

# REPUBLIC OF AZERBAIJAN

*On the rights of the manuscript*

## ABSTRACT

of the dissertation for the degree of Doctor of Philosophy  
(Doctor of Science)

### **INNOVATIVE DEVELOPMENT DIRECTIONS OF THE NON-OIL SECTOR OF THE REPUBLIC OF AZERBAIJAN**

Speciality: 5312.01 - “General economy”

Field of science: 53 - Economic sciences

Applicant: **Khanim Yusif Aghayeva**

Baku – 2023

The work was performed at Azerbaijan Cooperation University.

**Scientific supervisor:** doctor of economic sciences, professor,  
**Qazanfar Salman Sulaymanov**

**Official opponents:** doctor of economic sciences, professor,  
**Khatira Mayil Huseynova**

Doctor of philosophy in economics,  
ass. prof. **Ibrahim Gadim Guliyev**

Doctor of philosophy in economics,  
ass. prof. **Ayatulla Suvahil Jabbarov**

ED 2.46 Joint Dissertation Council of the Higher Attestation Commission under the President of the Republic of Azerbaijan at Azerbaijan Cooperation University and Baku Business University

Chairman of the joint  
dissertation council:



Active member of ANAS,  
Doctor of economics, professor  
**Ziyad Aliabbas Samadzada**

Scientific Secretary of the  
joint dissertation council:



Doctor of philosophy,  
associate professor  
**Samira Yashar Mammadova**

Chairman of the scientific  
seminar:



Honored Worker of Agriculture,  
Doctor of economics, professor  
**Islam Haji Ibrahimov**

## GENERAL CHARACTERISTICS OF THE WORK

**The actuality of the research and the degree of problem development.** In order to build a constantly developing economy that meets international standards, it is first necessary to ensure stable and sustainable economic development of the country. It is in this case that it is possible to form a competitive innovative economy and manage it efficiently. Diversification of the national economy, increasing the per capita share of GDP, developing the non-oil sector, increasing human potential, forming an inclusive, innovative, and sustainable development economy is one of the priority issues currently ahead. Applying these criteria to all industrial sectors of our republic, including the enterprises of the machine-building industry, which is one of the leading sectors of our economy, is one of the urgent issues.

Despite the obstacles created since the 70s of the last century, under the leadership of the Great Leader, the creation of multi-faceted industrial enterprises in the Republic of Azerbaijan has begun. The national leader has always especially noted that industrial products that are in demand in the country should be produced domestically within the existing capabilities, competitiveness should be ensured through customs duties and taxes, as well as innovative production methods and modern standards must be met in order for them to be competitive in foreign markets. should be investigated.

As a continuation of this strategy, the head of state Ilham Aliyev's constant attention to the development of industries was reflected in the adopted decrees and laws, and work was carried out in this direction.

Azerbaijan is a country that is able to promptly respond to modern challenges and has the potential to constantly apply new development methods. In this regard, regular work is being carried out in our country in the direction of adapting infrastructure suitable for the development of digital economy and technologies, including the conditions of the Fourth Industrial Revolution.

On January 6, 2021, the Analysis and Coordination Center of the Fourth Industrial Revolution, established by the relevant decree of the President of the Republic of Azerbaijan, began to operate with the aim of strengthening the position of our country in accordance with the

new realities, making greater use of the opportunities of advanced technologies, and establishing cooperation with organizations operating in this field.

Based on this necessity, the Decree of the President of the Republic of Azerbaijan on the approval of “Azerbaijan 2030: National Priorities for socio-economic development”, “State Program for the development of industry in the Republic of Azerbaijan for 2015-2020”, “In the Republic of Azerbaijan 2009-2015 National Strategy for the Development of Science in 2014”, “State Program of Socio-Economic Development of the Regions of the Republic of Azerbaijan in 2014-2018” and “Azerbaijan-2020: Vision of the Future” development concept, and finally “Strategic Roadmap for the perspective of the National Economy of the Republic of Azerbaijan “, other programs and orders were approved.

Social economic development of Azerbaijan, improvement of market mechanisms , expansion of innovation, investment and foreign-economic activity , efficient use of economic potentials of industries and regions , G.Z.Yusbashiyeva, B.A.Dadashov, M.M.Allahverdiyev, R.K.Isganderov, T.A.Guliyev, T.Naliyev, T.A.Huseynov, E.M.Hajizade, S.A. Samadzade, V.T.Novruzov, N.B.Boyukkishi, F.H.Gasimov, M.C.Atakishiyev, K.A.Sahbazov, R.M.Cjabiyeve, G.C.Imanov, Z.Najafov, E.Y.Mammadov, S.H.Haqverdiyeva, G.A.Safarov, Q.S.S.Suleymanov, etc. has been studied at the appropriate level in his works.

Foreign scientists Y.Schumpeter, B.Tviss, D.Bell, Y.B.Lenchuk, S.M.Valdaydev, S.Y.Glazer, Y.A.Muravyova, N.D.Kondratyev, N. Nelson, V.I. Kushlin, AA Dinkin, N.I. Ivanova, A.A.Akimov, V.O.Kolosov, V.N.Perekhodov, V.Y.Kolle, V.Abramov, Y.Kurenkov, Y.Elenova, P.Zalov, E.Smirnov, F.Fatkhudinov and others valuable research works has taken Problems related to ensuring sustainable economic development of the enterprise I.Ansoff, R.Akoff, R.Johnson, B.Kolas, D.Cleland, D.Morisey, P.Perstner, D.Forrester, etc., were reviewed in the works of foreign authors and others.

In addition, the above-mentioned problems require the development of new approaches to ensure the sustainable economic development of the engineering industry.

The relevance of the problem, its insufficient theoretical elaboration determined the choice of the topic, subject, purpose, issues and research structure of the dissertation.

**The object and subject of the research.** The machine-building industry of Azerbaijan, including the Surakhani Machine-Building Plant and industrial parks of oil machine-building for a long time, constitute the object of the research. The subject of the study is the creation of organizational and economic mechanisms related to the provision of sustainable economic development of machine-building enterprises.

**Goals and tasks of the research.** The main goal of the work is to develop theoretical, methodical hypotheses and practical recommendations on ensuring its sustainable economic development, based on the experience of studying the current problems faced by the machine-building industry in order to increase their activity. To achieve this goal, the following specific tasks have been set for the research work:

- To determine the essence and content of the concept of “sustainable mechanisms of the economic development of the machine-building industry” based on the study of existing approaches in the national and foreign literature and economic practice;
- Study of the factors and conditions that determine sustainable economic development of industries in modern conditions;
- To propose new methodological approaches for the analysis of sustainable and competitive economic development of machine-building industries;
- To determine the main strategic directions of ensuring the economic development of machine-building industries.
- To determine the application possibilities of modern innovations.
  - determination of investment prospects in industrial areas .
  - The potential impact of human resources on the development of the field.
  - Determining the industrial potential of the territories freed from occupation and evaluating the development strategy

**Research methods** are modern economic theories, national and foreign experience on the considered issues, monographs, materials of periodicals. The research work was carried out on the basis of systematic approach methods. That is, statistical, logical analysis, expert evaluations and mathematical modeling were used to solve the issues. Research information base. The information base of the research is made up of the actual materials of the State Statistics Committee of Azerbaijan, the Ministry of Economy and other institutions, statistical data, reports and reports of the management bodies of relevant fields, related scientific and research institutions, materials collected from the studied industrial enterprises, periodical press, magazines and “Internet” information in this direction. contane.

