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**MASTER'S DISSERTATION**

On the topic of

Foreign economic factors of Azerbaijan's long-term sustainable development:  
energy prices and global crisis perspectives

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## CONTENTS

INTRODUCTION.....	3
CHAPTER I. SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT .....	5
1.1. The Meaning of Sustainability .....	5
1.2. Definition of Economic Growth and Sustainable Development .....	14
1.3. A look at Sustainability efforts by some developed and developing countries and Azerbaijan. ....	21
CHAPTER II. SUSTAINABLE DEVELOPMENT IN TERMS OF ENERGY PRICES. ....	31
2.1. The role of energy in Sustainable Development.....	31
2.2. Impact of Oil Prices Change on Economy.....	37
2.3. Cointegration of oil prices and economic variables for Azerbaijan and other oil industrial countries like Kazakhstan .....	48
CHAPTER III. FOREIGN ECONOMIC FACTORS OF AZERBAIJAN'S ECONOMY AND GLOBAL CRISIS PERSPECTIVES.....	57
3.1. Economic Factors Affecting Development of Economy .....	57
3.2. The role of Azerbaijan in regional and global economic arena.....	64
3.3. Realities and perspectives for future economic stability of Azerbaijan .....	74
CONCLUSION .....	83
REFERENCES.....	86

## INTRODUCTION

**Topicality of the topic:** The concept of sustainable development is considered one of the most progressive, humanistic and global civilization integration development concepts in the history of humanity. Sustainable development is understood as a sustainable, continuous, stable and long-term development of society. Sustainable Development is the way of the most modern, progressive development that encompasses the demands of future generations of mankind, not limiting their capabilities also accepting human potential and capital, the mobilization of new knowledge, as well as environmental protection and improvement. This has social, economic, and environmental dimensions. In all three areas the way energy is used and produced plays a critical role. Energy has a main impact on every aspect of our socio-economic life. It plays a key role in the economic, social-political development of our nation.

**Methodology:** The primary research methods for this study are statistical methods, the study of dynamic series. Author will consider pros and cons of oil industry for sustainable economy. Along with this the main purpose making of estimated economic conceptual models with latest energy price and demand change data and give some offers for future economic ruling of country.

**The main purpose of the dissertation work is to:** to examine the legality and characteristics, to define its principles, criteria, mechanisms and indicators of our country's transition to Sustainable Development in the modern era and assess the possibilities of forming an economic policy that can ensure the efficient use of our country's energy and trade potential, and to develop proposals and recommendations on this basis, while maintaining an active economic policy despite Azerbaijan's extensive development potential.

**The main research tasks** of the master dissertation were the evaluation of the level of use of energy and trade potential of our country during the years of independence and the study of perspective tasks for the formation of a national

economic policy that could give rise to the requirements of the sustainable development model of these dominants.

As is well known, in order to effectively integrate into the world economy, adequate, scientifically justified foreign trade - the formation of an investment policy is required. The duty on the basis of the foreign policy of the Republic of Azerbaijan is to provide mutually beneficial cooperation with the regional states as well as with other states of the international community.

**The object and subject of the research:** The object of the master dissertation research forming a national economic strategy. The subject of the research is the features of the sustainable economic development in Azerbaijan, the main elements and the prospects for the development of the strategy.

**The scientific novelty of the research:** In the modern world, energy is the basis for the development of basic industries that determine the progress of social production. In all industrialized countries, the pace of development of energy has outpaced the pace of development of other industries. In modern age ensuring sustainable development of the country's economy in accordance with reflecting changes in energy prices is reflected.

**The practical importance of the research:** The practical importance of work is making analyses about current situation and future perspectives of the country's economy.

# CHAPTER I

## SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT

### 1.1. The Meaning of Sustainability

Sustainability means continuous development or growth without significant environmental degradation and depletion of natural resources on which human well-being depends. This definition measures income as flow of goods and services that an economy can generate forever without reducing its natural productive capacity. The terms "sustainable" and "sustainability" broke into the global lexicon in the 1980s, when news media made people increasingly aware of the growing global challenges of overpopulation, drought, hunger and environmental degradation that were the subject of growth constraints in the early 1970s.

**Figure 1. The Meaning of Sustainability**



"Ensuring the sustainable development of mankind is the most significant problem facing the world community". Such a clarification was made in 1987 by the UN General Assembly. Since then, it has not lost its actuality - the concept of sustainable development is actively discussed by world leaders today.

In 1987, many countries, including Azerbaijan, adopted the principle of sustainable development of society, which provides for the responsibility of the state and civil society in ensuring the opportunity to meet the needs of both existing and future generations.

In the same year, the notion of sustainable development (SD) used the International Commission on Environment and Development. This concept is the most common and is often referred to as the "world model of the future of civilization".

The concept of SD was formed as a result of joining three directions:

1) Economic. From this perspective, the concept of "economic efficiency" is considered from a completely different angle. As it became clear, long economic projects that take into account the laws of nature, as a result, are more effective than projects that do not take into account possible environmental outcomes.

2) Environmental. The main goal of sustainable development in the field of ecology is the stability of physical and ecological systems. Ignoring the needs of ecology will lead to degradation of the environment and will endanger the existence of all mankind.

3) Social. It was the awareness of social problems that prompted the formation of this concept, aimed at preserving cultural and social stability, as well as reducing the number of those who bear the destruction of conflicts.

The concept of sustainable development which began to flourish in the 1970s was a logical transition from the ecologization of scientific knowledge and socio-economic development. In the 1970s a number of scientific works were devoted about issues of limited natural resources, as well as pollution of the natural

environment, which is result of economic and any human activity . The response to this concern was the creation of international non-governmental scientific organizations to study global processes on Earth, such as the International Republic of Institutes of Advanced Studies (IFAS), the Club of Rome, the International Institute for System Analysis, and the USSR the All-Union Institute for System Studies.

The 1972 UN Conference on the Human Environment and the founding of the United Nations Environment Program (UNEP) marked the inclusion of the international community at the state level in the solution of environmental problems that hindered social and economic development. Environmental policy and diplomacy, the law of the environment began to develop, a new institutional component - ministries and departments for the environment.

In the 1980s, they began to talk about eco-development, development without destruction, the need for sustainable development of ecosystems. The World Conservation Strategy, adopted in 1980, for the first time in an international document, included a reference to sustainable development. The second edition of IUCN was called "Care for the Earth - Strategy for Sustainable Life" and was published in October 1991. It emphasizes that development should be based on the conservation of wildlife, the protection of the structure, functions and diversity of natural systems of the Earth on which species depend . To this end, it is necessary: to maintain life support systems to conserve biodiversity and to provide sustainable use of renewable resources. As part of national and global security there have been studies on environmental safety.

In the 1980s, the United Nations Environment Program (UNEP) called for a change to "development without destruction". In 1987, in the "Our Common Future" report, the International Commission on Environment and Development (ICRD) concentrated on the need for "sustainable development", in which "meeting the needs of the current does not impair the ability of future generations to meet their own

needs." This formulation of the concept of "sustainable development" is now commonly used as a base in many countries.

In June 1992, the United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro, at which a historic decision was made to change the course of development of the entire world community. Such an unprecedented decision by the heads of government and leaders of the 179 countries gathered at UNCED was due to the rapidly deteriorating global environmental situation and the global catastrophe predicted on the basis of the analysis of its dynamics that could break out in the 21st century. and lead to the death of all life in the world. Among the environmental problems that, according to the statement of the United Nations Environment Program (UNEP) Global Environment Outlook 2000 (GEO-2000), will be the main ones in the 21st century, climate change is identified as a result of greenhouse gas emissions, lack of fresh water and its pollution, forest loss and desertification, biodiversity loss, population growth (and its movement), the need for waste disposal, air pollution, soil and ecosystem degradation, chemical pollution, ozone depletion layer, urbanization, depletion of natural resources, disruption of biogeochemical cycles, the spread of diseases (including the emergence of new ones), etc. Almost each of these environmental problems can, if spontaneous development of civilization continues, lead to the death of mankind and the biosphere. UNCED demonstrated awareness of the harmfulness of the traditional development path, which was characterized as unsustainable development, fraught with crises, catastrophes. The transition to a new model (strategy) of development, called the model of sustainable development, seems to be a natural reaction of the world community, striving for its survival and further development.

