakh and Eastern Zangezur economic regions[22]. This factor has been accepted as an integral part of Azerbaijan's socioeconomic development strategy, and work related to it is being rapidly implemented.

Analyzing the investment in the economic regions of Azerbaijan by area and population, it can be noticed that the Baku economic region is still superior to other economic regions. The next places are occupied by the Absheron-Khizi, Nakhchivan, Karabakh, and Eastern Zangezur economic regions. The economic regions with an average level of investment include Ganja-Dashkasan, Guba-Khachmaz, Gazakh-Tovuz, and Daghlig (Mountainous) Shirvan, and the economic regions with relatively low investment include Shirvan-Salyan, Lankaran-Astara, Central Aran, Shaki-Zagatala, and Mil-Mughan (Table 1).

One of the main factors in the sustainable territorial organization of production areas in Azerbaijan is related to industry. In 2021, 98,7% of oil production, which is considered the leading force of industrial production, and 99,9% of gas production fell to the city of Baku, and the rest to the city of Shirvan, Salyan, Neftchala and Siyazan districts. This factor led to the development of Baku at a higher pace than other regions and the emergence of regional inequality in the country[23]. The main part of the country's industrial production is concentrated in the economic regions of Baku (82,0%), with a relatively small part in the Absheron-Khizi (7,5%) and Nakhchivan (1,9%). While these three economic regions account for 91,4% of the country's total industrial production, only 8,6% of production falls on the share of the other 11 economic regions (Figure 1). This is a very low indicator, which once

[21] Regions of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 772 p. (In Aze.)

[22] The First State Program on the Great Return to the Liberated Territories of the Republic of Azerbaijan // Adopted on November 16, 2022. – Baku: [p. p.], – 2022. – 33 p. (In Aze.)

[23] Industry of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 212 p. (In Aze.)

again confirms the uneven territorial organization of industry and the fact that regional development has not fully justified itself.

Table 1.

Investment by area and population of economic regions of Azerbaijan (2021)

Economic regions	Territory, thsd. km^2	Population, thsd. people	Investment, thsd. manats	Investment per thsd. km^2, thsd. manats	Investment per capita, manats
Baku	2,14	2303,1	10187183,1	4760365,9	4423,3
Nakhchivan	5,50	463,0	1062165,8	193121,0	2294,1
Absheron-Khizi	3,73	579,9	1232180,8	330343,4	2124,8
Daghlig Shirvan	6,13	326,8	224025,2	36545,7	685,5
Ganja-Dashkasan	5,27	612,1	422438,2	80159,1	690,1
Karabakh	8,99	907,9	1342032,7	149280,6	1478,2
Gazakh-Tovuz	7,03	690,6	272930,0	38823,6	395,2
Guba-Khachmaz	6,96	561,8	446179,5	64106,3	794,2
Lankaran-Astara	6,07	959,4	151446,1	24949,9	157,9
Central Aran	6,69	743,2	151394,7	22630,0	203,7
Mil-Mughan	5,67	526,4	85147,7	15017,2	161,9
Shaki-Zagatala	8,84	632,9	193252,4	21861,1	305,3
Eastern Zangazur	7,47	345,0	862228,9	115425,6	2499,2
Shirvan-Salyan	6,08	504,3	156047,8	25665,8	309,4

Source: Regions of Azerbaijan. Baku, 2022

Azerbaijan has implemented a regional spatial strategy for the organization and management of the agrarian industry structure, making radical changes in the conditions of new agrarian market relations, and has attempted to implement a dynamic and transformed socioeconomic and geographical concept. The goal is to ensure the systematic operation of the forms and mechanisms of geographical territorial organization of the agrarian industry, and to develop optimal options for the functional structure.

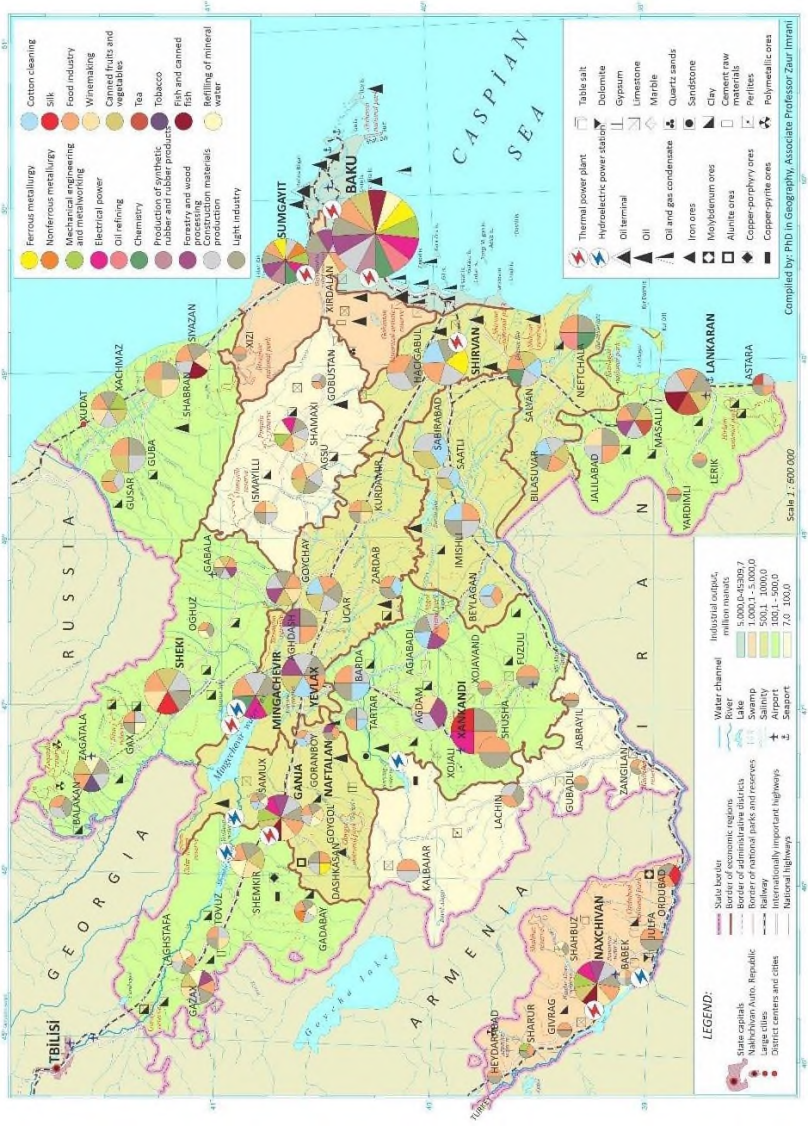
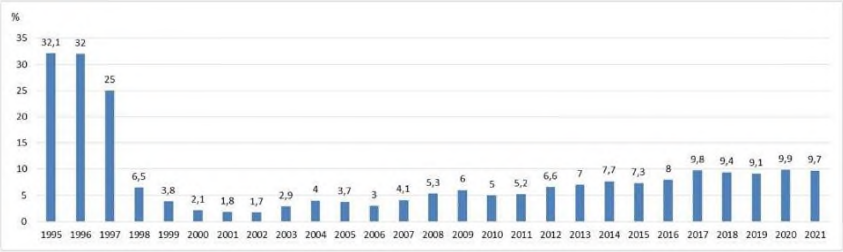


Figure 1. Industry map of Azerbaijan

Based on mathematical and statistical calculations, it can be enunciated that in 1995, 32,1% of total agricultural production was accounted for by agro-industrial production, and in 2021, 9,7%[24] (Diagram 1). Although there has been a noticeable increase in the production of general agricultural products, there has been a sharp decline in agro-industrial production.



Source: Agriculture of Azerbaijan. Baku: 2022.

Diagram 1. Share of agro-industrial production in the volume of agricultural production in Azerbaijan, %

Economic and geographical effectiveness in agro-industrial production depends primarily on the evolution of the territorial-typological development of agricultural products. Although in recent years several new agro-industrial enterprises have been established in our country, engaged in the production and processing of agricultural products, some of them do not correspond to the effective territorial organization on a regional scale. For example, the Shaki Silk Factory, established in 1931 and reconstructed in 2008, with a monthly production capacity of 25 tons, the Zagatala Milk Processing Plant, put into operation by "Gilan" LLC in 2010, with a daily production capacity of 30 tons, and other enterprises can be examples of this. Currently, the activities of these agro-industrial enterprises have either been suspended or they are not working at full capacity. The main reason is the lack of raw materials. In order to improve the situation in this area, the state, acting as a strategic investor, provides direct

[24] Agriculture of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 774 p. (In Aze.)

support to agro-industrial businesses and is trying to form new export-oriented trade to eliminate regional problems in agro-production.

Along with the agricultural industry, one of the priority sectors of the country's economy is the tourism industry. "*The tourism industry is a system of facilities designed to meet the demand for tourist services: production, accommodation, catering, transportation, trade, entertainment, etc.*"[25]. The main task of the tourism industry is to meet the consumer needs of tourists. These needs are in the form of a multi-faceted chain, incorporating an intermediary structure among "individual tourist service - tour operator - travel agent – tourist".

In terms of tourism promotion and development, the role of tour agents and tour operators is very important. Through them, tourists are attracted to the country, participate in tourism turnover, and form tourism market segments in the country. Although the activities of tour agents and tour operators in the tourism industry are less risky, during the COVID-19 pandemic, the opposite was experienced. A sharp decrease in the number of tour agents and tour operators was observed in Azerbaijan, as well as the number of employees working in them. Thus, compared to 2019, the number of tour agents and tour operators in 2020 decreased by 132 units, and from 2019-2021 by 282 units, reaching 150. Accordingly, a decrease was also recorded in the number of employees working in tour agents and tour operators. From 2019-2020, 741 employees and 1,243 employees were deprived of their jobs[26]. This is a very serious indicator and is among the factors slowing down the pace of development in the tourism industry.

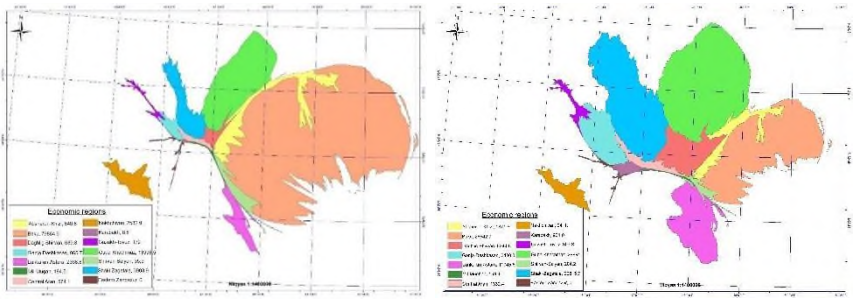
One of the main indicators of the activity of travel agents and tour operators is measured by the income they receive and the expenses they incur on the production of the product. Based on mathematical and statistical analyses, it can be enunciated that the incomes received by travel agents and tour operators during 2006-2019 were always high. The expenses they incurred on the services provided to tourists, with the exception of 2016, showed an increase in dynamics. 2019 was

[25] Akentyeva, S.I. Organization of the tourism industry / S.I. Akentyeva, V.V. Ignatieva, G.V. Petrova. – Moscow: Academia, – 2014. – 320 p. (In Russ.)
[26] Tourism in Azerbaijan (statistical compilation) / Managed by T.Budagov. – Baku: Narinji, – 2022. – 100 p. (In Aze.)