**Scientific novelty of the research:**

- research of the theoretical and methodological aspects of the organization and management of the modernization of production funds of the machine-building industry;
- classification of the factors and conditions that determine the sustainable economic development of the studied area according to the source of their origin, the degree of influence by the enterprise and the direction of influence of the factors;
- analysis of the main macroeconomic indicators that determine the current potential of enterprises of the engineering industry;
- comprehensive analysis of industrial park development indicators;
- determining the import potential of industrial parks;
- directions for weakening the risk factors determined on the basis of the GZIT analysis of industrial areas;
- design of the stability analysis algorithm of the machine-building enterprise;
- determination of methodical recommendations and scenario approaches for the formation of a sustainable economic development strategy of machine-building enterprises, taking into account the characteristics of their activity in the market of complex machine-technical products;
- design of a model that determines the degree of influence of the factors that determine the production volume of the engineering industry;

- the main directions of sustainable economic development strategy;

- analysis of the factors that determine the formation of the machine-building industry in the territories freed from occupation;

**The scientific novelty of the research** consists of the following:

- The concept of “sustainable economic development” is defined as a development characterized by a stable growth of the quantitative and qualitative results of its production-economic activity under conditions of efficient growth and quality improvement of all production resources used. In accordance with the organization and management of the modernization activity of production funds in machine building, the theoretical-methodological aspects were preferred to be comprehensively researched in accordance with the market demand.

- The classification of the factors and conditions that determine the sustainable economic development of the area according to the source of their origin, the degree of influence by the enterprise and the direction of influence of the factors has been prepared.

- Methodical recommendations and scenario approaches, taking into account the characteristics of their activity in the complex machine-technical product market, have been developed and prepared for the formation of a sustainable economic development strategy of machine-building enterprises;

- A model has been built that determines the degree of influence of the factors that determine the production volume of machine-building industry enterprises.

- A strategy has been developed to stimulate sales in the machinery and equipment market.

- An algorithm for the analysis of economic development and production stability of the analyzed areas has been developed

- The main strategic directions of ensuring sustainable economic development in industrial areas have been determined based on the systematization of problems based on the following principles

- Studies have been conducted in the direction of stimulating the export potential of industrial parks.

- The industrial possibilities of the regions freed from occupation were studied and directions for the formation of new industrial

possibilities were proposed.

**Theoretical and practical significance of the research.** The results, propositions, and empirically significant proposals and recommendations summarized in the work are important as a basis for the development of the machine-building industry, the production of competitive products, ensuring its stability, determining the factors hindering the development of the field, and distinguishing the current state of the field in the studied direction. The main provisions of the research are in the development stage of the machine-building industry, in the process of increasing competitiveness, in the determination of products that can be produced with high economic and technical parameters for entering the market, in the organization of marketing of products in the domestic market, in the study of the problems of this field, in the compilation of targeted development programs and other documents of the listed field, industry can be used at various stages of the personnel training and education process in the direction of the fields.

The mentioned can be considered an indicator of the theoretical and practical importance of the completed dissertation work.

**Approbation and application.** 21 scientific works of the applicant on the subject of the thesis work, including 8 articles, 13 conference materials, of which 3 articles and 1 conference material were published abroad in journals recommended by the Higher Attestation Commission. The main provisions of the research are the methods of assessing the sustainable economic development of the enterprise (news of ANAS, 2014), the ways of forming the sustainable development strategy of the enterprise (Institute of Economics of ANAS, 2014), the mechanisms of determination of the competitive and sustainable economic system of industrial enterprises (ASNSU, 2016), Problems The articles entitled “Sustainable development of oil machine-building enterprises in Azerbaijan and innovative ways of their solutions” (Ukraine 2017), Investment problems of sustainable economic development of oil machine-building enterprises in Azerbaijan (Russia 2017), Defining directions of economic development policy of Karabakh region (USA 2021) have been published.

In addition, the main directions of the state's innovation strategy in the economic development of the applicant's country (Baku 2014), Теоретические методологические основы информационных кластеров в производственных (Russia 2014), Study of sustainable



and sustainable economic development of industrial enterprises in the modern era. (Chamber of Auditors, 2017), ways to create a sustainable innovative development model of the enterprise (ARDIA, 2015), defining directions of the economic development policy of the Karabakh region (Odlar Yurdu University, 2021) conference materials were published. The use of theoretical-methodological aspects and practical recommendations of the research allows the management bodies of the enterprise to take constructive measures in the field of ensuring its sustainable economic development. The importance of the work lies in the further development of the theory of sustainable economic development of the enterprise and the delivery of the research to specific methodological recommendations for ensuring the sustainable economic development of the machine-building enterprise. The results of the scientific work found their use in the activity of “Surakhani Machine Building Plant”.

The main theoretical and practical results of his scientific work were carried out on enterprises included in the machine-building sector. The materials of the research are used in the lectures on “Economics of the enterprise” and “Macro-micro economics” of Azerbaijan State Oil and Industry University.

**Name of the organization where the research is carried on.** Dissertation work was performed at Azerbaijan Oil and Industry University.

**The total volume of the dissertation with a sign, indicating the volume of the structural units of the dissertation separately.** The dissertation consists of an introduction, three chapters, 9 paragraphs, a conclusion and a list of references. Introduction 17392 characters, chapter I 47146 characters, chapter II 87469 characters, chapter III 48034 characters, conclusion 12741 characters, reference list 13245 characters. The total volume of the dissertation consists of 249560 characters. Dissertation mark number is 212782, excluding tables, pictures, list of used literature and appendices.

## THE MAIN CONTENT OF THE RESEARCH

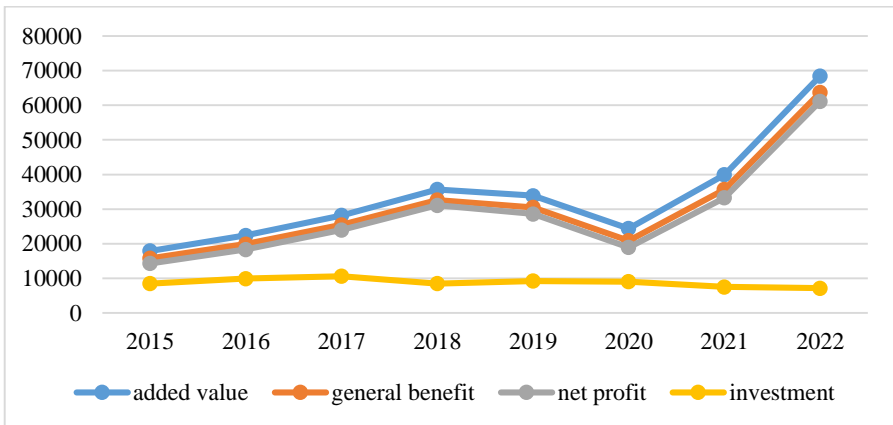
**Introductory** part of the dissertation relevance and degree of development of the topic, object and subject of the research, goals and tasks of the research, methods, main propositions defended, scientific novelty of the research, its theoretical and practical importance, approval and application, the overall scope of the work were explained.