In 2000 heads of state and government of 147 world countries adopted the Millennium Declaration at the Millennium Summit held by the UN initiative. This Declaration identifies Millennium Development Goals (MDGs) for countries around the world by 2015.

- Overcome extreme poverty and hunger;
- Achieving primary education;
- Reduce child death rate
- Improving maternal health;
- Fight against AIDS, malaria and other diseases;
- Ensure environmental sustainability;
- Extend the global partnership for Sustainable Development

Mankind has faced ever-growing contradictions between its growing needs and the inability of the biosphere to provide them without collapsing. As a result, social and economic development has taken the form of an accelerated movement towards a global ecocatastrophe, while not only satisfying the vital needs and interests of future generations of people, but also the very possibility of their existence. There was an idea to resolve this contradiction on the way to a transition to a civilization development that does not destroy its natural basis, guaranteeing humanity the possibility of survival and further uninterrupted, i.e. managed and sustainable, development.

The ideas of sustainable development meet the objective requirement of the time and can decisively influence the future of Azerbaijan, play an important role in determining state priorities, strategies for socio-economic development and prospects for further reform of the country. The new strategy for the development of civilization has already determined the position of the world community - to unite efforts for the sake of human survival and the continuous development and conservation of the biosphere. Azerbaijan, which signed the documents of the UN Conference, undertook serious commitments to implement the program of global cooperation adopted on the basis of consensus.

The term "sustainable development" was widely adopted after the publication of a report prepared for the United Nations in 1987 by a specially established International Commission on Environment and Development in 1983. In the

Azerbaijan edition of this report, the English term sustainable development is translated as "sustainable development", although the word sustainable has other meanings: "supported, self-sustained," "long-term, continuous," "backed up," "defended."

Even in the report "World Conservation Strategy" (1980), presented by the International Union for the Conservation of Nature and Natural Resources, it was stressed that in order for development to be sustainable, one should take into account not only its economic aspects, but also social and environmental ones. Since the mid-1970s, UNEP has made extensive use of the notion of "development without destruction", and the notion of "eco-development", which means environmentally acceptable development, development, the least negative effect on the environment.

We can assume that the Declaration of the First UN Conference on the Environment (Stockholm, 1972) also noted the link between economic and social development and environmental problems. An important contribution to this understanding of development was made by the scientific reports of the Club of Rome, and especially by the report "The Limits of Growth" (1972), which formulated the ideas of the transition of civilization from the exponential economic growth to the state of "global dynamic equilibrium", from quantitative growth to "organic (Qualitative) and" the new world economic order ".

The Republic of Azerbaijan joined many international conventions, including environmental conventions after gaining independence. Environmental conventions include biodiversity conservation, global climate change, ozone depletion, deforestation and land degradation, and so on.

The goal of the Azerbaijani state is to push the transition to the market economy, as well as the extensive development of our country in the Post-Soviet era, the inefficient use of natural and mineral raw materials, the formation of the national economy in accordance with the demands of the International Labour Organization rather than national interests, the nature and society relations the lack of satisfactory

has made an objective necessity for solving problems of sustainable development in our country.

UNCED widely used the definition in the book *Our Common Future*: "Sustainable development is development that meets the needs of the present, but does not impair the ability of future generations to meet their own needs." This definition was criticized for its vagueness and anthropocentricity. It was noted that the definition of "sustainable development" should explicitly include the notion of preserving the natural environment. That is why from the existing definitions it is necessary to eliminate even hidden hints on the degradation of both mankind and the biosphere. This is to some extent done in the Concept of the Azerbaijan Republic's transition to sustainable development, where sustainable development means "stable social and economic development that does not destroy its natural basis". Further this concept is concretized: "Improving the quality of life of people should be ensured within the limits of the economic capacity of the biosphere, exceeding which leads to the destruction of the natural biotic mechanism of environmental regulation and its global changes".

Sustainable development concept is characterized by the following model:

$$F_t (E,K,L,I) \leq F_{t+1} (E,K,L,I)$$

Here,

E - environmental (natural) capital (reflected in environmental accounts),

K - economic equity (reflected in economic and financial accounts),

L - human capital (measured by human development index),

I - institutional factor (structural reforms, entrepreneurship, information management system, tradition etc.)

As seen from the model, natural capital (natural resources, raw materials), human capital is one of the key factors more precisely, a productive force of sustainable development. Therefore, effective use and reproduction of productive

forces and preservation for future generations remain a strategic goal for SD. The realization of this strategy is conditioned by the following:

- the final consumption of the country should comply with environmental productivity;
- production must be environmentally friendly;
- population of country should be optimized;
- environmental safety policy of the country should be prepared.

The Concept of the Azerbaijan Republic's Transition to Sustainable Development mentioned above was submitted by the Government of the Azerbaijan Republic and approved by Presidential Decree No. 440 in 1996. The Concept notes that "following the recommendations and principles set forth in the documents of the United Nations Conference on Environment and Development (Rio-1992), guided by them, it seems necessary and possible to implement in the Azerbaijan Republic a consistent transition to sustainable development, ensuring a balanced solution to the socio-economic backdrop and the problems of maintaining a favourable environment and natural resource potential in order to meet the needs of present and future generations of people.

The Concept was adopted on the recommendation of UNCED, in which the government of each country was asked to develop and approve its national sustainable development strategy. The concept was an important milestone in this direction, and work is currently being completed on the draft State Strategy for Sustainable Development of the Azerbaijan Republic.

It was after UNCED that it became clear that if environmental problems were not solved, all the achievements of civilization would be threatened with destruction. They can disappear because all of humanity will be plunged into the abyss of a planetary ecological disaster, as the riches of nature, the possibilities of self-healing of the biosphere will be completely exhausted. It became clear that it was necessary to radically change the model of human development and even the way of life of each

person, to conduct the most cardinal civilizational transformations in the history of mankind that would ensure its survival.

The whole world, including Azerbaijan, is on the threshold of the third, after the agrarian and industrial, civilizational revolution, no less, and maybe even more fundamental than the two previous ones. It is impossible to create a sustainable development strategy based on traditional human concepts and values, stereotypes of thinking. It requires the development of new scientific and ideological approaches that correspond not only to the current realities, but also to the prospective development prospects in the III millennium.

The concept of sustainable development should be determined through two main features of such development - anthropocentric and biospherecentric. Anthropocentric attribute in a broad sense means the survival of mankind (the country) and the ability (possibility) of its further uninterrupted (sustainable), continuously long development, so that our descendants have no less opportunities, in comparison with the present generation, to satisfy their needs in natural conditions and ecological conditions of the Earth and the cosmos (the principle of equal opportunities for generations in terms of meeting their needs). Biosphere centric (in general, an ecological) sign of the concept is associated with the preservation of the biosphere as the natural basis of all life on Earth, the necessary condition for its stability and natural evolution, so that the further development of mankind does not occur in an eco-friendly form. The book "Our Common Future" notes that "the strategy of sustainable development is aimed at achieving harmony between people and between society and nature." This principle can be characterized as the principle of co-evolution of nature and society.

This allows us to define sustainable development as a strategy of social and natural development, which ensures the survival and continuous progress of society and does not destroy the surrounding natural environment, especially the biosphere.