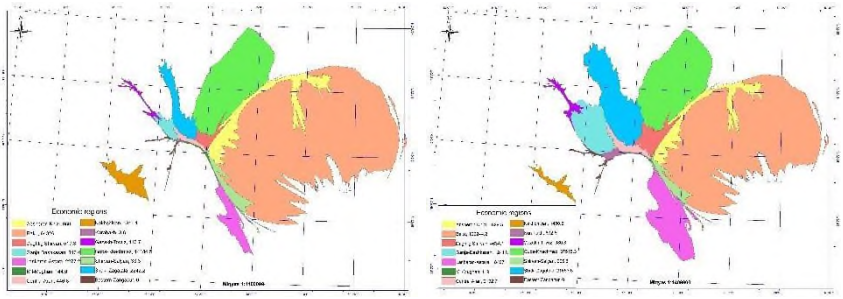
also the peak year in terms of income (63,3 million manat) and expenses (50.4 million manat). In the following years, sharp decreases occurred due to the COVID-19 pandemic, and in 2021, income decreased to 22,6 million manat and expenses to 19,6 million manat[26]. The majority of tourists who come to Azerbaijan through travel agents and tour operators come from the United Arab Emirates, Russia, Israel, China, Turkey, etc., while the majority of Azerbaijani citizens who travel abroad prefer Turkey, Russia, Kazakhstan, Georgia, the United Arab Emirates, and other countries.

Tour operators constantly interact with hotels when forming a tourism product and offer their services to tourists. Although the trend between the income and expenses of hotels in Azerbaijan was positive from 2010-2019, a sharp decrease in income and a relative decrease in expenses were observed from 2020-2021 due to the COVID-19 pandemic. However, the balance between income and expenses during these years was -55,007.1 thousand manat in 2020 and -21,780.7 thousand manat in 2021, with expenses exceeding income[26]. Although revenues are mainly related to the sale of hotel rooms, the provision of public catering services, and the offer of treatment and health packages, expenses are incurred on guests' drinks and food, their fuel and energy consumption, employee salaries, tax payments, and hotel renovations.

The analysis of the tourism industry is a complex process and requires a general approach to economic indicators, that is, income and expenses. The current state of the tourism industry in most regions of Azerbaijan reflects its weak development. In 2021, the main part of income, namely 61,3%, fell to Baku, 14,3% to Guba-Khachmaz, 9,9% to Shaki-Zagatala, 4,8% to Lankaran-Astara, and 55,8% of expenses fell to Baku, 16,2% to Guba-Khachmaz, 9,4% to Shaki-Zagatala, 7,9% to Lankaran-Astara, and 5,4% to Ganja-Dashkasan economic regions. Since other economic regions lag behind the development trend of the hotel industry, their income and expense statistics are estimated to be quite low. In this regard, anamorphic maps have been compiled in order to draw a general logical conclusion between the income and expenses of hotels in order to analyze the regional sustainable tourism industry more clearly.



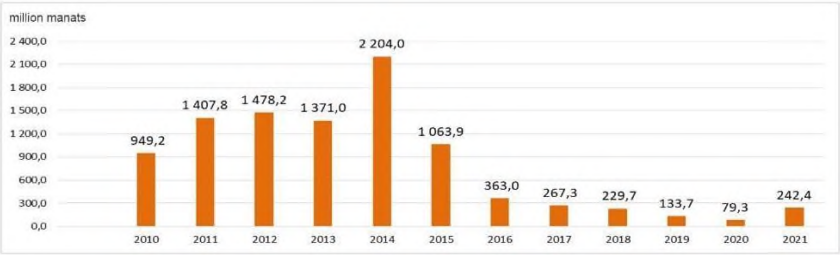
Revenues in 2010 and 2021



Expenditures in 2010 and 2021

Figure 2. Anamorphic maps of hotels in Azerbaijan (2010-2021)

The need to develop the tourism industry is explained by the fact that this sector causes foreign exchange inflows to the country, increases employment, regulates the financial balance, leads to diversification of the economy, and contributes to improving household incomes. The volume of investments allocated to the tourism industry (together with recreation and entertainment venues) in Azerbaijan in 2021 amounted to 242,4 million manat. Comparing this indicator with the indicators of 2010 indicates that investment in the tourism industry decreased by 3,9 times, and by 9,1 times compared to 2014, which was considered the peak year (Diagram 2). Although the tourism industry is considered the most profitable sector of the non-oil sector, the extremely low level of investment in this sector compared to other sectors is considered one of the reasons that slows down its development.



Source: Tourism in Azerbaijan. Baku, 2022

Diagram 2. Investments in the tourism industry in Azerbaijan, million manats

The Azerbaijani government should first improve its investment policy in this area in order to develop the tourism industry based on international experience. The State Tourism Agency of the Republic of Azerbaijan should work on the development of regional tourism through investment protection in the tourism industry. However, the agency is discussing gastronomic and orientological tourism in London, business tourism in Frankfurt, tourism photo exhibition in Tel Aviv, Silk Road with UNESCO, tourism relations with Türkiye, Japan, Israel, Russia, Hungary, Mexico, Pakistan, United Arab Emirates and other countries, and is conducting propaganda work among the residents of Khinalig, Basgal and other villages regarding domestic tourism. All these works do not affect the development of the tourism industry at the desired or expected level.

The third chapter of the dissertation is dedicated to "**Regional aspects and economic-geographic model of sustainable development in Azerbaijan"**. In this chapter, the cluster concept was applied to determine the sustainability of the regional territorial organization of production areas, and as its logical result, a SWOT analysis of production areas in regional sustainable development was conducted. Along with this, in the third chapter, the economic-geographic paradigm of the Caspian Sea coastal regions in the sustainable development of Azerbaijan was calculated and a regional economic-geographic model of sustainable development in production areas was developed.

In recent years, one of the most widely used research methods in world practice to determine sustainability in production areas is the "cluster" method. This is because the cluster approach to economic and innovation-oriented development allows for a clearer description of this development. Thus, the cluster plays a supporting role in identifying production areas based on regional communications between supply and demand[27]. According to the American scientist M. Porter, a cluster is a group of geographically interconnected areas (manufacturers, etc.) and the infrastructure that connects them. The distinctive feature of a cluster is its innovative orientation and the transition to a quality category. The most successful cluster is a form in which a "leap" in the field of production technology has occurred or is expected[28].

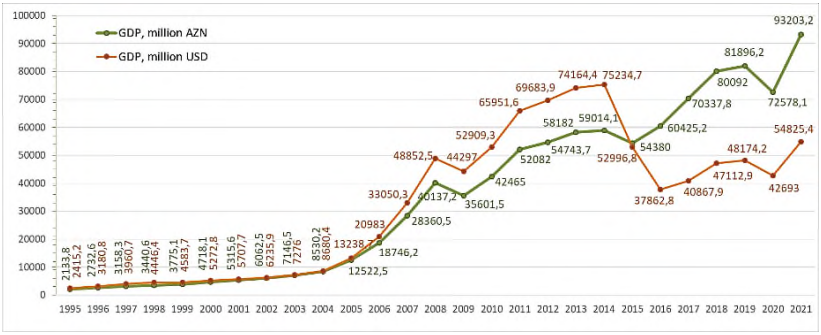
To fully characterize sustainable development in manufacturing sectors, it is necessary to analyze economic indicators, especially Gross Domestic Product (GDP), using the cluster method.

Analysis of GDP in Azerbaijan between 1995 and 2021 reveals fluctuations and contradictions. Thus, taking into account the ratio of the manat to the US dollar, it can be observed that a general trend is occurring in the country's economy. If we express the development trend of the economy in manat, it can be noticed that there was a 43,7-fold increase in comparison with 1995 and 2021. This is a very high indicator. However, if the development trend is expressed in US dollars, then it can be seen that the increase was 22,7 times, but in some years (from 2008-2009 and 2019-2020) it was small, and in some years (from 2014-2016) it was a sharp decrease (Diagram 3). The reason for the decrease was the economic crises that occurred in the world, the devaluation of the manat, as well as the weakening of trade relations during the COVID-19 pandemic.

---

[27] Aybulatov, N.A., Andreeva, E.N., Vylegzhanin, A.N., Mykhailichenko, Y.G. Nature use in the coastal zone of the seas of Russia // – Moscow: Journal of the Russian Academy of Sciences, Series of geography, – 2005. № 4. – pp. 13–26. (In Russ.)

[28] Porter, M. Competitive strategy: methodology of analysis of industries and competitors / M. Porter. – Moscow: Alpina Business Books, – 2007. – 453 p. (In Russ.)



Source: Statistical indicators of Azerbaijan. Baku, 2016, 2022.

Diagram 3. GDP volume in Azerbaijan, in million manats and million US dollars

The growth or decrease in GDP affects the economic production sectors in the country as well. The obtained statistical indicators and their complex analysis indicate that certain changes occurred in the sectors of economic activity in 2010 and 2021. However, this problem is still being discussed and requires deeper research through the study of other indicators, including GDP per capita. The changes in the most important sectors affecting the country's economy and its sustainable development indicators - industry, agrarian industry and tourism industry - were somewhat different. Thus, while in 2010 the share of industry in GDP was 51,7% (21942.2 million manat), in 2021 this indicator decreased to 42,9% (39956.6 million manat). However, an increase was recorded in the agricultural and tourism industries. Although the share of the agrarian industry increased by 5,5% (2344.6 million manat) in 2010, the share of the tourism industry by 1,7% (731.5 million manat), and in 2021 by 5,7% (5336.8 million manat) and 2,0% (1859.9 million manat), respectively[29], it was not possible to fully achieve sustainable or regional development in these areas. Because, in percentage terms, the indicators of trade, transportation, real estate, social security, taxes and subsidies have reached higher levels.

[29] Statistical indicators of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 746 p. (In Aze.)

The cluster approach in conducting economic-geographical analyses taking into account GDP indicators is one of the necessary conditions for determining the socioeconomic development of any territory. The cluster promotes the increase in competitiveness between production sectors, the formation of infrastructure closely related to production. The cluster also requires an innovative approach to economic development. This approach contributes to the creation of new products, increasing production efficiency and the formation of a sustainable production network.

For the purpose of clustering, V.Y.Pripoten used the stimulating and de-stimulating method, which can help in the assessment of socioeconomic development and economic growth. With this approach, it is possible to eliminate the existing shortcomings when conducting the assessment[30]. Z.T. Imrani put forward the following formula in order to generalize quantitative indicators for various production sectors and conduct intra-regional clustering:

$$I_{x_1,x_2,x_3\ldots x_n} = \frac{I_{fak} - I_{min}}{I_{mak} - I_{min}}$$

there, $I_{x_1,x_2,x_3\ldots x_n}$ – total production (x_1 – industry, x_2 – agrarian industry, x_3 – tourism industry, x_n – və s.) coefficient, I_{mak} – maximum profit during the production period, I_{min} – minimum revenue generated during the production period, I_{fak} – actual production cycle indicator.