**In the first chapter**, dedicated to the theoretical and methodological aspects of the economic development of the industrial sector, the theoretical and methodological foundations of the sustainable economic development of the field and its specific characteristics are determined. Here, the level of influence of sustainable economic activity on the development of the field and its role in increasing its competitiveness are determined.

Recent studies have clearly shown the implications that a sustainable economy can have on businesses. In addition, the research works of many scientists about the economic development mechanisms of the enterprise were widely used here.

The conducted research allows to redefine the concept of sustainable economic development of the enterprise. In our opinion, it is necessary to understand the stable growth of the economic results of its production and economic activity under the conditions of efficient growth and quality improvement of all used production resources under the sustainable economic development of the enterprise. The difference of the given concept from existing approaches is, firstly, the growth of the economic results of the enterprise's activity, secondly, the efficient growth of not only financial, but also production resources, and thirdly, the focus is on the need to improve their quality. Of course, the given concept also implies conducting future research (in the next sections of the work) on the selection of indicators that can adequately characterize the economic results of enterprise activity, as well as the qualitative improvement and efficient growth of all used production resources, but in our opinion, it is the sustainable development of enterprises. will allow to more fully formulate methodological and practical assumptions on ensuring economic development.

**In the second chapter**, dedicated to the assessment of the current state of the economic development of industries , the analysis of the macro-economic indicators of the industrial sector was carried out. This analysis is reflected in the graph below. During the analysis, the development of the industry with little trends from 2015 to 2018, a decrease in added value, gross profit and net profit indicators in 2018-2020, and in 2021-2022, even if investments in fixed capital decrease, added value will be 68434.7 million AZN, total profit increased to 63681.8 million AZN, and net profit increased to 61154.5 million AZN. The share of the industry in the country's economy increased to 51.1% in 2022 according to the indicators of added value, to 65.9% according to the total profit indicator, and to 67.3% according to the net profit. Investments in fixed capital made up 40.1% for the country.



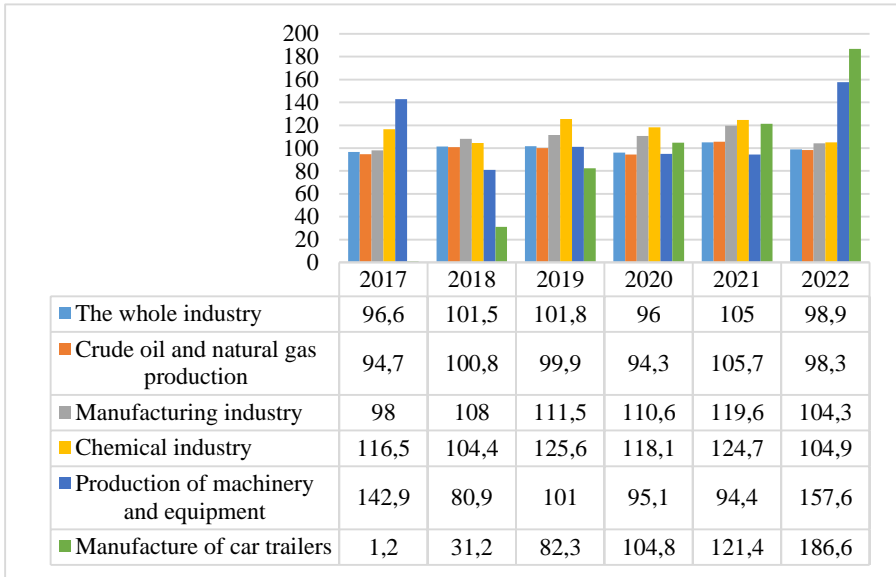
**Graph 1. Macroeconomic indicators of the industrial sector**

*Source: Compiled by the author<sup>1</sup>.*

Analyzing the statistical data, it can be observed that the number of enterprises related to oil equipment and machine building and the number of employees within the industrial sectors in our country indicate the contribution of the work done and the adopted state programs.

<sup>1</sup> Azerbaijan industry State Statistical Committee of the Republic of Azerbaijan. Statistical compilation. Baku, 2023. p. 11

In 2005, the total number of industries was 2621, the share of state enterprises was 645, the share of the private sector was 1976, the total share of the processing industry was 2010, the number of industrial enterprises producing machinery and equipment was 58, and the number of those producing cars and trailers was only 6. In 2010, this indicator was 2,650 for all industries, state-owned 549, the share of the private sector 2,101, and a decrease was observed in the processing industry, the total number was 1,909, the number of industrial enterprises producing machinery and equipment rose to 72, and those producing cars and trailers and the number was only 7 enterprises. In 2015, the total number of industries was 2583, the share of state enterprises was 577, the share of the private sector was 2006, the total share of the processing industry was 1778, the number of industrial enterprises producing machines and equipment was 59, and the number of enterprises producing cars and trailers was only 5 has done In 2020, the total number of industries is already 3389, where the share of state enterprises is 556, and the share of the private sector is 2833, the share of the processing industry as a whole is 2515, the number of industrial enterprises producing machines and equipment is 82, and the number of those producing cars and trailers is 13 has risen. In 2021, the total number of industrial areas increased by 8.2% to 3,689, the number of state enterprises was 564, the number of enterprises operating in the private sector was 3,125, the number of processing industry enterprises was 2,777, the enterprises producing machines and equipment were 84, and the number of automobile and trailer manufacturers was 12, other transport 13 manufacturers of vehicles, and 252 companies that install and repair machines and equipment. In 2022, these indicators will be 4,095 for general industrial enterprises, 3,130 for processing industry, 92 for machinery and equipment manufacturing enterprises, 14 for automobile and trailer manufacturing enterprises, 16 for other means of transport, and enterprises engaged in the installation and repair of machinery and equipment. was 309. Here, the share of state enterprises was 561, and the share of the private sector was 3534 enterprises.



**Graph 2. Volume indices of industrial output by types of economic activity**

*Source: Compiled by the author<sup>2</sup>.*

In 2020, 10,900.5 million manats, i.e. 29.3% increase, in the industry as a whole, 1,873.7 million manats, a 33.2% increase in the public sector, 9,047.1 million manats, a 32.1% increase in private industries, 6,474 million manats in the mining industry, 29.4 % growth, 3967.9 million manats in the processing industry, 35.5% growth, 309.6 million manats in the chemical industry, 46.8% increase, 63.3 million manats in the production of machinery and equipment, 25.2% increase, and 30.7 million manats in the production of cars and trailers, 29.1% decrease was observed. However, the trend analysis shows that in some years the growth was higher than in 2020. Even in the production of cars and trailers, growth in other years was higher than in 2020, and in 2016 and 2018 it was higher than in 2015. However, in 2021-2022, there is a high increase in all indicators

<sup>2</sup> Azerbaijan industry State Statistical Committee of the Republic of Azerbaijan. Statistical compilation. Baku, 2023. p. 18.

compared to previous years. Even the production of cars and trailers has increased by 42.4% compared to 2020. In the production of machines and equipment, an increase is observed every year.