The transition to sustainable development presupposes a gradual restoration of natural ecosystems to a level that ensures environmental sustainability and in

which a real possibility exists for the future generations of people to meet their vital needs and interests. Formulation of a new development strategy means a gradual integration into a single self-organizing system of economic, environmental and social spheres of activity. In this sense, sustainable development assumes, at a minimum, economic efficiency, biosphere compatibility and social justice, with a general decrease in anthropogenic pressure on the biosphere. The organization of economic activity that does not destroy the biosphere, but preserves it, i.e. ecologically acceptable, not exceeding the carrying capacity of ecosystems, is one of the central directions of the future of a sustainable society. The biosphere from this point of view should be considered not only as a storehouse and resource supplier, but as the foundation of life, the preservation of which should be an indispensable condition for the functioning of the socio-economic system and its individual elements.

## **1.2. Definition of Economic Growth and Sustainable Development**

It is necessary to distinguish the concepts of "economic growth" and "economic development", which are often used as synonyms. The term 'sustainable growth' means 'growing endlessly'. This implies that the increasing quantity will tend to become infinite in size. The limited size of resources, ecosystems, the environment, lead to the most fundamental truth of sustainability: "When applied to material things, the term 'sustainable growth' is an oxymoron." Sustainable development is the theory of a relationship between economic growth and the environment.

Economic growth does not necessarily mean a better living: a society can have a huge rate of economic growth measured through its Gross Domestic Product (GDP), maybe a figure as high as eight percent per year, because of very enormous exports. However, that society might also have its own people living in poverty

because the wages paid to its workers make that export possible, while not covering their most elementary needs.

Evidently, there is some difficulty in explaining the meaning of these terms. However, they can be very well understood given the explanation by Vaughan (Vaughan R. 1981), who characterize them in the following way:

- Economic growth is quantitative. It is an economic variation or change related to income, output, consumption and investment.
- Sustainable development means a qualitative change. This signifies changes not only to the economy, but also institutional, social and ecological changes.

Economic growth can be defined as a process characterized by an increase in the mass of created goods and services in accordance with the volume and structure of the emerging personal and social needs. It is accompanied by the expansion of consumption of resources of all kinds and is expressed in incremental values (output, income, output, etc.). This model of economic growth is now recognized as exhausted, as it causes enormous damage to the natural environment, leading to a sharp differentiation of the living standards of the population of different countries. The ultimate goal of development should not be in itself economic growth, the pace and size of accumulation, but a person, ensuring its material and spiritual needs, and as the main aggregated indicator should be an increase in the real gross national (or gross domestic) product for a certain period of time, including per capita.

Therefore, the world community objectively needs a transition to a model of sustainable economic development as a new global strategy that ensures the survival of mankind. This was reflected in documents developed at the initiative of the United Nations and supported by the world community, such as Agenda 21 (Rio de Janeiro, 1992), the Millennium Declaration (United Nations, 2000), the Johannesburg Declaration on Sustainable Development and the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg, 2002). These documents call upon governments of all countries of the world to make the transition to a model of sustainable development of their national economies.

Sustainable means the continuously supported development of social, economic and environmental spheres in their rational interaction that can meet the needs of the present and without compromising the ability of future generations to meet their needs.

Thus, the notion of "economic growth" is supplemented by a new, more advanced concept of "sustainable economic development", which calls for a rational combination of the directions of development of all spheres of human activity - social, economic and environmental - and taking into account their long-term consequences.

A comprehensive approach to the problems of economic growth presupposes the study of social, economic and environmental spheres - the main links of sustainable development of the national economy, reflected by the system of indicators. The indicators should characterize the functioning of the economy in the mode of expanded reproduction, the stability of the financial system, the improvement of the structure of the economy and foreign economic relations, the development of scientific and industrial and innovation-investment potentials, the creation of economic, legal and other conditions for sustainable development, raising the living standards of the population.

Of the many parameters that characterize the socio-economic development of the country, the main indicators are chosen as indicators of sustainable development, which reflect the essence of the process and without which it is impossible to imagine the economic structure as an integral system. Comparison of their values in dynamics over a number of years with scientifically based standards or values of similar indicators of economically developed countries characterizes the degree of approximation of socio-economic processes to stable dynamics and the level of world standards.

The mechanism for ensuring sustainable economic growth includes the legislative and regulatory framework, normative acts of ministries and other state bodies of state administration, other organizations subordinate to the Government of

the Republic of Azerbaijan, macroeconomic, sectoral and regional regulators of sustainable development.

The problems of economic growth have always played a special role in the theory and practice of human society. Recently specialists came to the conclusion that the continuation of unrestrained economic growth at the existing base will lead mankind to a catastrophe threatening its existence.

This conclusion is based on a number of interrelated arguments. First, while maintaining the existing production conditions in the short term, the resource component of production may be exhausted. According to the UN, natural resources are used faster than they are renewed. For example, the world economy's security of the explored oil reserves at the current production level is 45 years, and Azerbaijan - 23 years. The provision of mankind with natural gas at the current level of its production is 71 years. In addition, natural resources are distributed extremely unevenly between countries. Only 20-25 countries have more than 5% of the world's reserves of any one type of mineral raw materials. Only a few of the world's countries have the majority of its species. Azerbaijan still retains rich natural resources (for example, the estimated value of the explored reserves of minerals is about 30 trillion dollars, and the estimated reserves are about 140 trillion dollars), the resource component will remain extremely important for the country's economy for a long time. Azerbaijan with a population of 2.5% of the world has 25% of the world's resources, and consumes only 4%.

Secondly, the technologies and social relations that prevail today can lead humanity to an ecological catastrophe. Since the beginning of the XX century, humanity began to face a number of growing problems of a planetary nature, called global. The term "global problems" was introduced into the scientific literature in the late 60's - early 70's. in the works of the scientists of the "Club of Rome". "The Club of Rome" is an international non-governmental organization engaged in research that attempts to determine the prospects for the global development of mankind on the basis of the current state and development trends of the society. If in the 60-70's. the

main problem was the prevention of a world nuclear war, but now experts place an environmental problem first. Industrialization and economic growth cause such negative phenomena as pollution, industrial noise, emissions, urban deterioration, etc. These costs of economic growth emerge because the production process only converts resources, but does not completely utilize them. For example, in the production of electricity at nuclear power plants, 98% of the fuel is spent for waste. Over the past 150 years, the carbon dioxide content in the atmosphere has increased by 30%. According to the scientists' forecasts, its further accumulation within 40-50 years can raise the temperature of the Earth by 2-4 °, which will lead to melting of ice and increase of the level of the World Ocean, and, as a result, flooding of some coastal zones.

Third, the growing social stratification of society is a serious danger. Recently, the problem of income inequality and, as a consequence, the problem of poverty has become more acute. It should be noted that over the past 20 years, in all developed countries, the rich are getting richer, and the incomes of those at the bottom of the pyramid are not growing so fast. The number of super-rich is growing almost non-stop throughout the world. According to statistics, in the US over the past 25 years, significant revenues have been achieved only to representatives of the upper stratum of society. The super-rich, accounting for 0.1% of the population, earned more than 120 million citizens in a year, whose incomes appear at the bottom of the welfare scale of American citizens. As already noted, economic growth does not mean the automatic growth of incomes in all segments of the population. To ensure that the effects of economic growth are felt by all segments of the population, it is necessary not only to increase the social product, but certain political actions.

Just as in every country there is a significant gap in income between individual groups, a huge economic inequality is observed in all countries of the world. Approximately 2/3 of the world's population is constantly dragging out a beggarly existence or dangerously approaching it. Today, developing countries account for almost 80% of the world's population and about 40% of world GDP. For

comparison: developed countries account for more than 50% of world GDP and 16% of the world's population. For example, the GDP per capita of the United States is higher than that of other developed market economies and is over \$ 30,000. At the same time, the per capita GDP of a developing country like Mozambique is about \$ 300. It is estimated that in the past 50 years, the gap between the richest and poorest countries more than doubled.