The intervals of change of coefficient values of quantitative indicators in production sectors fluctuate between 0,0-1,0. Thus, 0,0-0,2 indicates very weak, 0,3-0,5 weak, 0,6-0,8 medium, and 0,9-1,0 high development indicators.

In order to determine the development directions of production sectors in Azerbaijan by region, calculations were made based on the formula presented, and the indicators of industry, agrarian industry and tourism industry were clustered (Table 2).

[30] Pripoten, V.Y., Alferova, I.E. Assessment of social and economic development of the region as a component of indicative development management // – Makeyevka: Economics of construction and urban economy. – 2017, Vol. 13, № 1, – pp. 327-336. (In Russ.)

Table 2.

Clustering of production areas across economic regions of Azerbaijan

Economic regions	Industrial production volume, thousand manats	I_s	Volume of agro-industrial production, thousand manats	I_a	Tourism industry (hotel) production volume, thousand manats	I_t	Generalized quantitative indicator, $I_{s,a,t}$
Baku	45309744,1	1,000	115974,2	0,020	128542,7	1,000	1,000
Nakhchivan	1069655,7	0,023	572096,7	0,448	2411,1	0,017	0,033
Absheron-Khizi	4125777,1	0,090	238490,5	0,135	1871,6	0,013	0,093
Daghlig Shirvan	88589,5	0,001	401433,5	0,287	6244,5	0,048	0,008
Ganja-Dashkasan	860978,1	0,018	322116,0	0,213	6430,3	0,048	0,023
Karabakh	194776,3	0,004	910375,5	0,765	931,0	0,006	0,022
Gazakh-Tovuz	416258,7	0,009	1160497,6	1,000	807,8	0,005	0,032
Guba-Khachmaz	305979,6	0,006	909613,2	0,764	29891,0	0,231	0,025
Lankaran-Astara	340950,5	0,007	810736,4	0,671	10045,6	0,077	0,023
Central Aran	646114,9	0,014	901565,6	0,757	1332,4	0,009	0,031
Mil-Mughan	554466,4	0,012	816192,8	0,677	159,4	0,000	0,027
Shaki-Zagatala	440578,4	0,009	716694,0	0,583	20815,7	0,160	0,023
Eastern Zangazur	7888,2	0,000	94448,9	0,000	0,0	0,000	0,000
Shirvan-Salyan	867323,3	0,018	635761,9	0,507	204,2	0,001	0,030

	0,0-0,2 very weak
	0,3-0,5 weak
	0,6-0,8 medium
	0,9-1,0 high

Source: Regions of Azerbaijan. Baku, 2022.

Note: calculations were carried out based on the formula presented by Z.T. Imrani.

Provided that we bring the quantitative indicators of the general production structure of the economic regions of Azerbaijan into a single cluster, it can be noticed that the Baku economic region is distinguished by its high level of development. The main reason for this is that a large part of industrial production is concentrated in the Baku economic region. This indicator, which ultimately affects the overall development, proves that sustainable regional development has not yet fully justified itself, and that there are sharp differences between the Baku economic region and other economic regions.

Existing scientific-methodological and methodological approaches, the application of various methods, etc. have been widely used during the research process. In recent years, the SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis method has been widely used in modern scientific approaches. The disclosure of the SWOT analysis method is explained as the identification and disclosure of strengths and weaknesses, the assessment of potential opportunities, and the prediction of threats and risks. The outstanding feature of this analysis method is the consideration of the geographical position in relation to external influences. The strengths and weaknesses of the SWOT analysis method are that it creates a positive basis for future dynamic development, while weaknesses and threats slow down overall development and exacerbate minor problems. This analysis method provides for the selection of priority production areas for the development of the territory as well.

SWOT analysis is one of the important tools for the purposeful study of production areas and the extraction of scientific and practical results in the regional sustainable development of Azerbaijan. As a result of the conducted research on the basis of SWOT analysis, we tried to determine the regional sustainability of production areas (table 3). It should be noted that when conducting SWOT analysis of production areas, scientific and theoretical knowledge was given priority. Because SWOT analysis plays an auxiliary role in drawing conclusions regarding strategic alternatives. For this purpose, SWOT analysis of quantitative indicators of production enterprises operating in Azerbaijan was conducted. The obtained results were scientifically accurately grouped, and opportunities and possibilities aimed at

solving the problems observed in the activities of production areas (weaknesses, threats and risks) were clearly shown.

Table 3.

Sustainability of production areas in the regions based on SWOT analysis

Strengths
− having rich natural resources; − the state's interest in the development and promotion of local production; − the existence of state and regional programs supporting the creation and development of new production areas; − continuous allocation of state investment funds, etc.
Weaknesses
− low performance of manufacturing enterprises; − weak business activity of foreign investors; − some newly opened enterprises are not operating at full capacity; − lack of marketing activities for the sale and promotion of new products, etc.
Opportunities
− involvement of natural resources in the production cycle; − creation of new production facilities; − increasing production by expanding sales markets; − attracting qualified personnel to production areas; − innovative approach to production; − opening new work places and increasing employment, etc.
Threats
− Incomplete study of the potential capabilities of production areas; − Failure to conduct an assessment based on various criteria; − Failure to apply the cluster method; − Disruption of production cycles during emergencies, etc.

Note: Compiled by Z.T. Imrani.

In modern times, the development of production areas is usually possible with the participation of factors such as population growth in the region, economic reforms, improvement of social infrastructure, etc. Among the five countries located around the Caspian Sea (Azerbaijan, Russia, Kazakhstan, Turkmenistan, Iran), Azerbaijan is the country that is most in contact with the coastal-marine economy

due to population settlement, pace of development, dynamics and diversification of production areas. All cities and regions located in the coastal zone of the Caspian Sea differ from other regions of the country in terms of their socioeconomic indicators.

The coastal area of the Caspian Sea is 14,65 thousand km^2, which is 16,9% of the country's territory, and the population is 3972.9 thousand (2021) people, which is 39,1% of the country's population. The internal zones differ sharply from each other in these indicators. Thus, the Northern zone accounts for 30,8% of the total territory, 7,6% of the population, the Central zone accounts for 28,7% of the territory, 72,1% of the population, and the Southern zone accounts for 40,5% of the territory, 20,3% of the population[31]. However, as a result of the conducted research, it was determined that 58,8% of the country's population (5972.9 thousand people) is concentrated in the coastal region of the Caspian Sea, mainly in the city of Baku. The unregistered population migrating from different parts of the country to the cities of Baku and Sumgait for work has led to an increase in the level of urbanization (pseudo-urbanization).

In the coastal regions of the Caspian Sea, Baku city still differs sharply from other areas in terms of GDP per capita and industrial production. If we compare the obtained indicators with the country's indicators, it can be noticed that the difference has become quite serious and creates problems in ensuring regional sustainable policy. Although it does not fully correspond to Baku city with its development trend, Sumgait city, which stands out from other areas, also has relatively high GDP per capita and industrial production. In other cities and regions, differences in GDP per capita and industrial production are noticeable and they lag behind the general development (Figure 3).

The main goal of our research is to use economic-geographical approaches based on the rational use of natural resources and indirectly participating in solving regional problems in order to ensure the transition to sustainable development. Because regional

[31] Demographic indicators of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 560 p. (In Aze.)

development is the main characteristic feature of the implementation of the sustainable development model.

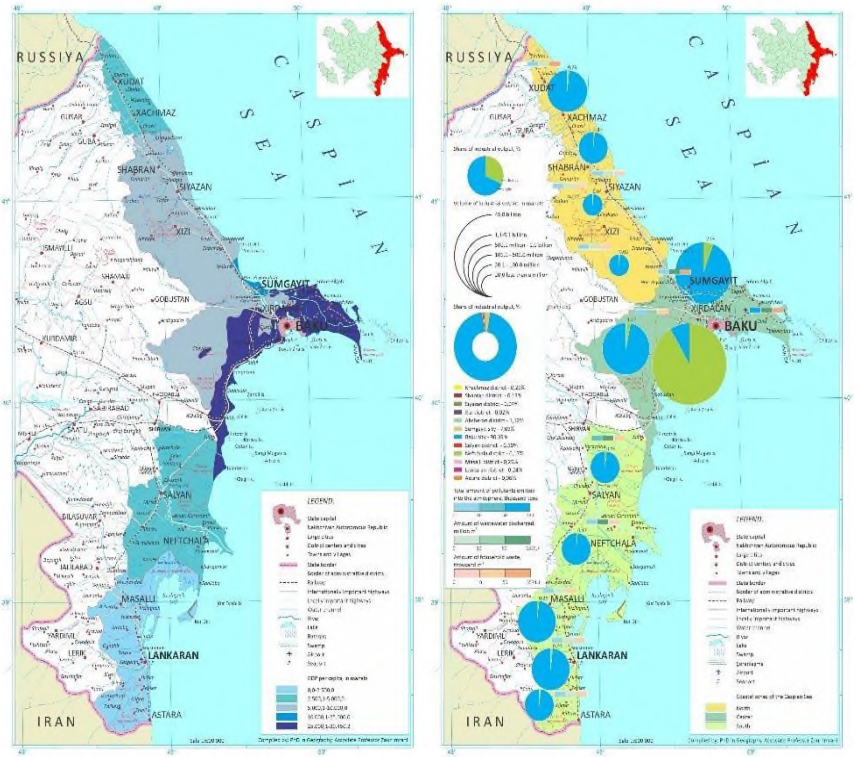
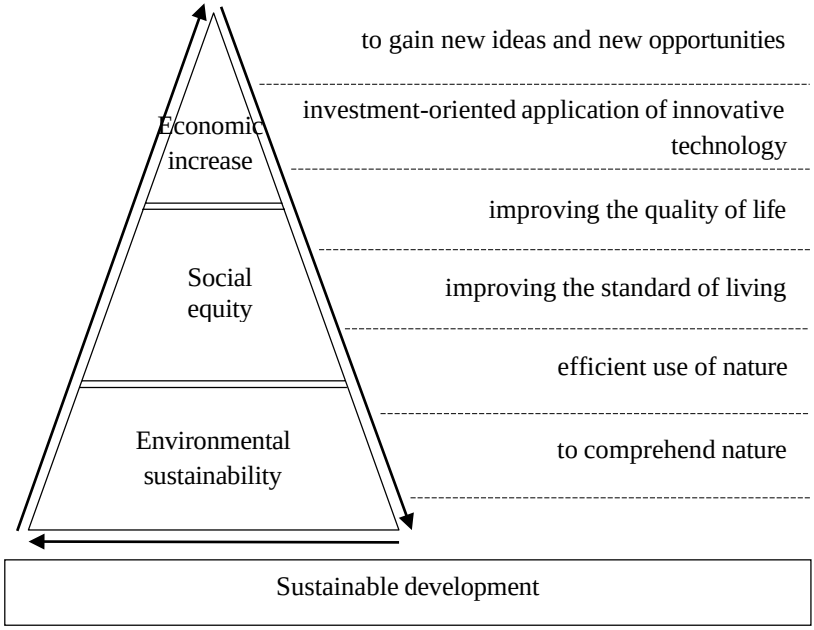


Figure 3. Map of GDP per capita and volume of industrial products produced the Caspian Sea littoral cities and regions

The sustainable development strategy is primarily economic, social and environmental in nature, and focuses on meeting people's physiological and personal needs (material, spiritual, cultural, etc.)[32]. This depends on the current state of production sectors, economic relations, the functionality of natural resources, people's social

[32] Imrani, Z.T. Regional aspects of sustainable development policy in Azerbaijan // Republican scientific-practical conference on "Geographical problems of the regions in Azerbaijan". – Baku: – 2016. – pp. 101-104. (In Aze.)

lifestyle, the health of the ecological environment, etc.[33]. Several models have been studied in this direction in various years. For example, A.Maslow proposed a theory of the hierarchy of needs related to human motivation, their deficiency and increase, and tried to find out what problems may arise in the future after the needs are met. Based on physiological, safety, belonging, skills, knowledge, aesthetics, self-actualization and realization of existing natural potential, A. Maslow gave the "Need Pyramid Model"[34]. Taking this into account, Z.T. Imrani noted that the "Sustainable Development Model" can be built on the basis of A. Maslow's pyramid of needs (Graph 2).