Organizational opportunities provided in industrial parks and neighborhoods serve to facilitate activities here. Thus, the “one-stop shop” principle, providing assistance in obtaining technical conditions, permits and licenses, providing consulting services and trainings, organizing meetings with business partners and local government officials are part of the support policy.

6933.1 manats funds are planned to invest to industry areas. Currently, only 6475.0 mln. manats funds were invested. This is 93.4% of the total amount. For 2022, 88.5 million manat funds have been allocated in this direction. In the future, it is planned to spend another 458.1 million manats for the development of this field.

When talking about the export potential of Industrial Zones, it should be noted that more Industrial Parks produce exported products here. Thus, the total volume of export by industrial zones is 2883.7 million manats. Of this amount, 2883.3 million manats belong to industrial parks and 0.4 million manats to Neftchala Industrial District. Among the industrial parks, Sumgayit Chemical Industrial Park exports the most products with 2,674 million manats. Mingachevir Industrial Park stands at the next level, exporting 188 million manats. Balakhani Industrial Park, which exports 18.31 million manats, is among the exporters of products. Garadagh Industrial Park exported products worth 3 million manats.

In 2021, the export volume of industrial zones totaled 959.3 million manats. Sumgayit Industrial Park exported 877 million manats, Mingachevir Industrial Park 77 million manats, Balakhani Industrial Park 5.25 million manats.

In 2022, the total export volume of industrial zones increased by 13% and amounted to 1083.7 million manats. Among the Industrial Districts, only the Neftchala Industrial District has 0.4 million manat export products. 1,083.4 million manats are allocated to industrial parks. Sumgayit Industrial Park increased by 17.8% to 1033.3 million manats, Mingachevir Industrial Park increased by 42.9% to 44.0

million manats, and Balakhani Industrial Park increased by 15.4% to 6.06 million manats produced.

**Table 1.**

**The volume of exports by industrial parks and their share in the non-oil sector**

№	Industrial parks	million for 2020. with manats	million for 2021. with manats	million for 2022. with manats	Share in non-oil sector exports, in %
1	Sumgayit Chemical Industrial Park	336.7	877.0	1033.3	28.1
2	Mingachevir Industrial Park	15.0	77.0	44	1.2
3	Balakhani Industrial Park	1.7	5.25	6.06	0.2
4	Garadag Industrial Park	3.1	-	-	0.8
5	Neftchala Industrial District	-	-	0.38	0.0

*Source: Compiled by the author<sup>3</sup>.*

When considering the production indicators of machine-building industry, it is determined that in 2020, 352.3 mln. manats, and in 2021, 430.7 million manats products were produced, compared to the previous year, the production of other vehicles increased by 47.0%, the production of cars, trailers and semi-trailers increased by 35.7%, and the production of machinery and equipment decreased by 5.1%. Compared to the previous year, 42.5% less than the previous year, 4.3 thousand units of well pumps, 76.9% less than 42.4 tons of fountain fittings, 65% less than 170 manjanak machines, 72.1% less than 4.4 thousand units of fire extinguishers , 93.6% less 35 pumps for liquids were produced.

In 2020, Ganja Automobile Plant, which is one of the important enterprises in the field of automobile production, continued its activities, 36.7 mln. manats worth of products were produced. During the year, the plant produces 300 MTZ tractors and 19 MTZ trailers, 101 special purpose KAMAZ vehicles, 40 combine harvesters, 2 MAZ buses, 1 special purpose MAZ vehicle, 9 tractor equipment, 45 domestic waste containers, 13 medical container was produced.

<sup>3</sup> [www.economiczones.gov.az](http://www.economiczones.gov.az)

“Belarus” tractors of various brands produced here are mainly directed to the needs of the country's agriculture. Since the beginning of production, more than 11.3 thousand tractors have been released at the enterprise.

Product release was continued by other enterprises of car production in the country. Thus, 1832 units of “Khazar” and 101 units of “Nazlifan” passenger cars were produced at the Neftchala and Nakhchivan automobile factories, respectively. In addition, the cost of the project jointly implemented by “Azermash” OJSC with the Russian company “GAZ Group” in Hajigabul Industrial District is 14 mln. The construction of the factory with the annual production capacity of 1000 manats has been completed and the equipment has been installed.

Baku Shipyard will continue its activities in 2020 and, on the basis of the order of “Azerbaijan Khazar Sea Shipping” CJSC, will build two “RoPax” type rare ferry ships and three oil tankers, renew and repair 12 ships and platforms, BP Exploration (On the basis of the order of Shah Deniz) Limited, he continued the implementation of the project of receiving, storing and loading pipes. The plant delivered the “Azerbaijan” ferry to the customer in 2020, delivered another ferry and two tankers in stages, and the construction of another tanker was completed by the end of 2022.

“Azneftmash” OJSC, located in Mingachevir, continued its activity during the year and made 4.1 mln. 5 units of CKD-3 manganak machine, lifting device (VIIT1-50), 11 units of 25 cubic meters (25 tons) tanks, 8 units of 40 cubic meters (40 tons) tanks, lifting device LPT-8, etc. produced machine-building products and provided related services.

When analyzing the efficiency indicators of the Surakhani Machine Building Plant, which is our main research object, it is noticeable that the enterprise with a net profit of 284 thousand 80 manats in 2021, its net profit in 2022 increased by 32.5% compared to 2021 and amounted to 376 thousand 384 manats. It is expected to be offered for privatization after the reconstruction and investment measures applied to the Surakhani Machine-Building Plant.



**Table 2.**

**The efficiency indicators of the Surakhani Machine-Building Plant are min. manats**

Indicators	2018	2019	2020	2021	2022
Basic operating income	5921400	8729398	4128170	5788775	7685093
Taxes	75349	167240	88110	71021	94096
Profit	89912	668962	440549	284080	376384
Retained earnings	1525123	117248	225847	194183	249567
Special funds	4377213	4744914	4744914	4744914	4744914
Reserve funds	1538526	1854037	3205746	3156272	4489245

*Source: Compiled by the author<sup>4</sup>.*

During the reporting period, the operating costs of the plant, whose main operating income was 7 million 685 thousand, were equal to 5 million 995.7 thousand manats. In this period, the total profit of the plant was 1 million 689.3 thousand manats, which is 21.5% more than in 2021. “Surakhani Machine-Building Plant” OJSC paid 94 thousand 96 manats in profit tax. In 2022, the volume of the plant's funds has decreased significantly. So, last year, the volume of the plant's funds decreased 79 times and amounted to 49 thousand 509 manats. At the end of 2021, the plant had 3 million 923 thousand 103 manats funds.

In 2022, the total assets of “Surakhani Machine Building Plant” OJSC decreased by 0.9% compared to 2021 and amounted to 9 million 814 thousand manats. During this period, the volume of liabilities decreased by 2.9% and was equal to 4 million 762.4 thousand manats.

As of January 1, 2023, the total capital of “Surakhani Machine-Building Plant” OJSC was 5 million 51.5 thousand manats. Currently, 359 people work in the enterprise.