It is estimated that the richest 15% of the world's population consume more than 50% of the planet's reserves, thereby further reducing the living standards of the remaining poor countries. If resources were consumed everywhere on the Earth at the speed of highly developed countries, already at the moment it would take 2.6 Earth.

Fourth, rapid economic growth, especially the underlying technology update, generates anxiety and insecurity among people in the future. Employees at any level are afraid that their professional skills and experience may become obsolete as technology progresses.

As a confirmation of such fears, one can cite statements from the sensational book in the West, written by the editors of the weekly magazine *Der Spiegel*, G.-P. Martin and H. Schuman, "The Trap of Globalization: Attack on Prosperity and Democracy." The authors predict that 20% of the population will be enough for the functioning of the world economy in this century. More labour will not be required. These 20%, in any country, will actively participate in the life of society, earn and consume, and the rest will have colossal problems.

In such conditions, the need to develop and implement the concept of sustainable development for the entire world community became evident. The main source document, which outlines the main directions of this concept, is "Agenda for the 21st Century", adopted at the UN international conference held in 1992 in Rio de Janeiro. The main provisions of this concept were further developed at the 2002 summit in Johannesburg. In accordance with the concept for the first time, the interests of material benefits and economic growth are not only marginalized, but are

considered in combination with issues that are no less important for the world community, such as environmental neutrality and a clear social orientation.

Sustainable economic growth is a positive dynamic of macroeconomic indicators without significant fluctuations in their values over a long period of time, with the growth of these indicators at constant and proportional rates. Sustainable social development is a development in which the life needs of the present generation of people are met without reducing this opportunity for future generations. The economic and social policies that people pursue do not only threaten living beings other than human beings, but they also threaten living environments of future generations. The ability of future generations to use natural resources, like today's generations, depends on making radical changes in our social and economic life. It is argued that sustainable development is the understanding that can bring a reformist point to the potential of changing the economy and society in the capitalist production system. Despite this expectation from the concept of sustainable development, according to some economic growth incentives, sustainability is nothing but an obstacle to growth. Sustainable development has not satisfied some environmentalists, such as growth incentives. Because, for some environmentalists, sustainable development is a concept that cannot go beyond being a distracting tactic that prevents the protection of the environment. However, while there are various debates about the direction of the concept, sustainability gives strong signals of change in the social and economic environment. While sustainable development predicts many changes in the social, economic and cultural arena, there is strong doubt that this change will take place in the social scene. Above all, the fact that the economy on the world is always regarded as a rising value makes this change difficult. The increase in the weight of economic policies, both nationally and internationally, causes other policies, especially the environment, to be indexed accordingly. This inevitably weakens the economy or even makes it difficult to enforce environmental policies that create a sense of control.

### **1.3. A look at Sustainability efforts by some developed and developing countries and Azerbaijan.**

The experience of the world's developed countries shows that in order to ensure the transition of the national economy to Sustainable Development, the resource potential of the country should be efficiently implemented taking into consideration the interests and interests of present and future generations, required for transition from investment-driven development model to innovative development model necessary economic, social, ecological, technical and technological potential should be formed. All of this requires a systematic study of the nature of the concept of "Sustainable Development", the principal ways, principles and criteria for transition to the national reality and sustainable development and the systematic study of the theoretical and practical concepts and features of the macroeconomic indicators characterizing its level.

The experience of countries in the world shows that in order to ensure Sustainable Development, the country's level of development, potential, and institutional base is important, as well as choosing the right economic strategy compatible the current reality of the national economy. Thus, a systematic analysis of the experience of countries with competitive advantage at the international level in the last century shows that the key factor ensuring their success was first of all the selection of mechanisms for the identification and implementation of the right economic development model. Countries like Azerbaijan, which are now actively integrated into the globalizing world, firstly needs to define the priorities of economic development in order to continue the competition of the national economy, and secondly, they must select the most effective method, tools and mechanisms for realizing their reality and opportunities.

At the head of the main reasons that environmental problems should be the subject of international policies is that environmental problems such as ecosystems

are border and non-national qualities, the solution ways are complex and environmental pressures are interdependent. This structure requires that various nations at the national level, as well as various social actors, at the global and regional level, cooperate to combat these problems.

Azerbaijan is like almost all countries in the world; local, regional, national and international environmental problems. He is involved in various initiatives to find solutions to these problems and acts as a dynamic actor in the search for regional and international solutions. From the date of its independence, it endorses various international treaties on the environment and provides active contribution to the work in this field. It participates in projects prepared to be a stakeholder in the solution of two important environmental issues that concern the region. The Caspian Ecology Program was established to solve the problems of Caspian sea, which is the most important water resource in the region, and the Caucasus Ecology Centre, which was established to solve environmental problems in the Caucasus region, actively participates in the studies.

The environmental problems of Azerbaijan are rooted in the following three stages:

A- The insensitivity of the production in the Soviet Union and the perception of environmental values as free goods, as well as the backwardness of the production technologies used and the release of gas, liquid and solid wastes, especially of large industrial establishments,

B- Significant destruction or pollution of forests, agricultural land and water resources due to the transformation of neighbouring Armenia into conflict after the disintegration of the Soviet Union and the removal of Armenians in the Nagorno-Karabakh region of Azerbaijan,

C- After the declared independence in 1991, the political chaos in the country, the uncertainty of the transition from the socialist system to the capitalist system and the fact that the environmental problems become unconcerned due to the weaknesses in the management process.

Among the major environmental problems of Azerbaijan in this overview are:

1. The problems related to the Caspian Sea are closely related to Azerbaijan because it is the shore. Sewage waters containing various chemical substances around 3 million cubic meters per year and petroleum product wastes around 100 thousand tons flow from the settlements such as Sumgayit and Baku in Azerbaijan to the Caspian Sea every year.

2. Wastes resulting from the processing of raw materials obtained from oil, gas and other underground mining sources are provided to the nature without being subjected to any reclamation or treatment.

3. Quality and fertility have been reduced due to intensive use of cultivated soils and improper farming techniques.

This situation has increased the need for the use of chemical fertilizers and pesticides, resulting in problems with soil and water resources and product health.

4. Forest areas; day by day, due to people needing firewood, livestock activities, ongoing war situation and fires.

The water basins of the 5th country are under an important environmental threat. The annual flow of the rivers is 29 km<sup>3</sup>, 27 km<sup>3</sup> of which forms the Kur River. Kur River, the five countries (Azerbaijan, Iran, Turkey, Georgia, Armenia) passes through its territory. However, 10 km<sup>3</sup> of this water is used by the industrial facilities near the Kur River and it is left untreated to the Caspian Sea. Again, for similar reasons, the Ioru River, passing through Georgia and reaching the water basin of Mingechevir, has dried up before reaching Azerbaijan. Since the rate of pollution in rivers that pass through Georgia and Armenia to Azerbaijan is very high, the possibility of using it in agricultural irrigation and domestic necessities is diminishing.

In terms of air pollution, emissions from area, point and line sources are a major problem. In 1991, the amount of gas and particulate matter left in the atmosphere was estimated to be around 2.6 million tons. The air pollution caused by

the metallurgical and petrochemical plants in Baku, Sumgayit, Shirvan and Ganja is increasing especially in the winter months.

Since the first Environmental Conference in Stockholm, the international community has been unable to resolve the negative difference between what is needed and what is happening in terms of bringing solutions to the problem, as well as taking important environmental steps. For this reason, the international community has to question the effectiveness of the means of intervention to the surrounding area and to decide how to organize in the management of the environment, taking into account the overall environmental problems.