Note: the model was compiled by Z.T. Imrani.

Graph 2. Sustainable development model

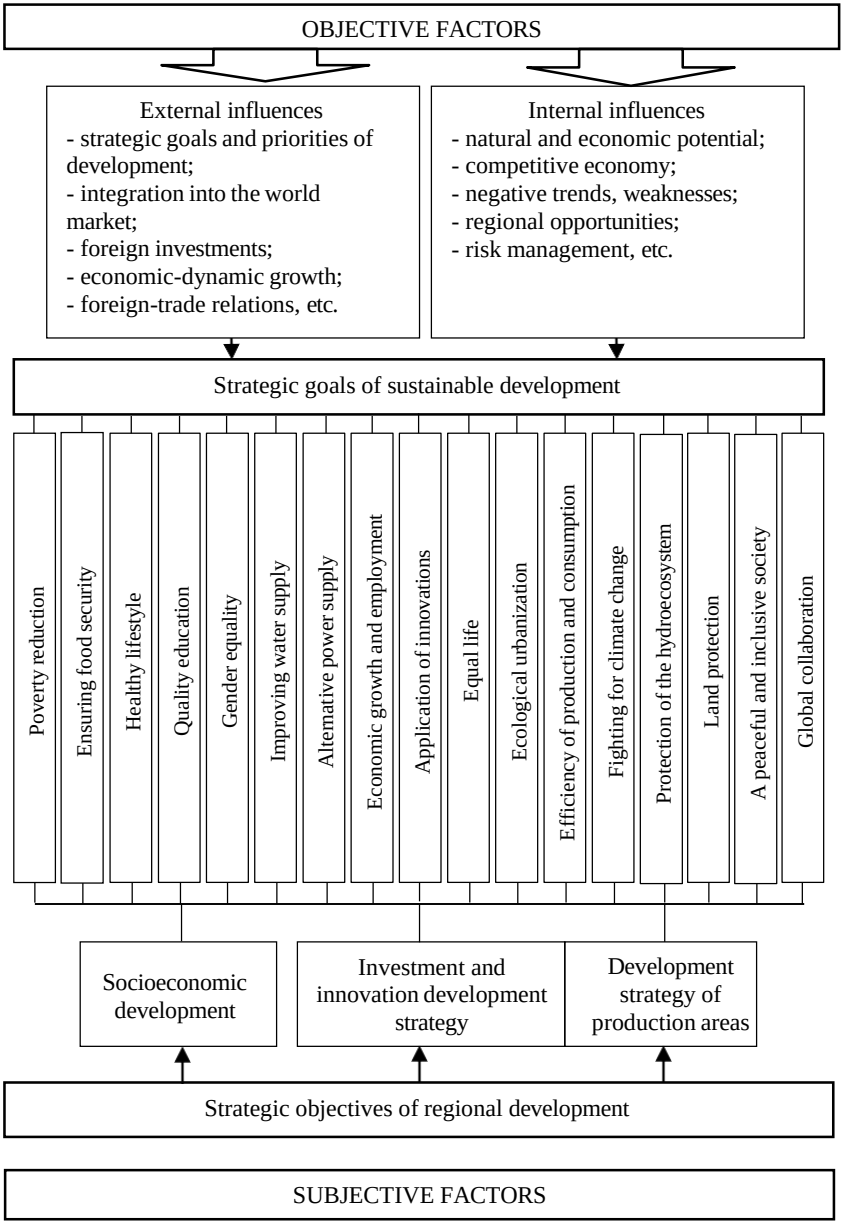
[33] Shimova, O.S. Sustainable development / O.S. Shimova. – Minsk: BSEU, – 2017. – 394 p. (In Russ.)

[34] Maslow, A.H. A Theory of Human Motivation // – Washington: Psychological Review, – 1943. No 50, – p. 370-396 (In Eng.)

Taking into account the above, the "demand and supply" concept of sustainable development in Azerbaijan is aimed at creating a strategic capital reserve of the state through the integrated use of non-hydrocarbon resources[35]. The primay goal of the strategy for creating a national sustainable development model within the general framework is to achieve a comprehensive development of the optimal level of production areas. In fact, the practical source of ideas for regional sustainable development is territorial-production complexes. It is this factor that requires the creation of a regional economic-geographic model of sustainable development in order to more effectively implement the development process of production areas. The model can become a direction aimed at the development and improvement of production and service sectors to meet the needs of consumers, as well as the most important component of science, innovation and management in the conditions of global competition. For this, first of all, it is necessary to determine the strategic goals and priorities of the regional economic-geographic model of sustainable development (Graph 3).

Provided that looking at the regional economic-geographic model of sustainable development, it can be observed that it is possible to protect the interests of all participants in the system and create a balanced environment between them, while bringing minimal harm and maximum benefit to current and future generations.

[35] Gurbanzada, A.A. 21st century: agro-industrial cluster factor of sustainable development. – Baku: Cooperation, – 2015. – 216 p. (In Aze.)



Note: the graph was compiled by Z.T. Imrani.

Graph 3. Regional economic-geographic model of sustainable development

The fourth chapter of the dissertation is dedicated to **"Azerbaijan's integration into the world economy through innovative development and the geography of foreign economic and trade relations".** This chapter examines the techniques of applying an innovative modern approach to production sectors by studying world experience, as well as the geographical paradigm of the integration of production sectors into the world economy, taking into account the geography of foreign trade policy and trade relations.

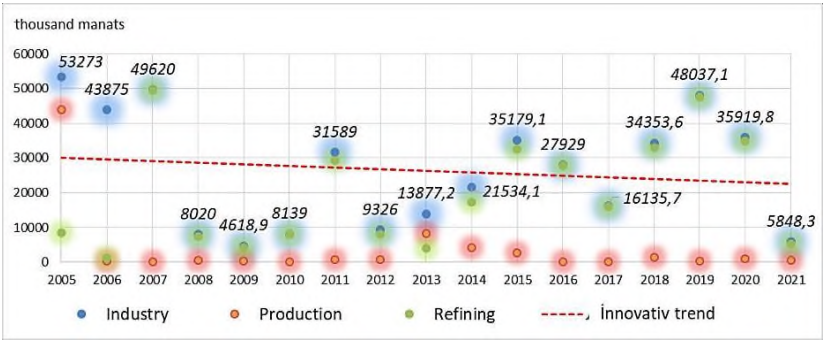
The background of the development of the world economy indicates that the application of innovations to production, that is, the level of development of new achievements of science, as well as people's knowledge and skills, has become dynamic, which creates the basis for sustainable and continuous economic growth. In recent years, the application of scientific and technical progress to production sectors provides rapid development, gives impetus to intensive scientific research, affects the structure of production and forms a new paradigm.

The formation of an innovation environment and the implementation of innovative processes are carried out on the basis of various technological models[36]: 1) The Japanese model – economic growth is based on scientific, technical and innovative activity, the state actively participates in innovation processes; 2) The US model – business entities give priority to innovative activity, it involves the creation of favourable political, legal, economic and other projects to stimulate it, the state is based on a decentralization strategy; 3) The European Union model – is a diversified model, indirectly stimulates innovation processes based on the active intervention of the state in important strategic areas of the economy, expands cooperation in the field of scientific research and development, and increases the efficiency of innovation activity by strengthening the competitive position in the global economy.

The innovation policy of the modern era is considered an integral part of regional sustainable socioeconomic development. This also constitutes the conceptual basis of scientific and technical

[36] Sapegina, O.P. Models of state innovation policy in "high technology countries" // – Tambov: Scientific almanac. – 2017. № 3–1(29). – pp. 223-226. (In Russ.)

achievements. Because technological innovations play a mediating role in stimulating development and determining the priority directions of production sectors. Since Azerbaijan is inclined towards innovation innovations, it is interested in constant investment in this area. However, if we analyze the years 2005 and 2021, it is observed that the total expenditure on innovations has decreased by 9,1 times. In 2005, 82,4% (43,892,000 manats) of the total expenditures on innovations in Azerbaijan fell to the extractive industry, 17,6% (8,572,500 manats) to the processing industry, in 2021, 9,1% (529,800 manats) to the extractive industry, and 90,9% (5,318,500 manats) to the processing industry (Diagram 4).



Source: Industry of Azerbaijan. Baku, 2022

Diagram 4. Innovation spending in Azerbaijan, thousand manats

One of the main reasons for innovative approaches to production sectors in Azerbaijan is related to integration. Because integration is a concept that expresses the differential and functional relationships of various sectors, as well as events and processes. Integration not only serves the management of natural and socioeconomic resources of strategic importance for the country, but also make the way for increasing their competitiveness in the world market, investment attractiveness and the efficient operation of production sectors.

"*In our modern era, the stages of integration include: free trade zone, customs union, common market, economic union, and currency*

union."[37]. Azerbaijan has manifested itself at almost all stages of integration. The Alat Free Economic Zone as a free trade zone in our country; the Partnership and Cooperation Agreement with the European Union (1996) within the framework of customs cooperation, the Kyoto Convention (2003), the Black Sea Economic Cooperation Organization (2003), etc.; Azerbaijan's integration into the world, especially the European market, on the path to the common market; economic union ties with the European Union, the Commonwealth of Independent States, the Turkic World Union, as well as Azerbaijan's chairmanship of the Economic Cooperation Organization in 2023, etc.; within the framework of the currency union, Azerbaijan operates as an independent state, domestic transactions are carried out in manat, but foreign trade transactions are carried out in US dollars. The process of further deepening such integration stages leads to an increase in the quality of life of the population, modernization of production sectors and increased competitiveness in regional markets.

Azerbaijan conducts 60,1% of its export transactions with Europe, 36,7% with Asia, 2,4% with Africa, 0,5% with Oceania, and 0,3% with the countries of the Americas, while 46,0% of its import transactions are with Asia, 45,9% with Europe, 7,3% with America, 0,6% with Oceania, and 0,2% with African countries[38]. However, provided that paying attention to Azerbaijan's import and export operations, it is clear that instability prevails in the real sectors of the country's economy. Because in the process of raising the level of innovative technological progress, the task of radically modernizing industry and agrarian industry has not been solved. That is why, if we analyze the structure of Azerbaijan's export and import operations in 2021, it is experienced that serious problems still remain in the industrial and agrarian industry sectors. However, generally speaking, it can be enunciated that 96,3% of export operations fell to industry, 3,7% to agrarian industry; 81,1% of import operations fell to industry, 18,9% to agrarian industry. The majority of exported products, namely

[37] Rodionova, I.A. Economic and social geography of the world [In 2 Vol.] / I.A.Rodinova. – Moscow: Yurayt, – Vol. 1, – 2015. – p. 192. (In Russ.)
[38] Foreign trade of Azerbaijan (statistical compilation) / Managed by T. Budagov. – Baku: Narinji, – 2022. – 208 p. (In Aze.)