**In the third chapter**, called development of the basic model of sustainable economic development of industrial enterprises , during the study of the sustainable economic development characteristics of the enterprise, its financial stability is determined by traditional methodology, especially by studying the general characteristics of the enterprise balance sheet, by liquidity analysis of financing sources

---

<sup>4</sup> Financial statements of the Surakhani Machine-Building Plant

with working capital, financial ratios, profitability and should be evaluated with the analysis of business activity.

Thus, the general scheme of the analysis of the sustainable economic development characteristics of the machine-building enterprise can be presented as follows.

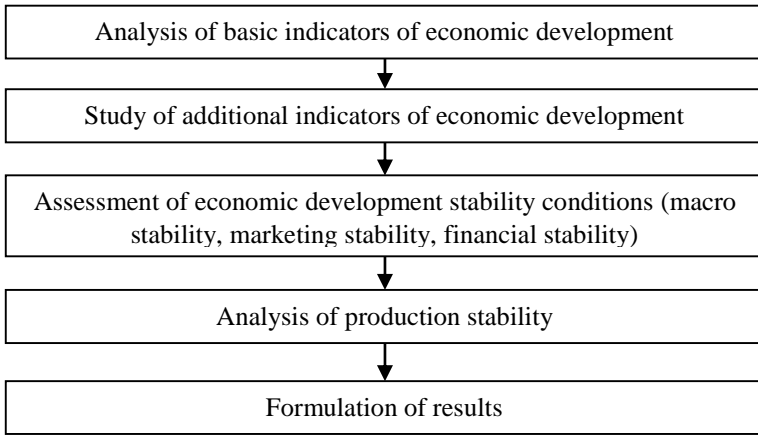
At the first stage, it is necessary to study the development characteristics of the enterprise, its direction, and the speed of change. For this, it is appropriate to examine the basic criterion indicator (dynamics of sales volume) and a series of additional indicators, the profitability of the enterprise. The given block allows to evaluate the development vector of the enterprise and give it a general characteristic.

Each development must be based on certain conditions. Therefore, there is a need to assess the conditions of economic development and the existence of blocks of analysis (the study of the macro-sustainability of the field ; the analysis of the financial and marketing stability of the enterprise).

A distinctive feature of the presented approach is that the analysis of production stability is included in a separate, particularly important block of analysis. This is due to the fact that many indicators of this block (volume, structure, condition, dynamics of fixed assets, availability, composition and movement of labor resources, etc.) determine not only the retrospective characteristics of the sustainable economic development of the enterprise, but also the forecast.

The given scheme of the analysis allows to form a system of indicators characterizing the sustainable economic development of the enterprise. The given system of indicators, grouped according to the above-mentioned blocks, is presented in scheme 1.

The main feature of the indicators given in the table is that the conditions of sustainability, in our opinion, the characteristics of development to which the net indicators of the growth trends of product production, the volume of income, the growth trends of commodity production (both chain and basic), fixed and working capital, and the average number of lists belong. completed with In our opinion, these indicators sufficiently characterize the direction of development.



**Scheme 1 . Analysis algorithm of sustainable economic development of a machine-building enterprise**

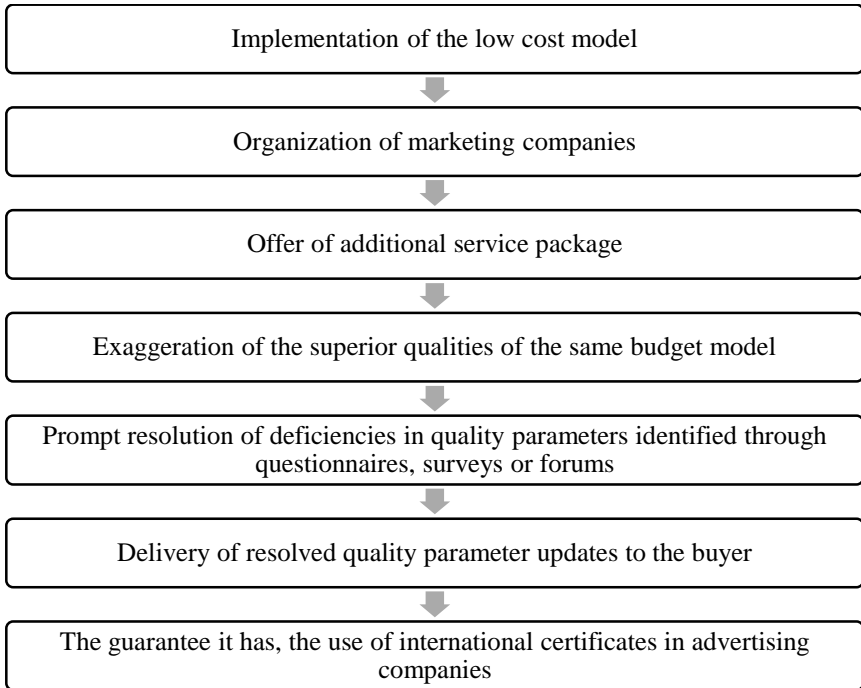
*Source: compiled by the author.*

Following the current legislation of the Republic of Azerbaijan and the development trends of the engineering fields in the world practice, the state support for this field, the participation of financial industry groups, and the possibility of achieving high progress with the application of new technologies are inevitable. Because these are the important factors for the modernization of the field.

Based on the ideas written in the table below, an algorithm for stimulating product sales is proposed.

When purchasing such products, people's maximum rational decision-making cannot be ignored, therefore, during the stimulation of product sales, it is important to highlight the product's main quality indicators or to achieve quick elimination of any defects that appear in the main quality indicators, and to bring a better quality product to the market. Finding out which parameters of the product the buyer is most dissatisfied with and focusing on it will lead to less negative opinions being voiced in the forms opened about the product in modern times. Because recently, in addition to advertisements in social networks, certain forms are opened with the participation of users of certain products. Sometimes producers themselves act as organizers of such forms. Product quality parameters discussed in these forms become a

very important source of information when making a rational decision. Based on the information collected from these forms, making changes to the quality parameters of the product and presenting these changes to the buyer will send signals about the development of the product in a positive direction.



**Scheme 2 Algorithm of the sales stimulation strategy in the machine equipment market.**

*Source: Compiled by the author*

As we know, for the production of some products, there is a condition of having certain certificates and licenses. Sometimes manufacturers get international certificates during participation in certain foreign exhibitions. The use of such certificates in advertising companies and the presentation of these certificates under large titles on their official website are also factors influencing the buyer's decision.