One of the programs participated by the Republic of Azerbaijan in terms of eco-political importance and geographical size is "Ecology Program for Europe". This program was developed with the support of the European Economic Commission, which operates under the auspices of the United Nations. The program is mainly aimed at mobilizing the management of environmental protection activities and environmental policies in the countries where transition economies are experienced. Especially after 2000, the "Ecology Program for Europe" played an important role in the development of cooperation in the field of environmental protection policies between the countries of Eastern Europe, the Caucasus and Central Asia. After the Kiev meeting in 2003, Azerbaijan's activity in this program has increased even more. Within the framework of the "Ecology Program for Europe", the Republic of Azerbaijan has participated and participated in many regional and global environmental programs and projects.

From the second half of the twentieth century, rapid economic development of leading industrial countries and the rapid development of international transport and communications have resulted in the strong growth of international trade with commodities and services. The experience of countries in the world shows that in order to ensure Sustainable Development, the country's level of development, potential, and institutional base is important, as well as choosing the right economic strategy compatible the current reality of the national economy. Thus, a systematic

analysis of the experience of countries with competitive advantage at the international level in the last century shows that the key factor ensuring their success was first of all the selection of mechanisms for the identification and implementation of the right economic development model.

The developed countries like Finland, Sweden and Switzerland have had more than 50 years of industrialized actions, using and cutting the rain forests which have affected the high accumulation of the greenhouse gases, currently being faced. However, the developing countries such as Brazil, India and China are just developing in the industrialized world and are viewed as not having conducted much to the accumulated greenhouse gases and most of the greenhouse gases created in the developing countries outcome from the production of consumer goods.

Switzerland has achieved significant success towards sustainable development. The government's economic policy has been subject to the fulfilment of the tasks of modernizing the economic potential and expanding foreign economic activity. Switzerland has preserved a stable modern market economy with low unemployment, a highly skilled labour force and a per capita GDP among the highest in the world. Transnational corporations and the public sector play an important role in the economy. The environment of country is subject to intense pressures (pollution, spatial restructuring), due in particular to industry, agriculture, transport and tourism. These pressures are as the result of its high population intensities and high level of economic activity, and from Switzerland's location at the heart of Europe.

Switzerland has done important progress in separating environmental pressures and economic growth midst fears of weak economic growth and international competitiveness. This is in regards to air pollutants; the use of fertilizer and pesticides, and water extraction. The sustainable development policies adopted in 1997 and 2007 have induced better collaboration among government agencies which have been followed by evaluation and monitoring procedures. The federal authorities make sectoral strategy or planning documents that cover environmental problems.

Switzerland has done some progress in internalizing external costs in water treatment and waste management, and in integrating environmental concerns into strategies for sectors such as agriculture and transport. The economic instruments applied such as VOC tax and the heavy vehicle fee, have confirmed effective.

Another country China is a country in East Asia which is the world's fourth-largest country by land size with a population of around 1.4 billion, the largest in the world. China's economy during the past 35 years has changed from a centrally planned system to a more market oriented economy that has a fast-growing private sector and is a main player in the global economy. The restructuring of the economy and the resulting efficiency gains have conducted to a significant rise in Gross Domestic Product since 1978. The expansion of the private sector in the country has helped reduce the negative impact of the public sector's transition to a market economy - reducing the negative impacts of the production structure, the release of workers and other factors in society. Gradually, the restructuring of the economy has ensured a smooth adaptation to the demands of production and population. This, in turn, has created a favourable social and psychological environment for reform. The restructuring of the economy did not create a crisis in the economy, provided economic growth and increased productivity. The state has a decisive role in the implementation of economic reforms to use the country's market system mechanisms to move to the entire market economy. The state plans and regulates financial and tax, monetary and credit relations, defines prices for basic goods and services.

The fast economic growth, urbanization and industrialization have applied a lot of pressure on the environment with a resulting damage on the ecosystem and society. The Chinese government, for combat this, is supporting more balanced patterns of development, through concepts such as harmonious society and scientific development. They have campaigned for strategies that include planning for national economic and social development, strengthening environmental institutions, planning modern environmental legislation, and prioritizing environmental and natural source management.

Also for example, United States of America has one of the largest and technologically strongest economy in the world. In this market-oriented economy, the principle of individualism is implemented in social policy, private individuals and business companies make most of the decisions, and the federal and state governments buy the desirable goods and services mainly in the private marketplace. Social-economic policy has been directed towards the reduction of state interference in solving individual problems of citizens, as well as giving them higher economic freedom. Liberal values and national interests are reflected in an optimally coordinated form in the US economic model. Liberal values and common national interests are recognized and implemented by both state institutions and businesses and citizens. In the US, the consumption of the population exceeds its revenues. Thus, the rate of savings is negatively formed. Americans are consuming more than they have earned. This country's economic development is largely crucial for its domestic presence . USA companies enjoy better flexibility than their competitors in Japan and Western Europe in decisions to widen capital plant, to lay off surplus workers, and to improve new products. Large corporations, which account for 20 per cent of companies in the country and have more than 500 employees, provide up to 90 per cent of total sales. Companies with up to 100 employees are small businesses, and those between 100 and 500 are referred to the medium-sized business. About 60 per cent of federal budget expenditures are spent on human resources development (education, health, social security, etc.). About 80 percent of the US GDP is in service. The main direction of the development of the processing industry is to move from the fields of capital, material and environments to highly skilled workforce and science-technical areas. Regions of agricultural products are special. About 30 percent of state federal spending is spent on scientific and technical research.

Countries like Azerbaijan, which are now actively integrated into the globalizing world, firstly needs to define the priorities of economic development in order to continue the competition of the national economy, and secondly, they must select the most effective method, tools and mechanisms for realizing their reality and opportunities.

Sustainable Development programme will help Azerbaijan achieve improvements in people's lives by providing access to the necessary skills and resources for the unemployed, engaging with the private sector for continued growth, improving environmental management and mitigating climate change effects.

In recent years in Azerbaijan has created enough economic, social, scientific-technical, human resources, institutional, legal base, start capital, thanks to the work on the formation of complex economic, organizational and political preconditions to ensure the transition of the national economy to sustainable and dynamic development.

It should be noted that the long-term structural policy of our republic should take into consideration the current problems of the national economy, on the other hand, in the perspective, Azerbaijan's intensification of the world economy, the competitiveness of the national economy, and most importantly, the solution of sustainable development problems. This makes the whole of oil industry a major force in the development of other industries for the realization of the non-oil sector as a priority task in the country. Implementing a policy of thoughtful employment strategy, successful social policy, as well as opening new jobs led to an increase in incomes of the population and a decline in the level of poverty in the upcoming period.

It is commendable that many large-scale policy documents (concepts, strategies and programs) have been adopted as an official basis for the implementation of the sustainable economic development model in the Republic of Azerbaijan. From these programs like "Small and Medium Entrepreneurship Assistance Program in Azerbaijan (1997-2000)", "State Program on Development of Small and Medium Entrepreneurship in the Republic of Azerbaijan (2002-2005)", "State Program on Machine Building Industry in the Republic of Azerbaijan (2002-2005)", "State Program for Agrarian Sector in the Republic of Azerbaijan (2002-2006)", "The concept of demographic development of the Republic of Azerbaijan", "State Program on Tourism Development in the Republic of Azerbaijan

for 2002-2005", "State Program on Poverty Reduction and Economic Development in the Republic of Azerbaijan (2003-2005) ", "State Program on Socio-Economic Development of the Regions of the Republic of Azerbaijan (2004-2008)" and others have been successfully implemented.