88,7%, consisted solely of natural raw materials (oil, gas, bitumen, various minerals, etc.) and were exported to the world market. This should be viewed as a weak point in economic development. Because the dependence of sustainable development on one factor, otherwise, can lead to the occurrence of the "Dutch syndrome" in the country. This will lead to the dependence of the economy on natural resources and stagnation in the manufacturing sector. From this we can conclude that the integration of products into the world market is carried out in an unstable environment between sectors. In import operations, we observe the exact opposite.

The tourism industry is considered one of the most important types of economic activity in the integration process. The participation of the tourism industry in the integration process is manifested in the increase in the number of foreign tourists coming to the country. For this purpose, the number of foreign citizens coming to Azerbaijan was analyzed and their development dynamics for 2006-2021 were examined. This dynamics indicates that the development is unstable and is evident from the statistical figures that it continued until 2019. A sharp decrease was observed from 2019-2021. The number of 2,8 million tourists coming to the country in 2019 decreased to 461,7 thousand in 2021. That is, the dynamics of the decrease in the number of tourists coming to our country for tourism purposes was 6,2 times during the corresponding years[39]. The reason for this was the imposition of bans and restrictions in the country due to the COVID-19 pandemic.

One of the factors that plays an important role in integration relations is foreign trade policy and the geography of trade relations. In order to formulate and implement the regulation of foreign trade policy, Azerbaijan integrates into the world economic system. For this purpose, in 1992, Azerbaijan became a member of the International Monetary Fund (established in 1944, 186 member countries), a member of the International Bank for Reconstruction and

[39] Tourism in Azerbaijan (statistical collection) / Managed by T.Budagov. – Baku: Narinji, – 2022. – 100 p. (In Aze.)

Development (established in 1944, 186 member countries)[40], founding member of the Black Sea Economic Cooperation Organization (established in 1992, 12 member countries), member of the European Bank for Reconstruction and Development (established in 1991, 69 member countries), consultant to the World Trade Organization in 1997 (established in 1995, 162 member countries), member of the Cooperation Council of Turkic-Speaking States in 2012 (established in 2012, 5 member countries), member of the Organization of the Petroleum Exporting Countries (OPEC) in 2016 (established in 1960, 13 permanent countries, 10 cooperating countries)[41]. In addition to this, Azerbaijan has signed partnership and cooperation agreements with a number of countries (Türkiye, Russia, Italy, Germany, Israel, China, Greece, Iran, Kazakhstan, etc.), which has had a positive impact on the expansion of its foreign trade relations.

According to 2021 statistics, Azerbaijan maintained trade relations with 185 countries of the world in various fields, and the annual foreign trade turnover amounted to 33,9 billion US dollars. However, in 2021, Azerbaijan carried out a significant part of its foreign trade relations, i.e. 60,1%, with only five countries. Of this, 28,6% fell to Italy, 13,8% to Türkiye, 8,8% to Russia, 5,1% to China, and 3,8% to Germany[39]. Currently, Azerbaijan pays great attention to the development of partnership relations with its closest neighbours - Türkiye, Russia, Georgia and Iran. Because the initial stage of integration begins directly with a positive neighbourly policy between countries. In this sense, neighbourly relations and mutual trade cooperation can play a supporting role in increasing production and scientific and technical potential in the country.

The fifth chapter of the dissertation is devoted to **"Geographical parameters and development prospects of sustainable production areas against the background of the organization of the regional**

[40] Decree of the President of the Republic of Azerbaijan on accession to the International Monetary Fund, the International Bank for Reconstruction and Development and related organizations // Adopted on August 18, 1992. – Baku: Law, 1992. – 3 p. (In Aze.)

[41] Beynəlxalq təşkilatlarla əlaqələr [Electronic resource] / Ministry of Energy of the Republic of Azerbaijan. – Baku: 2023.
URL: https://minenergy.gov.az/az/beynelxalq-teskilatlarla-elaqeler] (In Aze.)

economic-geographical model of Azerbaijan". In this chapter, the economic-geographical synergetic parallels of the directions of increasing the efficiency of production areas and the strategic order of state programs in the formation of a regional sustainable development model are analyzed on economic-geographical grounds.

The efficient and complex placement of production areas in Azerbaijan is a complex process. Its assessment from an economic point of view determines the directions of complex development and specialization based on territorial principles. In this regard, it is very important to determine the efficiency of production areas in each region.

Using D.L.Lopatnikov's Territorial Development Index, it is possible to calculate the development indicators of any region[42].

$$I = 0{,}1\sqrt{\frac{V^2}{N\,S}}$$

there: V – total value of produced products, manat; N – the number of population, person; S – area, km^2.

The Territorial Development Index can also be used to determine economic efficiency in production areas. The Territorial Development Index ranges from 0,0 to 10,0, which provide us to determine the level of development in each region. In terms of general criteria, development indicators can be assessed as 0,0-1,0 very weak, 1,1-2,0 weak, 2,1-4,0 relative, 4,1-6,0 medium, 6,1-8,0 high, and 8,1-10,0 very high.

The Territorial Development Index was used to calculate the efficiency of production areas for the economic regions of Azerbaijan. At the same time, the area (*S*), population (*N*) and production areas (*V* without square) of the economic regions were brought to a common quantity and the level indicators of development were determined. As a result, it was determined that Baku (9,6) was considered a very high economic region in terms of its level of development. In the

[42] Lopatnikov, D.L., Esterov, A.I. Possibilities of using the economic development index of the territory in comparative economic and geographical analysis // – Moscow: News of the Russian Academy of Sciences, Geography Series, – 1997. – № 2, pp. 85-88. (In Russ.)

calculations, the Absheron-Khizi (4,6) economic region is characterized by an average development indicator. The economic regions with the relative development rate of production efficiency are Nakhchivan (2,5), Shirvan-Salyan (2,2), Mil-Mughan (2,1), and the economic regions with the weak development rate are Ganja-Dashkasan (1,9), Gazakh-Tovuz (1,8), Guba-Khachmaz (1,78), Central Aran (1,7), Daghlig Shirvan (1,6), Shaki-Zagatala (1,4), Lankaran-Astara (1,4) and Karabakh (1,2). The most backward and very poorly developed is the Eastern Zangezur (0,6) economic region. The economic region's long-term occupation by the Armenians, negative impacts and pressures on its nature, spontaneous extraction of raw materials, etc. have been the reasons that slowed down its development (Table 3). Currently, a number of works are being carried out within the framework of the "Great Return" State Program, which will lead to an increase in the development indicators of the Eastern Zangezur, as well as Karabakh economic regions in the near future.

The development and improvement of production sectors is considered the greatest source of future socioeconomic progress of each economic region of the country[43]. However, the calculation of the efficiency of production areas by economic regions with the help of the Territorial Development Index cannot fully reflect reality. Because within each economic region there are regions that stand out with their own pace of development or are developed at a very slow pace. It is from this point of view that it is very important to calculate the efficiency of production areas separately for each of the regions. These indicators can be used as a main tool in building a territorial cluster, as well as in preparing the LED Strategy.

In addition to the positive aspects mentioned above, it is necessary to look at the sustainable development strategies adopted by countries around the world as a first step in defining regional development[44].

[43] Samadzada, Z.A. Structure and efficiency of social production / Z.A. Samadzada. – Baku: Elm, – 1980. 210 p. (In Russ.)

[44] Kogut-Jaworska, M. Identification of smart specialisations in Polish regions in the context of the EUs new financial perspective 2014–2020 // – Olsztyn: Oeconomia copernicana, – 2015. No 6(2), – p. 23-36. (In Eng.)

Table 3.

Calculation of the efficiency of production sectors of economic regions of Azerbaijan using the Territorial Development Index

Economic regions	Area, thsd. km^2	Population, thsd. people	Total value of manufactured products, thsd. manats	Production efficiency in the Territorial Development Index
Baku	2,14	2303,1	45554261,0	9,6
Nakhchivan	5,50	463,0	1644163,5	2,5
Absheron-Khizi	3,73	579,9	4366139,2	4,6
Daghlig Shirvan	6,13	326,8	496267,5	1,6
Ganja-Dashkasan	5,27	612,1	1189524,4	1,9
Karabakh	8,99	907,9	1106082,8	1,2
Gazakh-Tovuz	7,03	690,6	1577564,1	1,8
Guba-Khachmaz	6,96	561,8	1245483,8	1,7
Lankaran-Astara	6,07	959,4	1161732,5	1,4
Central Aran	6,69	743,2	1549012,9	1,7
Mil-Mughan	5,67	526,4	1370818,6	2,1
Shaki-Zagatala	8,84	632,9	1178088,1	1,4
Eastern Zangazur	7,47	345,0	102337,1	0,6
Shirvan-Salyan	6,08	504,3	1503289,4	2,2
Republic of Azerbaijan	86,57	10156,4	64044764,9	0,9

Note: Calculated by Z.T.Imrani based on D.L.Lopatnikov's method.

For example, Norway stimulates regional development by using sustainable development principles as a basis for strategic planning[45]. In France, sustainable development is accepted as a principle that promotes global development that supports the well-being of both people and the planet[46], in Poland, it is based on the stable and sustainable economic development of the "green economy" of environmentally friendly production sectors and the reduction of

[45] Clement, K. Sustainable regional development: learning from Nordic experience / K. Clement, M. Hansen, K. Bradley. – Stockholm: Nordregio, – 2003. – 132 p.
[46] Owens, T. Higher education in the sustainable development goals framework // – Warsaw: European journal of education, – 2017. No 52, – p. 414-420. (In Eng.)

unemployment by using existing social resources in the labor market[47], in Romania, it is the acceptable, viable, sustainable and equitable interaction between the economy, society and the environment (ecology)[48]. Obviously, the concept of sustainable regional development implies the integration of sustainable development principles into regional development practice. In Azerbaijan, various state programs and strategic roadmaps have been developed, implemented and are being implemented in this direction.

The Strategic Roadmap indicates as weaknesses of economic development the dependence of the country's economy on oil and gas revenues, the focus of exports mainly on the extraction of natural resources, the dependence of production on imports, the high share of the state in investment, the focus of foreign investments mainly on the extractive industry, etc. In such circumstances, the main driving force of economic growth is aimed at eliminating the backwardness observed in production areas, minimizing investment risks, reducing dependence on foreign trade, as well as the formation of new challenges for regional development.

One of the necessary factors that act as a guarantor of sustainable socioeconomic development in Azerbaijan is the "State Program for Socio-Economic Development of Regions" covering the years 2019-2023, based on "Azerbaijan 2030: National Priorities for Socio-Economic Development", and the "Socio-Economic Development Strategy" covering the years 2022-2026.