Studies show that as the main indicator of the economic development of machine-building enterprises, as well as machine-building areas as a whole, we can take 1) Product production volume (Y1) and 2) the total volume of all products produced in machine-building areas (Y2). We will use the Y2 indicator because in such enterprises, in addition to machine-building products, other auxiliary or intermediate products are also produced. According to the Cobb-Douglas function, both Y1 and Y2 depend mainly on fixed capital (K), labor (L) and technology (A):

$$Y1_t = A * K_t^\alpha * L_t^{1-\alpha} \quad (1)$$

Of course, modern theories of economic growth prove that there are other factors that affect the volume of production. For example, entrepreneurship, public administration, economic liberalism, management and other factors also affect the volume of production. Here, as a quantitative indicator of labor, we use 1) the nominal volume of wages of workers operating in the field of machine building (x1); 2) the value of the main funds as a quantitative indicator of the main capital (x2); 3) Volume of working capital (x3); 4) The volume of investments in fixed capital (x4); 5) Expenditure on technological innovation (x5) has been deducted. It should be noted that the data on these indicators were obtained from the statistical database of the State Statistics Committee of the Republic of Azerbaijan.

Before determining the relationship between indicators Y1 and Y2 and indicators X1, X2, X3, X4 and X5 with empirical calculations, it should be noted that the mechanism of the impact of the volume of investments in fixed capital (x4) on the volume of production is realized through fixed capital. Also, the human capital factor, which can be considered a quantitative indicator of the knowledge and skills of specialists working in the engineering sector, is included in the total amount of wages. Therefore, we consider it acceptable to perform calculations in two options. The first is the identification of short-term relationships between these indicators through simple linear regression analyses. The second is to enter the main indicators reflected in the Cobb-Douglas function into the model and determine the multivariate regression relationship through logarithmization. So we will use the following models:

$$\begin{aligned}
Y1_t &= \beta1_1 + \beta1_2 * X1_t + u1_t \\
&\dots \\
Y1_t &= \beta6_1 + \beta6_2 * X6_t + u6_t
\end{aligned}
\tag{2}$$

It should be noted that the search for double regression relationships based on equations (2) depends on the stationarity of the time series included in the equations. We will use the unit root test (or Dickey-Fuller test) when calculating the stationarity of time series. At this time, checking the stationarity 1) level; 2) will be calculated for the first difference. For both cases, a) there is no intersection and no trend; b) where there is an intersection, but there is no trend; c) will be checked for cases where both the intercept and the trend exist. It should be taken into account that the H0 hypothesis is not fulfilled in the simple regression relationship and the coefficient of determination is high, as well as the Durbin-Watson coefficient is around 2, it does not mean that the model is adequate. In such a model, relationships can be “false”. Therefore, we must also check the stationarity of the time series for which the regression relationship is sought. Table 3 shows the stationarity of time series Y1<sub>t</sub> and Y2<sub>t</sub>, as well as time series x<sub>1t</sub>, X2<sub>t</sub>, X3<sub>t</sub>, X4<sub>t</sub>, X5<sub>t</sub>, and X6<sub>t</sub>. Here, stationarity of order I(0), I(1) and I(2) was checked for all three cases, i.e. a) no intercept and no trend, b) no intercept and no trend, and c) both intercept and trend. .

Thus, it can be seen from the table that only the time series Y2<sub>t</sub> is stationary to degree I(0) if there is both a cross section and a trend. The time series X5<sub>t</sub> is stationary if there is no intercept or trend, and if there is an intercept but no trend. And the time series X6<sub>t</sub> is stationary when there is an intercept but no trend, and when there is both an intercept and a trend. The first differences of all indicators included in the study are stationary in all cases where there is no cross section and no trend.

Except for the time series X2<sub>t</sub>, other time series are also stationary when there is an intersection and there is no trend. These time series are stationary both when there is an intercept and no trend, and when there is an intercept but no trend.

**Table 3**

**Stationarity of time series  $Y1_t, Y2_t, X1_t, X2_t, X3_t, X4_t, X5_t,$  and  $X6_t$**

	For level			For the 1st difference			For the second difference		
	Intersection and trend or not (-;+)	Intersection and trend or not (-;+) (intercept)	Trend and intercept	Intersection and trend or not (-;+)	Intersection and trend or not (-;+) (intercept)	Trend and intercept	Intersection and trend or not (-;+)	Intersection and trend or not (-;+) (intercept)	Trend and intercept
$Y1_t$	-	-	-	I(1)	I(1)	-	I(2)	I(2)	I(2)
$Y2_t$	-	-	I(0)	I(1)	I(1)	-	I(2)	I(2)	I(2)
$X1_t$	-	-	-	I(1)	I(1)	-	I(2)	I(2)	-
$X2_t$	-	-	-	I(1)	-	-	I(2)	I(2)	I(2)
$X3_t$	-	-	-	I(1)	I(1)	I(1)	I(2)	I(2)	I(2)
$X4_t$	-	-	-	I(1)	I(1)	I(1)	I(2)	I(2)	-
$X5_t$	I(0)	I(0)	-	I(1)	I(1)	I(1)	I(2)	I(2)	I(2)
$X6_t$	-	I(0)	I(0)	I(1)	I(1)	-	I(2)	I(2)	-

*Note: calculated by the author using the eViews software package*

Thus, taking into account in which cases these time series are stationary, we can check the adequacy of simple regression relationships between them.  $Y1_t, X1_t, X2_t, X3_t, X4_t, X5_t, X6_t$  The results of simple regression analysis between time series are given in table 2. According to the obtained results,  $Y1$  is only  $X5_t$  in time order

There is a significant regression relationship between the time series. The coefficient of determination of the simple regression relationship between  $Y1$  and  $X6_t$  is very small and the presence of such a relationship can be ignored (table 4).

**Table 4**

**Results of simple regression relationship between Y1 and other indicators**

	(Cost of fixed assets) million Man	Working capital mln.man	The volume of cumulative investments in fixed capital is mln. Man	Spending on technological innovations mln. Man
	$X_{3t}$	$X_{4t}$	$X_{5t}$	$X_{6t}$
$R^2$	0.7	0.8	0.4	0.004
Number of observations	16	16	16	16
$\beta_1$				
coefficient	-10,279	-30,771	100,533	151,720
Std error	29,745	22,018	26,073	37,173
t-Statistics	-0.342	-1,397	3,855	4,081
Prob.	0.734	0.184	0.0017	0.001
Number of observations	16	16	16	16
$B_2$				
coefficient	0.347	87,989	2,374	677,077
Std error	0.057	9,608	0.846	2766,886
t-Statistics	6,069	9,157	2,804	0.244
Prob.	0.0000	0,000	0.014	0.810
Durbin-Warson stat	1.4	1,2	0.765	0.402

*Note: calculated by the author using the eViews software package.*

Although the dependence of the volume of production on the volume of fixed assets in machine-building enterprises and in the mining sector as a whole exists in the short-term period, the non-stationarity of the time series allows us to conclude that the dependence between these indicators is valid not for the short-term period, but for the long-term period. The same result can be claimed for working capital and for the volume of cumulative investments in fixed capital.



The stationarity of the time series we considered above at the I(1) and I(2) levels allows us to look at the pairwise regression relationships between these indicators. Calculations show that although these indicators are stationary in two cases - a) there is no intersection and no trend, b) there is an intersection, but there is no trend, there is no double regression relationship between them (table 5).