In this regard, the main purposes of the "State Program on Socio-Economic Development of the Republic of Azerbaijan" (2004-2008) which approved by the Presidential Decree of 2004 and "State Program on Poverty Reduction and Sustainable Development in the Republic of Azerbaijan for 2008-2015" which approved by the Presidential Decree of 2008 were the sustainable development of the non-oil sector, improving service and social infrastructure, increasing employment and improving living standards as a result of the creation of new jobs and businesses. In recent years creation of oil fund, ensuring transparency of its use, population's incomes, budget opportunities, as well as increasing the aggregate demand due to a significant increase in the financial resources of enterprises, banks, has created the start capital today that is the basis for sustainable development of the national economy. The share of aggregate investments in GDP, especially the share of foreign investments, sharply declined, but the share of domestic investment increased from 13.4 to 26.3%. Thus, in 2000-2015, capital investments in Azerbaijan increased 11 times. The share of the non-oil sector in the structure of investments increased from 49% to 71% as a result of the excessive investment in non-oil sector compared to the oil sector. The amount of investments into the oil sector decreased from 50% to 29%. All these trends can be considered as an important outcome of the practical effectiveness of large investments in the oil sector in the initial phase of the transition.

Also Sustainable Development programme like "State Program on Socio-Economic Development of the Regions of the Republic of Azerbaijan for 2014-2018" is helping Azerbaijan achieve improvements in people's lives by providing access to the necessary skills and resources for the unemployed, engaging with the private sector for continued growth, improving environmental management and mitigating

climate change effects, promoting macroeconomic stability, expanding entrepreneurship in the regions, creating new businesses and businesses, implementing large-scale infrastructure projects, improving utility services, ultimately improving the well-being of the population and reducing poverty.

All this shows that our country's economic development has already entered a new stage of quality. The main objective of the new stage is to ensure the sustainability of dynamic socio-economic development in the country in the long-term perspective, while improving the competitiveness of the national economy and effectively integrating into the global economic system. Also such tasks like to strengthen the economic potential of the country and to realize this potential effectively, to develop the non-oil sector, to fully and effectively use the potential of each region, to balance the development of the regions, to create new jobs, significantly increase the amount, quality of social services, poverty reduction and so on. may be an example for main objective of the new stage of sustainable development.

## **CHAPTER II.**

### **SUSTAINABLE DEVELOPMENT IN TERMS OF ENERGY PRICES.**

#### **2.1. The Role of Energy in Sustainable Development**

In the modern world, energy is the basis for the development of basic industries that determine the progress of social production. In all industrialized countries, the pace of development of energy has outpaced the pace of development of other industries.

Insufficient supply of energy restricts socio-economic activities, limits economic growth and negatively affects the quality of life. Improvements in standards of living are manifested in raised food production, raised industrial output, the provision of efficient transportation, healthcare, adequate shelter and other services. These will require raised energy consumption. So, expected energy requirements will continue to become larger with rise in living standards, industrialization and a host of other socioeconomic factors.

The history of civilization is the history of the invention of ever new methods of energy conversion, the development of its new sources and, ultimately, the increase in energy consumption. The first jump in energy consumption occurred when a person learned to obtain fire and use it for cooking and heating their homes. The sources of energy in this period were wood and muscular strength of man. The next important stage is connected with the invention of the wheel, the creation of various tools of labour, the development of forging production. By the XV century a medieval man, using working cattle, the energy of water and wind, wood and a small amount of coal, already consumed about 10 times more than a primitive man. A particularly significant increase in global energy consumption has occurred over the past 200 years that have passed since the beginning of the industrial era - it has increased 30 times and reached 14.3 Gt of nuclear fuel per year in 2001. A man of an industrial society consumes 100 times more energy than a primitive man, and lives 4 times longer.

Energy is related to the productivity level in the industry, agriculture, commerce and even in office activities as the very source of development. One of the indicators or benchmarks for measuring the standard of living of a people is energy consumption per capita. A specific feature of the electric power industry is that its products cannot accumulate for subsequent use and therefore consumption corresponds to the production of electricity and in size (of course, taking into account losses) and in time.

A life without electrical energy is no longer possible. Electric power industry has invaded all spheres of human activity: industry and agriculture, science and space, our way of life. Such a wide spread is due to its specific properties: the ability to transform into virtually all other types of energy (thermal, mechanical, sound, light, etc.); the ability to be relatively easily transferred to large distances in large quantities; the enormous rates of flow of electromagnetic processes by the ability to fragment energy and the formation of its parameter (change in voltage, frequency).

In the industry, electrical energy is used both for activating various mechanisms, and directly in technological processes. Without electrical energy, it would be impossible to develop cybernetics, computer technology, and space technology.

Electricity plays an enormous role in the transport industry. Electric transport does not pollute the environment. A large amount of electricity consumes electrified railway transport, which allows increasing the capacity of roads by increasing the speed of train traffic, reducing the cost of transportation, increasing fuel economy. Electricity in everyday life is the main part of ensuring a comfortable life for people. The level of its progress reflects the level of development of the productive forces of society and the possibility of scientific and technological progress.

At the same time, energy is one of the sources of adverse environmental and human impacts. It affects the atmosphere, the hydrosphere, the biosphere (emissions of toxic substances) and the lithosphere (consumption of fossil fuels, change of landscape).

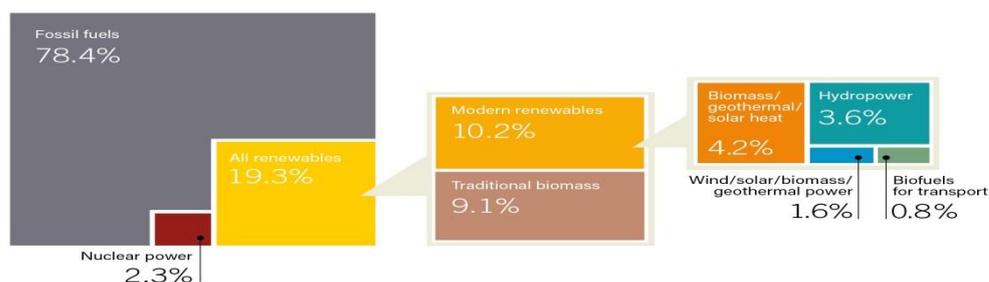
Despite the mentioned factors of the negative impact of energy on the environment, the increase in energy consumption did not cause much concern among the general public, as it was clear how from a technical point of view it is possible to reduce or exclude this effect altogether. This went on until the mid-1970s, when numerous data appeared in the hands of experts, which showed a strong anthropogenic pressure on the climate system, which threatens the global catastrophe with uncontrolled growth of energy consumption. Since then, no other scientific problem has attracted such close attention as the problem of the present, and especially of the forthcoming climate changes.

Electric power industry is engaged in the production of electric energy, its transportation and distribution through power lines. Energy is produced at power plants of different types, at some stations, together with electrical, thermal energy is also produced. In Azerbaijan, electricity is produced at three major types of power plants: thermal (TPP), hydraulic (HPP) and nuclear (NPP). The structure of energy production by types of stations is shown in Fig. 2

**Figure 2. The share of various power plants in Azerbaijan for 2017**

Figure: 01

**Estimated Renewable Energy Share of Total Final Energy Consumption, 2015**



REN21 *Renewables 2017 Global Status Report*

**REN21** Renewable Energy  
Policy Network  
for the 21st Century

Electric power is generated at power plants: thermal, hydraulic, nuclear, solar, geothermal, wind, etc. In our country, a huge amount of electricity is produced and

consumed. It is almost entirely produced by two main types of power plants: thermal and hydroelectric.

Practically at all power stations having industrial value, the following scheme is used: the energy of the primary energy carrier by means of a special device is first converted into mechanical energy of rotational motion, which is transferred to a special electric machine-generator, where an electric current is generated.

The leading role in the electric power industry of Azerbaijan is played by thermal power plants (TPPs). They now produce about two-thirds of all electricity in the country. The most widespread were TPPs with steam, gas turbine and combined-cycle plants.