The "State Program for Socio-Economic Development of Regions" is considered an important component of the sustainable development that has been successfully implemented in recent years and, since 2004, has led to a 3,3-fold increase in GDP, a 2,6-fold increase in industrial output, the allocation of investment funds in the

[47] Wysokińska, Z. Implementing the main circular economy principles within the concept of sustainable development in the global and European economy, with particular emphasis on central and Eastern Europe – the case of Poland and the region of Lodz // – Warsaw: Comparative economic research, – 2018. No 21(3), – p. 75-93 (In Eng.)

[48] Gogonea, R. Tourism pressure at the regional level in the context of sustainable development in Romania / R. Gogonea, A. Baltalunga, A. Nedelcu [et al.] // – Basel: Sustainability. – 2017. No 9(5), 698, – p. 1-24. Doi: 10.3390/su9050698 (In Eng.)

amount of 244.9 billion US dollars, 68,0% of preferential loans in recent years falling to the agrarian industry, and the creation of 1,5 million new permanent work places due to the implementation of regional economic and social projects[49]. The "Socio-Economic Development Strategy" has played a mediating role in implementing important measures to coordinate national action plans and state programs. Socioeconomic reforms are aimed at ensuring the sustainable development of human capital, as well as the efficient use of financial and credit resources, the preservation of socio-political stability, and the justification of the role of investments in strengthening the sustainability of production[50]. In other words, the implementation of structural and institutional reforms has a mechanism to significantly influence the development of local production potential.

Azerbaijan's foreign policy and its continuous tendency towards strategic economic integration between countries aim to realize the goals it has set for itself. As a logical result of the constructive work carried out in this direction, our lands, which had been under Armenian occupation for 30 years, ended with the Patriotic War and territorial integrity was achieved. In the new stage, the State Program "Great Return to the Liberated Territories" was adopted for the restoration of the territories liberated from occupation, the remigration of the displaced population, the creation of new production areas, the creation of work places, the improvement of transport and logistics infrastructure and the implementation of other national priorities[51]. The elimination of regional inequality, which arose because a strong economy requires the inclusive development of all subjects of the country's territory, was reflected in the state program. In this direction, in the Karabakh and Eastern Zangezur economic regions: the

[49] State Program for Socio-Economic Development of the Regions of the Republic of Azerbaijan in 2019-2023 // Adopted on January 29, 2019. – Baku: [p. p.] – 2019. – 352 p. (In Aze.)

[50] Socio-economic development strategy of the Republic of Azerbaijan for 2022-2026 // Adopted on July 22, 2022. – Baku: [p. p.] – 2022. – 110 p. (In Aze.)

[51] The First State Program on the Great Return to the Liberated Territories of the Republic of Azerbaijan // Adopted on November 16, 2022. – Baku: [p. p.], – 2022. – 33 p. (In Aze.)

operation of industrial zones and agroparks (Aghdam Industrial Park, Araz Valley Economic Zone Industrial Park), the preparation and implementation of development concepts for the tourism industry, the construction of modern highway infrastructure (Fuzuli, Zangilan and Lachin airports, Barda-Aghdam railway, Horadiz-Aghband railway, Tartar-Chayli-Sugovushan-Talish highway, Ahmadbayli-Fuzuli-Shusha highway, Barda-Aghdam highway, etc.), the provision of residential areas (Shusha city, Aghali village in the Zangilan district, Hadrut settlement in the Khojavend district, etc.) with electricity, gas, water and heating systems, the organization of communication (telephone, internet) services, the opening of educational institutions and their branches, and other measures are envisaged.

The adopted strategic roadmap and state programs have led to the comprehensive development of regions and the restoration of their historically rooted specializations through new technologies, the stimulation of investment flows, and increased efficiency in other areas. Thus, it is possible to achieve rapid development of the most advanced and progressive areas of production in the near future.

CONCLUSIONS

1) For the first time, a "Sustainable Development Model" was presented, reflecting economic, social and ecological aspects, based on indicators reflecting the sphere, target triangle, connection concept, ratio, inequality and other models of sustainable development, so that current generations can meet their own needs without limiting the needs of future generations. The model indicates that it is possible to understand nature and utilize it effectively, to improve the standard and quality of life of people through the application of investment-oriented innovative technologies, as well as through the acquisition of new ideas and opportunities. On the basis of the "Sustainable Development Model", a "Regional Economic-Geographical Model of Sustainable Development" was developed. As a result of the analysis of objective and subjective factors, the model reflects strategic goals and priority directions for economic growth.

2) For the first time, "Formation of Investment Environment in Production Sectors Model" was developed by summarizing numerous

applicable models in the direction of determining the provider of investment in the production area and the advantages of locating production, justification of the investment climate and others. The model covers a four-stage development cycle and stipulates the territorial organization of production within a favourable economic-geographical space, the supply-demand relationship of products, the regulation of the legal framework within the regional policy of the state, and the formation of a conceptual investment environment.

3) Industrial production is considered the leading force of the economy and economic sectors on a national scale, as well as a provider of regional development. Although the share of the processing industry (75,3%) among industrial enterprises operating in Azerbaijan in 2021 is high, there are some differences in the indicators of industrial product production. Thus, although the share of the mining industry in total production is 65,6%, the processing industry is 28,8%, electricity and gas production is 4,8%, and water supply is 0,8%, this trend has not been able to eliminate the uneven development between economic regions. Based on the anamorphic compiled maps, it can be articulated that the Baku economic region has always been selected for its pace of development, while the Absheron-Khizi, Nakhchivan, Ganja-Dashkasan and Shirvan-Salyan economic regions have been somewhat developed in recent years.

4) The agro-industry determines the state's demand for food products and regional socio-economic security. However, in recent years, the share of the agro-industry in the production of agricultural products has significantly decreased, from 32,1% in 1995 to 9,7% in 2021. Emerging feasible challenges regarding stimulation of the regional sustainable development of the agrarian industry were unraveled.

5) Although the tourism industry is considered a more profitable and intensively developed sector, there is currently a significant gap between income and expenses, which are the main economic indicators of this sector. In 2021, the balance between income and expenses of travel agents and tour operators in the tourism industry was 3,0 million manat, and in hotels - 21.7 million manat. Compared to 2019, the development trend of the tourism industry has decreased

by 2,2 times. The dynamics of foreign tourist trips and their destinations prove that only Baku has been developed as a tourism centre from a regional perspective. From the perspective of the concept of sustainable tourism, this indicator is assessed as a negative situation.

6) The quantitative indicators of the production areas were summarized and clustered ($I_{x_1,x_2,x_3 \ldots x_n} = I_{fak} - I_{min} \,/\, I_{mak} - I_{min}$), and the obtained data proved that regional differences were sharp. Since the Baku economic region occupies a superior position compared to other regions of the country in clustering, it was not possible to form a competitive environment in the structure of general production. If the Baku economic region is excluded, it is possible to see that Absheron-Khizi is highly developed, Nakhchivan, Tovuz-Gazakh, Ganja-Dashkasan, Shirvan-Salyan, Central Aran are poorly developed, and other economic regions are very poorly developed. The fact that the average level of development is not recorded is a negative factor.

7) Regional sustainability of production areas in Azerbaijan was conducted on the basis of SWOT analysis, and a constant growth trend was observed in the indicators of industry, agrarian industry and tourism industry. However, this growth trend either does not fully provide regional sustainable development or cannot. Thus, although the volume of industrial production increased by 31,2 times, agrarian industry by 12,6 times, and tourism industry by 10,9 times during 1995-2021, the development of industry from a regional perspective was more pronounced in Baku and Absheron-Khizi, the development of agrarian industry in Guba-Khachmaz, Ganja-Dashkasan, Mil-Mughan, Central Aran, Lankaran-Astara, Nakhchivan, and the development of tourism industry in Baku, Guba-Khachmaz and Shaki-Zagatala economic regions.

8) One of the main tasks of sustainable economic development of Azerbaijan is to achieve innovative growth in production, strengthen the application of innovations, and involve new advanced technologies in the production process. However, during 2005-2021, the expenditures on innovations were reflected in a negative trend line. While in 2005, the expenditures on innovations were 53,2 million

manats, in the following years they attracted attention with their variable dynamics, and in 2021 this indicator fell to 5,8 million manats. Since the decrease in expenditures on innovations affected the dynamics of production and the quality of products, problems arose in ensuring high-profit and sustainable development

9) Azerbaijan's foreign trade policy has enabled economic growth and related economic development to be continuously increased, and economic integration to be achieved on a more solid basis. The dynamics of Azerbaijan's foreign trade relations between 1990 and 2021 were affected by the global economic crisis, the sharp drop in oil prices, the devaluation of the manat against the dollar, the coronavirus pandemic, and other factors. Currently, Azerbaijan carries out trade relations with 185 countries of the world, and the annual trade turnover is 33,9 billion US dollars. However, 60,1% of these relations are carried out with five countries: Italy, Türkiye, Russia, China, and Germany.

10) Investment in production sectors in Azerbaijan acts as a guarantor of sustainable development. In recent years (2015-2021), the volume of investments allocated to sectors of the economy has increased by 861,2 million manat. The highest growth was in science by 14,9 times (178,5 million manat), finance by 10,2 times (60,0 million manat), construction by 89,9% (1909,7 million manat), transport by 29,9% (658 million manat) and social security by 21,5% (136,9 million manat). However, a decrease was observed in production sectors, which are guarantors of sustainable development. The volume of allocated investments decreased by -11,7% in industry, -3,8% in agriculture, and -59,9% in the tourism industry. This decrease is assessed as a factor negatively affecting the development dynamics of production sectors.

11) Despite the fact that in recent years, according to the regional policy of Azerbaijan, investment in the Baku economic region has slightly decreased, Baku is still a leader compared to other economic regions. This can be observed in all areas of investment. Per capita investment in the Baku economic region is 1,8 times higher than Eastern Zangazur, which is in second place in the country and has received more funds under the "Great Return" program, and 28,0 times

higher than Lankaran-Astara, which is in last place. Despite the regional state policy carried out in this direction and the increase in the volume of investments allocated to the non-oil sector, the Baku economic region, as in previous years, stands out in the development of all areas of the country.

Suggestions

1) The cluster approach provides us to determine the dynamics of economic growth in the regions. In the near future, it is possible to carry out calculations using the formula we have proposed to determine the strength of economic development in the regions and the social lifestyle of the population. In this direction, the creation of a network of territorial production clusters and the development of production areas can lead to an increase in inter-enterprise competitiveness and the achievement of long-term socio-economic advantages. The implementation of an effective cluster policy may ensure the development of production areas in a sustainable context.

2) Sustainable development means purposeful self-regulation of socio-economic activity, and the natural environment is in a stable state. Such development can be considered as a perspective model that ensures the security of the regional economy. The application of the model may help in the development of a long-term development strategy.

3) The sectoral structure of production in the Caspian littoral areas reflects the level of social division of labour, differentiation and specialization of sectors. Although the volume of production in this area characterizes the level of socio-economic development of both the region and the country, as well as the employment and living conditions of the population, it has a negative impact on socio-economic development from the point of view of regional sustainable policy. To eliminate the problem, there is a need to create new production facilities in other regions of the country that are considered more strategically appropriate.