**Table 5.**

**Results of simple regression relationship between  $Y_2$  and other indicators**

		(Also the location of fixed assets) million man	Working capital mln.man	The volume of cumulative investments in fixed capital is million man	Expenditures on technological innovations are million
		$X_{3t}$	$X_{4t}$	$X_{5t}$	$X_{6t}$
$Y_2$	$R^2$	0.79	0.75	0.64	0.022
	Number of observations	16	16	16	16
	$\beta_1$				
	coefficient	6,931	6,488	181.182	288,484
	Std error	44,805	50,814	34,136	64,703
	t-Statistics	0.154	0.127	5,307	4,457
	Prob.	0.879	0.900	0.0001	0.0005
	Number of observations	16	16	16	16
	$\beta_2$				
	coefficient	0.640	144.90	5,582	2731,282
	Std error	0.086	22,174	1,108	4816,004
	t-Statistics	7,425	6,534	5,035	0.567
	Prob.	0,000	0,000	0.0002	0.579
	Durbin-Warson stat	2.31	0.71	1.31	0.45

*Note: calculated by the author using the eViews software package*

Thus, it is more appropriate to use the Cobb-Douglas function rather than a simple regression equation between these indicators or their first differences. In this case, logarithmizing both sides of equation (1),

$$\log Y_1 = \log A + \alpha * \log K + (1 - \alpha) * \log L \quad (3)$$

Calculation of both bivariate and multivariate regression relationships based on equation (3) suggests that there is a strong relationship between these indicators (table 6). The main result is that the production volume in the machine-building sector is positively dependent on the value of fixed assets, turnover volume, and cumulative investments in fixed capital.

**Table 6**

**Results of a simple regression relationship between  $\Delta Y_1$  and changes in some indicators**

	$\Delta x_{3t}$ (Also location of fixed assets) million Man	$\Delta x_{4t}$ Working capital mln. Man
R <sup>2</sup>	0.004	0.49
Number of observations	16	16
$\beta_1$		
coefficient	13,292	4,321
Std error	14,707	8,978
t-Statistics	0.903	0.481
Prob.	0.382	0.003
$\beta_2$		
coefficient	0.049	82,240
Std error	0.212	22,830
t-Statistics	0.231	3,602
Prob.	0.820	0.003
Durbin-Warson stat	2.0	1.8

*Note: calculated by the author using the eViews software package*

The multivariate regression analysis between Y1 and the indicators mentioned above also shows that the relationship between them can be expressed as follows:

$$\text{LOG}(Y1) = 4.574 + 0.659 \text{ LOG}(X4) + 0.223 \text{ LOG}(X5\_1) \quad (4)$$

0.160
0.166
0.08

(4) based on the multivariate regression relationship, it can be argued that production volume in the machine-building sector depends more on working capital and cumulative investment volume (table 7)

**Table 7**

**Results of multiple regression relationship between logY1 and the logarithm of some indicators**

Dependent Variable: LOG(Y1)				
Method: Least Squares				
Date: 07/10/22 Time: 01:09				
Sample: 2005 2020				
Included observations: 16				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(X4)	0.659007	0.166149	3.966371	0.0016
LOG(X5_1)	0.222681	0.079982	2.784124	0.0155
C	4.573536	0.160345	28.52312	0.0000
R-squared	0.896734	Mean dependent var	5.663674	
Adjusted R-squared	0.880847	S.D. dependent var	0.514406	
S.E. of regression	0.177566	Akaike info criterion	-0.451592	
Sum squared resid	0.409884	Schwarz criterion	-0.306732	
Log likelihood	6.612739	Hannan-Quinn criter.	-0.444174	
F-statistic	56.44405	Durbin-Watson stat	1.554214	
Prob(F-statistic)	0.000000			

*Note: calculated by the author using the eViews software package*

It is observed that the number of individual entrepreneurs registered for industrial activity will increase by 7 times in 2022 compared to 2005 only in the Karabakh economic region. The value of the industrial product in 2010 increased 3.5 times compared to 2005, and in 2015, compared to 2010, a 2-fold increase was observed and reached 44,700.1 thousand manats. In 2018, the volume of industrial

output increased twice compared to 2015 and reached 97,485.4 thousand manats. In 2019, 125,602.5 thousand manats worth of products were produced by the activity of 74 enterprises, which means a 33% increase compared to the previous year. In 2020, the product produced by 78 enterprises decreased by 9% to 114,680.1 thousand manats due to the impact of the war and the pandemic, in 2021, as a result of the increase of production enterprises to 85 and the investments already allocated to this region, the production of products worth 194,776.3 thousand manats increased by 42%. has been done. Despite the fact that the number of industrial enterprises in the region increased to 93 in 2022, the value of the industrial product was 193829.0 thousand. formed manat. the growth of industrial development trends in the region with liberation from occupation is clearly observed. It is clear that the planned investments and adopted development programs will soon be reflected in the increase in both reconstruction and economic development trends.

**Speaking in the research materials, we found it necessary to summarize the following results, new scientific approaches, suggestions and recommendations:**

- The complex financial and economic analysis of the machine-building industry of our country has shown that these enterprises have serious shortages in the field of special financial resources necessary to restore the main production funds and maintain the continuity of the production process.

- In machine-building industry enterprises, there is a constant trend towards technical-technological wear (physical and moral wear) of the main production funds, and the main reason for this is the low renewal rate.

- Many years in the field of production of oil field equipment in the country The great experience gathered during the period and the available scientific and technical potential determine the need to develop the national oil machinery industry at a new technical and technological level.

- The adoption of the state program for the modernization of the mentioned direction, the stimulation of the production of high-quality

oil-mining equipment by the state could help increase the competitiveness of the national oil and gas machinery industry. This is quite an important factor in the conditions of importing oilfield equipment that can be produced in the country.

- Starting the production of agricultural, construction, and transport vehicles of simple construction aimed at meeting domestic demand with low production costs determined during the research will affect the production capacity of existing factories, and it will be easier to sell such products with easy marketing methods.

- Most of the enterprises of the machine-building industry were forced to be satisfied with the development and implementation of less capital-intensive measures for the implementation of the process of recovery of the main production funds (this is mostly overhaul or overhaul to meet the requirements of modern construction, and in less cases leasing).

- In the conditions of limited investment resources, one of the most effective forms of investment for the recovery of the main production funds for the country's machine-building industry in the short and medium term is leasing activity (eliminating their physical and to some extent moral wear).

- In our country, the indicators of sustainable economic development of machine-building industries, including the low investment attractiveness, necessitate the development of complex state regulatory measures for the development of machine-building and the development of the entire field development strategy. High-quality economic development in the republic makes the implementation of innovative measures on the diversification policy of industry an objective necessity. The advanced world experience of the industry proves that innovative clustering measures are able to attract investments as a flexible mechanism, influence the growth of machine-building production, and ensure the long-term income of commercial banks.

- Clustering is considered as elements of single and interrelated processes in the relations of sustainable economic development, which will facilitate the integration of the Azerbaijani machine-building industry into the world machine-building industry, showing its

positive effect on solving the issues of efficient organization and management of the field.

- We believe that in the future independent Azerbaijan, which has great financial opportunities, will have an export-oriented machine-building industry that serves to meet domestic demand based on the latest innovative technologies. turning it into a product should be one of the priority issues. The policy of strengthening the position of both oil and gas equipment and motor vehicle products in the domestic market with state support will after a certain period lead to the increase of the production capacity of these enterprises, to adapt to innovative innovations by investing the income, and after this stage to be competitive in the world market. can lay the groundwork for product release.