Thermal power plants require a huge amount of organic fuel (up to 5 billion a year), while its reserves are declining, and the cost is constantly increasing due to increasingly complex production conditions and the range of transportation. So for the CHP located on the European part, about 2/3 of the consumed fuel is brought, and the transportation of fuel is much more expensive than the transmission of electricity.

TPPs are built with relatively low costs and quickly both near the fuel deposits and near large energy consumption centres. But they require a significant number of personnel for their service, they are rather poorly regulated, and exhaustible and non-renewable types of mineral fuel-coal, gas, peat, shales are burned on a large scale. The fuel utilization factor is rather low (no more than 40%), and the amount of waste polluting the environment is high. The maximum ecological harm is caused by thermal power plants operating on high ash-coal, the smallest - working on gas.

The first type of TPP is condensing stations. They burn mineral fuels, due to which the boilers heat water, turning into steam. Steam passes through turbines, generating electricity, and then it condenses and re-enters the boiler. The most powerful condensing stations are called GRES - state district power stations. Power plants operate mainly on gas and fuel oil, and in Asia - on coal.

The second type of TPP is a combined heat and power (CHP). They generate electricity and heat. Due to this, the fuel utilization factor is higher, but they are built only near the consumer, since heat can only be transmitted for short distances. As a rule, the power of the CHP plant is much less than that of the GRES.

Complexes of thermal power plants operating on the coals of one field are called fuel and energy complexes. Economic, technical, economic and environmental factors do not allow to consider thermal power plants as a promising way of generating electricity.

Hydropower plants (HPPs) are the most economical. Their efficiency reaches 93%, and the cost per kilowatt-hour is 5-6 times cheaper than with other methods of generating electricity. They use an inexhaustible free energy source, are serviced by a minimum number of employees, are well regulated. In terms of the size and power of individual hydropower stations and units, our country occupies a leading position in the world.

But the HPPs also have a number of shortcomings: The pace of development is hampered by significant costs and construction time, due to the remoteness of HPP construction sites from large cities, lack of roads, difficult construction conditions, seasonally affected rivers, large amounts of valuable riverine land are being flooded, large reservoirs are negatively impacted on an ecological situation, powerful hydroelectric power stations can be post-produced only in places where resources are available.

Hydropower plants are divided into: hydroelectric power plants using the energy of rivers (HPP); tidal power stations using the energy of tides and ebbs of the seas and oceans (PES); pumped storage stations (PSPs), capable of accumulating and using the energy of artificial reservoirs and lakes.

The hydropower station provides for the construction of a dam that blocks the riverbed. The dam allows you to accumulate water in the reservoir and create, thus, the head of water, necessary for the operation of the hydro turbine.

PES uses the energy of tides and ebbs of a wave formed in the seas and oceans as a result of the forces of attraction acting between the Earth, the Moon and the Sun. The disadvantage of PES is the high cost of their construction, and they work only during high tide.

PSPs use hydraulic energy, which they accumulate, accumulate, pumping water into a special pool, and at the necessary time transform it into electrical, than reduce or remove short-term peak loads. Short-term operation is explained by relatively small volumes of basins.

During most of the twentieth century, primary energy supply has been cheap and abundant, however, due to limited emphasis on optimising the use of more energy efficient end-use technologies the energy system as a whole has evolved with limited regard for optimisation, because there has been little emphasis on optimising endues technologies. The energy system is made up of the energy supply sector and energy end-use technologies; the object of the system is to provide energy services. If the end-use technologies are not efficient, the system cannot be efficient either.

The energy generation of Azerbaijan is based on the use of hydrocarbons resources of the big country, but if the development of renewable energy is one of the government's strategic priorities, the legal and institutional environment is still not attractive for potential investors. However, since the utilization of the potential of this field is important, the Azerbaijani Government has taken the first steps by establishing the Agency for Alternative and Renewable Energy Sources (ABEMDA).

More than that, Azerbaijan is recognized as a country rich in renewable and alternative energy sources. ABEMDA is planning to present proposals for the passing of many parts of this potential and aims to increase the ratio of renewable and alternative energy sources to 20% in general energy production by 2020.

The contribution of Azerbaijan to the Paris Agreement on Climate Change, taking into account national decisions, is to reduce 35% of the gas wastes that generate heat effect by 2030 compared to the stock level, and also 39% on the energy

field. At the same time, 25% share of alternative and renewable energy resources It decreases.

In the spring of 2011, ABEMDA and the UN Development Program (UNDP) launched a new project on "Promoting the Development of Sustainable Energy in Azerbaijan". This project was carried out with € 500,000 from the European Commission and \$ 790,000 from the Norwegian Government. This project aims to help the Republic of Azerbaijan with the aim of coming from the tops of the middle obstacles by making the changes and observations in terms of the current legal and public environment. Implementing this project will be an important step towards achieving the Millennium Development Goals in the country.

Also in the Nakhichevan Autonomous Republic, renewable and important projects related to the use of energy resources have been implemented. In this case, the use of a new solar power plant located near the Hal-Hal village of the town of Babek and started this year was presented. The construction of the 20 MV capacity solar power station was made according to the agreement signed between the State Energy Agency of the Nakhichevan Autonomous Republic and the Soltech N.V. company of Belgium.

The State Agency regularly organized activities and informed the media about the use of alternative and renewable energy sources in the country. The press has created an environment for informing Agency experts; special attention has been paid to the government's ability to explain the renewable energy policy and to raise awareness of the society.

## **2.2. Impact of Oil Prices Change on Economy**

The energy system today is heavily dependent on the use of fossil fuels (coal, oil, and gas), which together account for 80 percent of global primary energy consumption. The large global energy system has the following characteristics:

- Total energy sales worldwide amount to some US\$1 trillion per year (3 percent of the world's gross domestic product).
- Subsidies on fossil fuel sales are on the order of US\$150 billion per year.
- Sales of 'new renewables' are on the order of US\$20 billion per year.

During most of the twentieth century, primary energy supply has been cheap and abundant, however, due to limited emphasis on optimising the use of more energy efficient end-use technologies the energy system as a whole has evolved with limited regard for optimisation, because there has been little emphasis on optimising end-use technologies. The energy system is made up of the energy supply sector and energy end-use technologies; the object of the system is to provide energy services. If the end-use technologies are not efficient, the system cannot be efficient either.

One of the most important economic issues related to energy has to do with the relationship between energy prices and energy use. Energy prices influence consumer choices and behaviour. High energy prices can lead to high energy bills, which in turn has adverse consequences for business, employment, and social welfare. On the other hand high energy prices can also stimulate exploration and development of additional resources, create incentives for innovation and efficiency improvements, and attract new investment. Energy system development cannot take place without investment in plants, equipment, and energy system infrastructure.

The oil crisis of the 1970s highlighted the importance of energy efficiency and ultimately contributed to a significant decoupling of energy consumption and gross domestic product. As a result, more products can be manufactured with less energy, and less energy is needed in general to create the energy services required. A major challenge will be to find ways of meeting the growing demand for energy services in developing countries to support desired economic growth without incurring the adverse consequences associated with current patterns of energy use. To accomplish this, significant investment will be needed to supply the two to four fold increase in global primary energy projected in the World Energy Assessment over this century.