4) Although therapeutic mineral and thermal waters are widely distributed in the coastal areas of the Caspian Sea (on the Absheron Peninsula, in the Khachmaz and Lankaran districts), their potential is used at a very low level. Since these places, which are resort zones,

are rich in clean air, sea views, and sandy beaches, the population is more densely populated in these areas. In order to solve the problem, investments should be attracted to the tourism industry in such areas where the population is more densely populated, reconstruction work should be carried out in resort centres, and new treatment and recreation centres should be created on the basis of the existing base.

Published scientific works on the dissertation

1. Imrani, Z.T. Guba-Khachmaz economic region. – Baku: Elm, – 2007. – 172 p. (In Aze.)
2. Imrani, Z.T. The current state of the tourism and recreation complex in the Republic of Azerbaijan // – Baku: Works of the Azerbaijan Geographical Society. – 2008. Vol. XII, – pp. 379-384. (In Aze.)
3. Imrani, Z.T. The role of the TRACECA project in use of Azerbaijan, s natural resources // – Baku: The "Caspian Sea" natural resources international. – 2008. №2, – pp. 100-105. (In Eng.)
4. Imrani, Z.T. Research of natural disaster cases happening in Azerbaijan sector of the Caspian Sea from economic-geographical point of view // The 1st. Inernational Conference on the Caspian Region Environmental Changes. – Mazandaran: – 2008. – pp. 6-12. (In Eng.)
5. Imrani, Z.T. Impact of Caspian Sea level fluctuations on coastal areas of Azerbaijan // – Baku: Works of Young Scientists. – 2009. №2, – pp. 110-116. (In Aze.)
6. Imrani, Z.T. Techniques to improve and develop the material and technical base in agriculture // – Baku: Works of the BSU branch of the Azerbaijan Geographical Society. – 2009. Vol.II, – pp. 347-352. (In Aze.)
7. Imrani, Z.T. The modern economic situation and prospective opportunities of the Republic of Azerbaijan // – Baku: Turkish People scientific-social journal. – 2009. №4, – pp. 54-58. (In Aze.)
8. Imrani, Z.T. Potential development of industrial sectors in the Republic of Azerbaijan // – Baku: Works of the Azerbaijan Geographical Society. – 2009. Vol.XIV, – pp. 132-135. (In Aze.)

9. Imrani, Z.T. Analysis of the investment climate of the Republic of Azerbaijan // – Baku: Works of the Azerbaijan Geographical Society. – 2009. Vol.XIV, – pp. 151-155. (couathor: K.Z.Zeynalova) (In Aze.)

10. Imrani, Z.T. Destructive hydrometeorological events occurring in the Republic of Azerbaijan and their economic and geographical assessment // – Baku: Works of Young Scientists. – 2010. №3, – pp. 90-97. (In Aze.)

11. Imrani, Z.T. Ecological status of agricultural lands in the Republic of Azerbaijan // – Baku: Works of the BSU branch of the Azerbaijan Geographical Society. – 2010. Vol.III, – pp. 304-309. (In Aze.)

12. Imrani, Z.T. Ecological Status and Oil Factor of the Caspian Sea // – Istanbul: Turan: science, thought and civilization magazine. – 2010. №11, – pp. 91-94. (In Turk.)

13. Imrani, Z.T. Socio-economic and environmental problems of the Caspian Sea on the Azerbaijani sector // – Baku: "Caspian Sea" natural resours international journal. – 2010. №4, – pp. 59-63. (In Eng.)

14. Imrani, Z.T. Damage caused to the ecological state of the environment and human health by nuclear power plants // "University Ecology" International Conference. – Makhachkala: – 2011. Vol. VI, – pp. 258-261. (In Russ.)

15. Imrani, Z.T. Economic characteristics of the so-called Nagorno-Karabakh and illegal activities of Armenians on Azerbaijani lands // – Baku: Works of Young Scientists. – 2013. №8, – pp. 347-350. (In Aze.)

16. Imrani, Economic and geographical features of the territorial organization of the economy in Azerbaijan. – Baku: Nafta-press, – 2014. – 232 p. (In Aze.)

17. Imrani, Z.T. Territorial organization of social infrastructure areas in the Republic of Azerbaijan // – Baku: Works of Young Scientists. – 2014. №10, – s. 62-66. (In Aze.)

18. Imrani, Z.T. Economic-geographical perspectives of the sustainable development of the agrarian-industrial complexes in the

Republic of Azerbaijan // Scientific conference dedicated to R.Kh. Piriyev's 90th anniversary. – Baku: – 2014. – pp. 344-351. (In Aze.)

19. Imrani, Z.T. Medical and health tourism in the Republic of Azerbaijan // International scientific and practical conference on "Geographical problems of tourism, local history and ecology". – Almaty: – 2014. – 281-283. (couathor: K.Z.Zeynalova) (In Russ.)

20. Imrani, Z.T. Economic and geographical characteristics of the investment policy of the Republic of Azerbaijan // – Volgograd: Science and world. – 2015. Vol. 1, №2(18), – pp. 113-116. (In Russ.)

21. Imrani, Z.T. Investment policy and its prospective directions of the Republic of Azerbaijan // – Baku: Geography and natural resources. – 2015. №1, – pp. 87-90. (In Aze.)

22. Imrani, Z.T. Investment in the tourism industry of the Republic of Azerbaijan and its potential opportunities // – Izhevsk: "Privolzhsky Scientific Bulletin" Scientific and Practical Journal. – 2015. №1-4, – pp. 74-77. (In Russ.)

23. Imrani, Z.T. Automobile transport as an important condition for sustainable development of Azerbaijan // – Almaty: "Khabarshy" natural sciences and geography series. – 2015. №2(44) – pp. 6-10. (In Russ.)

24. Imrani, Z.T. Methods to attract foreign investments to the economy of Azerbaijan // – Almaty: "Khabarshy" natural sciences and geography series. – 2015. №4(46) – pp. 13-17. (In Russ.)

25. Imrani, Z.T. Study of development of information and communication technology in Azerbaijan with marketing approach // – Bhopal: International journal of advanced computer research. – 2015. Vol. 5, – pp. 80-93. (couathor: R.N.Karimov) (In Eng.)

26. Imrani, Z.T. Activity and problems of successful functioning of mobile operators in Azerbaijan // – United Kingdom: – 2015. Vol. 2, №6, – pp. 150-161. (couathor: R.N.Karimov) (In Eng.)

27. Imrani, Z.T. Investments into economic branches of Azerbaijan Republic and their effectiveness // – United Kingdom: International Journal of liberal arts and social science. – 2015. Vol. 3, No. 7, – pp. 29-37. (In Eng.)

28. Imrani, Z.T. Assessment of economic damage caused by floods and inundation events in the Kura-Araz lowland // International

scientific and practical conference “Emergency situations and safe life”. – Baku: – 2015. – pp. 175-179. (In Aze.)

29. Imrani, Z.T. Cluster method in the sustainable development of production sectors in Azerbaijan // Collection of Works “Geography: Theory, Practice, and Innovation”. – Baku: – 2015. – pp. 235-240. (In Aze.)

30. Imrani, Z.T. Socioeconomic aspects of the concept of sustainable development in the Republic of Azerbaijan // – Dagestan: South of Russia: ecology, development. – 2016. Vol.11, №2.– pp. 42-49. (coauthor: M.R.Musayeva) (In Russ.)

31. Imrani, Z.T. Energy complex of Republic of Azerbaijan as guarantor of sustainable development // – Baku: Works of Young Scientists. – 2016. №13, – pp. 44-47. (In Eng.)

32. Imrani, Z.T. Potential opportunities of industrial sectors in the Republic of Azerbaijan and their role in the development of the economy // – Baku: News of Pedagogical University. – 2016. Vol.XIV (64), №1 – pp. 52-56. (couathor: J.R.Abbasov) (In Aze.)

33. Imrani, Z.T. Attractiveness of the Republic of Azerbaijan for Sustainable Development and Investments // – Volgograd: “Science and world” International scientific journal. – 2016. №12(40), – pp. 92-95. (couathor: Kh.A.Badalova) (In Russ.)

34. Imrani, Z.T. The impact of tourism industry on the formation of labour resources in the sustainable development of Azerbaijani regions // Scientific conference on “Demographic development in the Republic of Azerbaijan: prospects and regional problems of population settlement”. – Shaki: – 2016. – pp. 434-443. (couathor: Kh.A.Badalova) (In Aze.)

35. Imrani, Z.T. Sustainable development and prospects of light industry in the Republic of Azerbaijan // – Baku: News of Baku State University. – 2017. №1, – pp. 159-168. (In Aze.)

36. Imrani, Z.T. The role of state programs in the sustainable development of mountainous areas of Azerbaijan // – Baku: Works of the Azerbaijan Geographical Society. – 2017. Vol.XIX, – pp. 265-271. (In Aze.)

37. Imrani, Z.T. The role of climate in the development of Azerbaijan’s tourism industry // – Baku: Works of the Azerbaijan

Geographical Society. – 2017. Vol.XX, – pp. 505-510. (couathors: E.Z.Soltanov, M.S.Fatullayeva) (In Aze.)

38. Imrani, Z.T. Ways of inflyuencing of sericulture to the development of turism industry // 8th Bacsa international conference Climate changes and chemicals – the new sericulture challenges. – Shaki: – 2-7 april, – 2017. – pp. 105-108. (couathors: Y.R.Rahimov, Kh.A.Badalova) (In Eng.)

39. Imrani, Z.T. The role of new ecotourism facilities in the sustainable development of the Shaki-Zagatala economic-geographic region // – Baku: Geography and natural resources. – 2018. №2(8), – pp. 75-80. (couathor: Y.R.Rahimov) (In Aze.)

40. Imrani, Z.T. The role of socio-economic factors in the sustainable development of the Sharur administrative district // – aku: Azerbaijan Construction and Architecture. – 2018. №1(16), – pp. 23-27. (In Aze.)

41. Imrani, Z.T. Assessment of the landscapes of the Khizi administrative district according to the degree of sensitivity (Southeastern part of the Greater Caucasus) // – Baku: ANAS Transactions Earth Sciences. – 2018. №2, – pp. 83-90. (couathor: S.N.Yusifova) (In Aze.)

42. Imrani, Z.T. Tourism potential of Turkic states and methods to use it // V International Symposium on Turkic World Studies. – Almaty: – 2018. Vol. III, – pp. 174-178. (couathor: E.E. Gasimova) (In Aze.)

43. Imrani, Z.T. Potential opportunities and zoning of tourism and recreational resources of the Northern region of Azerbaijan // Republican scientific-practical conference “Prospects for the creation of tourism and recreation zones in the Republic of Azerbaijan”. – Baku: – 2018. – pp. 8-13. (In Aze.)

44. Imrani, Z.T. Sustainable development and human geography problems of the regions in the Azerbaijan Republic // – Sofia: Problems of geography. Bulgarian academy of sciences. – 2019. №2, – pp. 3-21. (couathors: Z.N.Eminov, H.M.Tahirova, M.R.Musayeva) (In Eng.)

45. Imrani, Z.T. Regional aspects of tourism and the role of socio-economic factors in its development // International scientific

conference “The role of tourism in ensuring sustainable development”. – Baku: –29-30 May, – 2019. – pp. 288-296. (In Aze.)