- In order to increase the development prospects of machine-building enterprises, a comparative analysis of their current potential and possible potential shows that there are opportunities for profitable sales and profit from the existing production potential, which can be achieved step by step.

- Special attention to the expansion of scientific research and design work in the strategy, which envisages the prospective development opportunities of the machine-building industry, is justified by the fact that the strengthening of the scientific base of the field can obtain new patents and inventions at a low cost of machines and equipment that can be produced, with high technical indicators, and this can be done in the production process. by applying it, they will take steps towards innovative development that meets modern requirements.

10. The sustainable economic development of the machine-building industry requires taking systematic measures to eliminate deficiencies in the level and structure of personnel potential. In order to develop the existing personnel potential, it is possible to start the process of personnel training with the education-work integration method, and to eliminate the shortage of personnel required in the market.

11. It is possible to meet most of the demand for industrial products of the territories freed from occupation with the production potentials of the industrial parks established in the area. The opening of factories

and workshops of large industrial enterprises producing agricultural machinery in industrial parks operating in the Karabakh zone will both solve the problem of resettlement of these areas faster, and the increase in the economic power of the area will lead to easier restoration of the region.

**The main content of the research is reflected in the following published scientific works by author:**

1. Aghayeva Kh.Y., Salmanov G.S. The main directions of the state's innovation strategy in the economic development of the country. Proceedings of IV International Scientific Conference of Caucasus and Central Asian economy and international relations in the process of globalization. Caucasus University. Baku-2014, p. 314-318.

2. Aghayeva Kh.Y., Efendiev S.G., Bakhyshev A.S. Theoretical methodological foundations of innovative clusters in industry. Subsoil problems. International forum-competition of young students. Сборник научных трудов. St. Petersburg 2014, str. 50-51.

3. Aghayeva Kh.Y., Salmanov G.S. The role of Socio-Economic Development of Industrial Clusters. ECO2014, 2nd International Conference on Energy, Regional Integration and Socio-Economic Development. Baku-2014.

4. Aghayeva Kh.Y. Problems of stable and sustainable development of non-oil industries and their solutions. "Contract of the Century" is Heydar Aliyev's new oil strategy. Proceedings of the Republican Scientific Conference. SDU, 2014, p. 207-208.

5. Aghayeva Kh.Y., Salmanov G.S., Hatamova T.M. Sustainable economic development of industrial enterprises is the basis of socio-economic and ecological development of our country in the globalized world. Materials of the VIII traditional international scientific conference dedicated to the "Year of Industry" on ecology and life protection. SSU, 2014, pp. 151-155.

6. Aghayeva Kh.Y., Salmanov G.S. Methods of evaluating the sustainable economic development of the enterprise. News of ANAS, Economy series No. 3. 2014, p. 114-117.

7. Aghayeva Kh.Y. Ways of forming the sustainable development strategy of the enterprise. Institute of Economics of ANAS. Scientific works, No. 4 2014, p. 126-129.

8. Aghayeva Kh.Y. Ways to create a sustainable innovative development model of the enterprise. ARDIA "Regional management: innovative approaches and prospective opportunities" REK materials. April-2015 p. 136-138.

9. Aghayeva Kh.Y. Theoretical foundations of sustainable economic development of industrial enterprises. Azerbaijan Cooperation University. Scientific-Practical Journal of Cooperation, 2015, No. 1 (36), p. 62-67.

10. Aghayeva Kh.Y. Methodological foundations of sustainable economic development of industrial enterprises. Azerbaijan Cooperation University. Scientific-Practical Journal of Cooperation 2015, No. 2 (37). p. 45-51.

11. Aghayeva Kh.Y. Sustainable economic development criteria of non-oil industrial enterprises "Innovative socio-economic development of regions: realities and prospects" REK materials. Azerbaijan Trade Union Confederation, Scientific Innovation Center, Azerbaijan Academy of Labor and Social Relations. May-2015, p. 264-266.

12. Aghayeva Kh.Y. Theoretical foundations of sustainable economic development of the enterprise. Ministry of Taxes of the Republic of Azerbaijan The role of tax policy in the sustainable development of Azerbaijan. EPK. May-2015, Shamakhi.

13. Aghayeva Kh.Y. Main directions of economic development of processing industry enterprises in the regions Baku Business University. REPK, December 22, 2015.

14. Aghayeva Kh.Y. Approaches to sustainable and sustainable economic system of the enterprise. Azerbaijan State Economic University. BEPK, December-2015.

15. Aghayeva Kh.Y., Salmanov G.S. Necessity of innovative sustainable economic development of non-oil industry enterprises of the republic. "Expansion of innovation activities in the non-oil sector of Azerbaijan" dedicated to the 80th anniversary of Shamil Samadzadeh. REC. Baku-2016.



16. Aghayeva Kh.Y. Mechanisms of determining the competitive and sustainable economic system of industrial enterprises. News of ASOSU Azerbaijan Technical Schools, No. 4 (104). 2016.

17. Aghayeva Kh.Y. Study of sustainable and sustainable economic development of industrial enterprises in modern times. Chamber of Auditors of the Republic of Azerbaijan, BEPK, April 5-6, 2016.

18. Aghayeva Kh.Y. Problems of sustainable development of petroleum engineering enterprises in Azerbaijan and innovative ways of their solutions. Investytsiyi: praktyka ta dosvid. Ukraine. No. 9 2017 str. 75-79.

19. Aghayeva Kh.Y., Suleymanov G.S. Investment problems of sustainable economic development of oil machine-building enterprises in Azerbaijan. Economics and business. Moscow. No. 8, 2017, p. 464-468.

20. Aghayeva Kh.Y. Determining directions of economic development policy of Karabakh region. Azerbaijan Union of Economists. Integration of territories freed from occupation into the Azerbaijani economy after the Patriotic War: a conceptual review. REPK materials Odlar Yurdu University. Baku February 10, 2021.

21. Aghayeva Kh.Y., Hatamova T.M., Sheydai T.B. Defining directions of economic development policy of Karabakh region. IX International Scientific and Practical Conference Challenges in Science of Noward. Washington, USA. July-2021.





The defense of the dissertation will be held on September 27, 2023 at 16:00<sup>at</sup> the meeting of the Joint Dissertation Council of Azerbaijan Cooperation University and Baku Business University, ED 2.46 of the Higher Attestation Commission under the President of the Republic of Azerbaijan, operating under Azerbaijan Cooperation University.

Address: AZ1106, Azerbaijan Republic, Baku city, Najaf Narimanov Street, 93.

It is possible to get familiar with the dissertation at library of Azerbaijan Cooperation University.

Electronic versions of the dissertation and synopsis are settled at the official website of the Azerbaijan Cooperation University ([www.aku.edu.az](http://www.aku.edu.az)).

Synopsis is sent to the relevant addresses on the date of August 25, 2023.

Signed for issue: 25.08.2023

Size of the paper: 60 x 84 1/16

Volume: 44172 characters

Edition: 20 pcs