46. Imrani, Z.T. Foreign economic relations of independent Turkic states and national entities // Republican scientific conference “Modern problems of geography”. – Sumgait: – 24-25 October, – 2019. – pp. 206-210. (In Aze.)

47. Imrani, Z.T. The role of tourism and recreation resources in the socio-economic development of mountainous regions (on the example of the Shaki-Zagatala economic-geographic region) // International conference on “Mountains: cultures, landscapes and biodiversity”. – Baku: – 10-12 May, – 2019. – pp. 388-393. (couathor: Kh.A.Badalova) (In Aze.)

48. Imrani, Z.T. The role of tourism in socioeconomic development of mountain rural areas of Azerbaijan (on the example of Guba and Gusar districts) // – Baku: Geography and natural resources. – 2020. №1(11), – pp. 64-69. (couathor: N.R.Jafarova) (In Eng.)

49. Imrani, Z.T. The role of tourism in solving the employment problem of the population in the Shaki-Zagatala economic-geographic region // – Baku: News of Pedagogical University. – 2020. Vol. 68, №2, – pp. 113-122. (couathor: A.Ch.Ismayilova) (In Aze.)

50. Imrani, Z.T. Methodical basis of tourism-recreationation resources and their regionalisation // Region – 2020: socio-geographical aspects: materials of the international scientific and practical conference. – Kharkiv: – 2-3 April, – 2020. – pp. 10-13. (In Eng.)

51. Imrani, Z.T. The geopolitical position of the Turkic world and the geography of transport and economic relationships // – Almaty: Bulletin of national academy of sciences of the republic of Kazakhstan. – 2021. Vol.1, №389, – pp. 104-110. (couathors: M.R.Musayeva, P.Sh.Orujov) (In Eng.)

52. Imrani, Z.T. Sustainable development of the tourism industry in Azerbaijan // – Cuba: Revista Universidad y Sociedad. – 2021. №13(1), – pp. 43-50. (couathors: G.R.Aghakishiyeva) (Web of Science) (In Eng.)

53. Imrani, Z.T. Analysis of wind-wave characteristics of the Caspian Sea based on reanalysis data // – Moscow: Russian

Meteorology and Hydrology. – 2022. Vol. 47, No. 6, – pp. 479-484. (couathors: S.H.Safarov, E.S.Safarov) (Web of Science) (In Eng.)

54. Imrani, Z.T. Methodological basis of zoning of tourism-recreation reserves and tourism potential of Gusar region of the Republic of Azerbaijan // – Dnipro: Journal of Geology, Geography and Geoecology. – 2021. №30(2), – pp. 379-388. (couathor: G.V.Valiyeva) (Web of Science) (In Eng.)

55. Imrani, Z.T. The role of tour operators and travel agents in the development of the tourism sector in Azerbaijan // – Izhevsk: Bulletin of Udmurt University. – 2021. Vol. 31, Issue 2, – pp. 209-215. (couathors: E.J.Karimova, K.Z.Zeynalova) (In Russ.)

56. Imrani, Z.T. Designing industrial zones and ecological problems in the guba district of the Republic of Azerbaijan // – Nizhnevartovsk: Bulletin of Science and Practice. – 2021. Vol.7, №8, – pp. 83-90. (In Eng.)

57. Imrani, Z.T. The main directions of sustainable socio-economic development of the Caspian littoral areas of the Republic of Azerbaijan and the existing environmental problems // – Dnipro: Journal of Geology, Geography and Geoecology. – 2021. №30(6), – pp. 652-665. (couathors: Sh.I.Mammadova, N.N.Hajiyeva, O.Y.Vysotskyi) (Web of Science) (In Eng.)

58. Imrani, Z.T. The role of natural resource potential in sustainable socio-economic development of mountainous regions of the Republic of Azerbaijan // India: International Journal of Development Research. – 2021. Vol. 11, №8, – pp. 49848-49854. (In Eng.)

59. Imrani, Z.T. Socio-economic and environmental aspects of the creation of industrial zones and industrial parks in the Republic of Azerbaijan // The XVII international scientific symposium “Karabakh: way to victory”. – Gothenburg: – 28 August, – 2021. – pp. 356-360. (In Aze.)

60. Imrani, Z.T. Comparison of the Azerbaijani education system with the us education system (XX-XXI centuries (1960-2015) // The XVI International Scientific Symposium “World Science: problems and innovations”. – Michigan: – 26 July, – 2021. – pp. 169-182. (couathor: S.Sh.Jafarov) (In Eng.)

61. Imrani, Z.T. Karabakh's tourism and recreation resources and the role of sports tourism in their development // V International Scientific and Practical Conference "Tourism and Recreation in the 21st Century: Problems and Prospects". – Baku: – 5 November, – 2021. – pp. 17-19. (couathor: G.A.Hidayatli) (In Aze.)

62. Imrani, Z.T. Current problems in the tourism services market in Azerbaijan and methods to overcome them // – Baku: Geography and natural resources. – 2022. №1(16), – pp. 95-101. (couathors: G.Ch.Bayramova, I.Y.Mammadova) (In Aze.)

63. Imrani, Z.T. Opportunities and prospects for the development of speleotourism in Azerbaijan // – Dnipro: Journal of Geology, Geography and Geoecology. – 2022. №31(2), – p. 293-301. (couathors: K.Z.Zeynalova, G.Sh.Mammadova, O.Y.Vysotskyi) (Web of Science) (In Eng.)

64. Imrani, Z.T. Study of the earthquakes impact on industrial facilities in the Republic of Azerbaijan using GIS Technologies // – Makhachkala: News of the Dagestan State Pedagogical University, series "Natural and Exact Sciences". – 2022. Vol.16, №3, – pp. 77-86. (couathor: A.E.Babakhanov) (In Eng.)

65. Imrani, Z.T. A study of caves and their speleotourism potential in Azerbaijan // – Baku: ANAS Transactions, Earth Sciences. – 2023. №1, – pp. 100 - 110. (couathors: K.Z.Zeynalova, G.A. Hidayatli) (Scopus) (In Eng.)

66. Imrani, Z.T. The current state of foreign trade relations of the Republic of Azerbaijan // 7th International EMI Entrepreneurship & Social Sciences Congress, – Tashkent: – 20-22 june, – 2022, – pp. 52-58. (coauthors: Z.N.Eminov, S.Sh.Jafarov) (In Eng.)

67. Imrani, Z.T. Regionalization of resort-recreational zones of Azerbaijan and possibilities of using them studios case: Gusar tourism-recreational zone // – Cuba: Revista Universidad y Sociedad. – 2023. №15(3), – pp. 554-561. (couathor: G.V.Veliyeva) (Web of Science/ Scopus) (In Eng.)

68. Imrani, Z.T. Regionalization of resort-recreational zones of Azerbaijan and possibilities of using them studios case: Gusar tourism-recreational zone // – Pushkino: Services in Russia and

abroad. – 2023. Vol. 17, №1(103) – pp. 147-155. (couathor: G.F.Asgarli) (In Eng.)

69. Imrani, Z.T. Constructive foundations of sustainable economic and geographical development of the investment environment and production spheres of Azerbaijan // – ula: Tula State University News. Earth Sciences. – 2023. Issue 2, – pp. 484-500. (Web of Science) (In Russ.)

70. Imrani, Z.T. Ethnos with turkish ancestry in the toponymic background of the territory of Azerbaijan // – Florida: Revista de Gestão Social e Ambiental. – 2023. Vol.1, №7, – pp. 1-10. (couathors: N.G.Babayev, A.R.Zakirova) (Scopus) (In Eng.)

71. Imrani, Z.T. Economic-Geographical Model of Sustainable Development in Manufacturing and Education // – Zagreb: International journal of innovation and economic development. – 2023. Vol.9, №1, – pp. 47-54. (couathor: S.Sh.Jafarov) (Scopus) (In Eng.)

72. Imrani, Z.T. Strategic objectives of sustainable development model in production and education // – Florida: Journal of law and sustainable development. – 2023. Vol. 11, №7, – pp. 1-14. (couathor: S.Sh.Jafarov) (Scopus) (In Eng.)

73. Imrani, Z.T. Determination of tourism and recreational potential by landscape planning method (on the example of Guba district)// – Tula: Tula State University News. Earth Sciences. – 2023. Issue 4, – pp. 158-170. (couathor: S.T.Kazimova) (Web of Science) (In Russ.)

74. Imrani, Z.T. Main directions of sustainable development in education // – Florida: Journal of law and sustainable development. – 2023. Vol.11, №7, – pp. 1-33. (couathors: S.Sh.Jafarov, Y.I.Aliyev) (Scopus) (In Eng.)

75. Imrani, Z.T. Ecotourism potential of Karabakh and Eastern Zangezur economic regions and methods to use it // – Baku: Geography and natural resources. – 2023. №2(20), – pp. 72-77. (In Aze.)

76. Imrani, Z.T. The importance of the internatıonal transport corridors // International scientific conference on “Science. Research.

Practice", – Tomsk, – 2023, – pp. 14-17. (coauthor: P.Sh.Orujov) (In Eng.)

77. Imrani, Z.T. Regional economic-geographic model of sustainable development // "Modern Eurasia: socio-geographical analysis" international scientific conference, – Ulan-Ude: – 10-19 September, – 2023, – pp. 86-91. (In Eng.)

78. Imrani, Z.T. Study of industrial production in Azerbaijan based on anamorphosis maps // 6th Intercontinental Geoinformation Symposium. – Baku: – 2023, – pp. 36-40. (In Eng.)

79. Imrani, Z.T. Prıorıty development areas of nature tourısm resources in Shakı-Zagatala economıc and geographıc regıon // – Oradea: Geojournal of Tourism and Geosites. – 2024. Vol.54, №2, – pp. 921-926. (couathors: A.I.Huseynzade, B.A.Bilalov) (Scopus) (In Eng.)

80. Imrani, Z.T. Possibilities of applying the cluster approach in the study of the stability of the regional territorial organisation of production areas // – Dnipro: Journal of Geology, Geography and Geoecology. – 2024. Vol.54, №33(1), – pp. 54-62. (couathors: Z.N.Eminov, E.E.Gasimova, O.Y.Vysotskyi) (Web of Science) (In Eng.)

81. Imrani, Z.T. Eco-geographıcal aspects of ınnovatıve modern approach to productıon areas // XII International Scientific and Practical Conference "Current Problems of Natural Sciences". – Петропавловск: – 2024. – pp. 126-131. (In Russ.)

The defence of the dissertation work will be held on 23 may 2025, at 11^{00} at the meeting of the BED 2.51 Disposable dissertation council of the Supreme Attestation Commission under the President of the Republic of Azerbaijan operating at Baku State University.

Address: AZ 1148, Baku city, St. Academician Z.Khalilov 23, Baku State University. E-mail: info@bsu.edu.az

The dissertation is accessible at the library of the Faculty of Geography of Baku State University.

Electronic versions of the dissertation work and its abstract are available on the official website www.geography.bsu.edu.az.

The abstract was sent to the required addresses on 22 April 2025.

Signed for print:14.04. 2025

Paper format: A5

Volume: 72249

Number of hard copies: 30