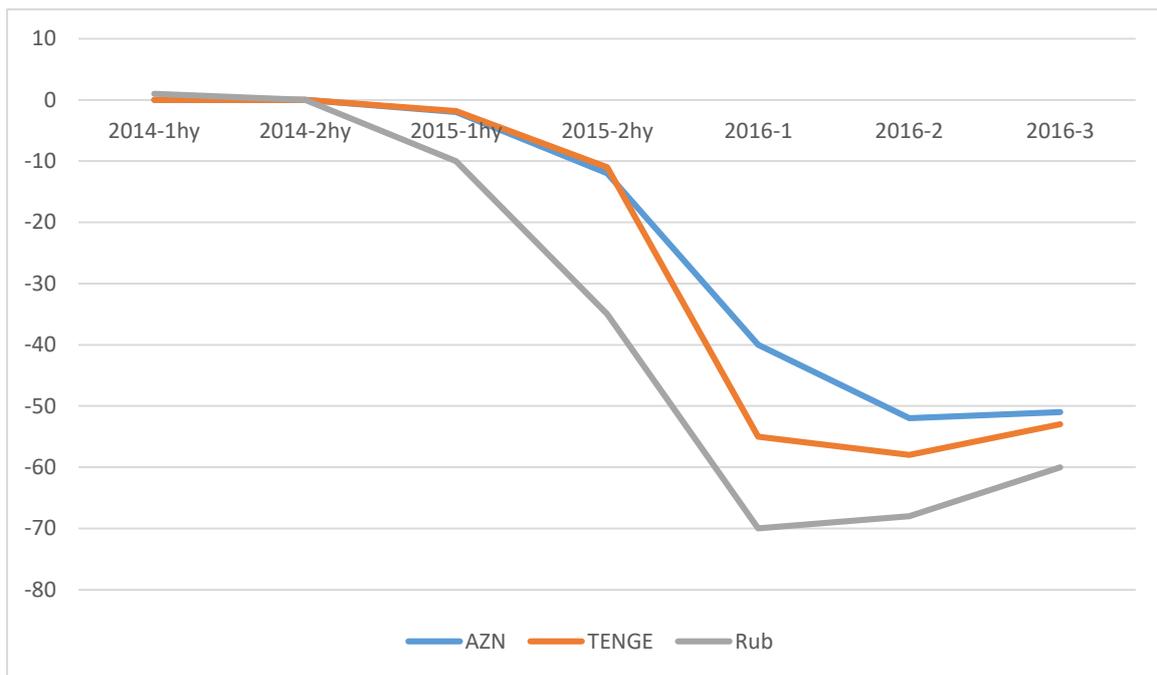
In the United States, rock oil production in the United States is expected to reach 10 million a day in 2014 from 5 million per day in 2007, while the Saudi Arabian-led OPEC members' production of parts of their production, the excess supply in the final oil market, Turkey has lowered it from \$ 115 / barrel today to less than \$ 35 / barrel. Such a decline is affecting the economies of many countries.

The price of oil, which rose to the level of 140 dollars before the global crisis of 2008, went down to the level of 40 dollars with the crisis but with the recovery in growth, it rose again above 120 dollars. Higher prices also lead to new and cheaper production. Searches in North America and Northern Europe, particularly in the US, which has the largest and most energy-consuming economies in the world, have begun to include different alternatives, such as new oil resources and rock gas, into the energy supply. First, we saw a fall in natural gas prices. In 2014, oil prices were expected to decline towards 90 dollars. But the price of 60 dollars declined was a development that no one could predict.

It may take a while to compensate for such hard movements that occur at prices. Continuation of the fall may come. Falling prices, as at rising prices, will also lead to improvements in supply. News from energy companies indicates that a supply shortage is coming in this direction. When we look at the costs of extracting oil or rock gas, it can be said that it would not be easy to form a permanent balance below \$ 55-60. Of course, one of the things that should not be forgotten is the political and geopolitical developments and the effects of the related strategies on the oil prices.

The US, Saudi Arabia or OPEC (Oil Exporting Countries) countries' supply-side strategies seem to be influential in the current hard movements. Since the beginning of the year, oil prices have been depreciating by around 40 percent, and it is likely that oil prices are likely to remain low for some time.

**Figure 3. The impact of oil price decline on countries' currency in 2014-2016**



Source: <http://slideplayer.biz.tr/slide/10667170/>

One of the most important events on the markets in 2015 was a sharp drop in oil prices by 40%. At the end of 2015, oil prices fell to a record low for 11 years. Understanding the causes of fluctuating oil prices can often be confusing to those outside the commodity market. Nevertheless, despite the fact that oil is much more difficult to analyze commodities than any other, there are several common factors that affect its price around the world.

One of the main factors, as in the case of any commodity, stock or bond, is the law of supply and demand, which forces prices to change. When supply exceeds demand, prices fall and vice versa. World oil production is predominantly controlled by OPEC, the Organization of Petroleum Exporting Countries, which has a major impact on fluctuations in oil prices. The organization's goal is to maintain a stable oil price. OPEC undertook to keep prices above 100 USD per barrel in the foreseeable future, but in mid-2014 the price began to fall. It fell from USD 100 per barrel to the current USD 40 per barrel. And OPEC itself became the main reason for cheap oil. She refused to cut production, which led to a drop in prices.

OPEC as a producer has a huge impact on oil prices, but on the other hand, the price depends on demand. The demand of the largest oil importers, such as Europe, China, India and Japan, also affects prices. For example, the fall in oil prices may be due to lower demand in these regions, coupled with a stable supply from OPEC. Excessive supply of oil can cause them to fall sharply.

The cost of production also causes a rise or fall in prices. While in the Middle East oil production is relatively cheap, its extraction, for example, in Canada or the UK is much more expensive. As soon as the supply of cheap oil is fully spent, the price of oil may increase if only oil remains in regions with expensive production.

This is another factor that causes fluctuations in oil prices. Like most commodities, seasonal changes in weather affect the demand for oil. In winter, it is consumed more for heating, and in summer people drive more and use more gasoline. Although markets know when to expect these periods of increased demand, the price of oil rises and levels up with the start of the season each year. Extreme weather conditions (hurricanes, tornadoes, thunderstorms) can have a physical effect on production facilities and infrastructure, reducing the supply of oil and causing an increase in prices.

Political instability in oil-rich areas can also cause price fluctuations. For example, in July 2008, the price per barrel of oil reached a record high of \$ 140 due to concerns and fears of consumers about wars in Afghanistan and Iraq. Another example is that if an oil-rich region becomes politically unstable, supplier markets respond with rising oil prices so that supplies are still available to the person who offered the highest price. In this case, only understanding the shortage of supply can raise prices, even at a constant level of production.

In addition, it is important to note that oil is quoted and sold internationally in US dollars. In general, the fall in the US dollar increases the demand for oil and its price. On the contrary, the strengthening of the US dollar reduces real incomes in consuming countries, reducing the demand for oil and its price.

When it comes to the impact of rising oil prices on the economy, economists disagree. From one point of view, the higher cost of energy carriers increases the cost of production and transportation of everything. With the growth in value, which slows production, the incomes of enterprises fall, and the stock market experiences a decline.

From the consumers' point of view, the rise in gasoline prices frightens those who, seeing the loss of their purchasing power, reduce their spending on goods not of prime necessity, which negatively affects the sales of companies. This also has a negative impact on economic growth and stock prices. The counterargument to this opinion is based on the reasons for the rise in prices. The most likely cause of growth is high demand. A strong economy increases the demand for energy, which increases their price.

When it comes to the impact of falling oil prices on the economy, on the whole this means good news for oil importers, for example, Europe, China, India, Japan, and bad news for exporters such as OPEC, Latin America and Azerbaijan. Oil importers benefit from falling prices, as the cost of oil imports is falling. This reduces the current account deficit. For oil exporters, in turn, the fall in oil prices has the opposite effect: it reduces the cost of their exports and leads to a decrease in the trade surplus.

The drop in oil prices helps consumers reduce the cost of living and save money that can be spent on more expensive purchases. In most cases, this implies a reduction in transport costs, which leads to a lower cost of living and a lower inflation rate. In fact, the fall in oil prices is a free tax cut. In theory, the fall in oil prices could lead to an increase in spending on other goods and services, as well as real GDP growth.

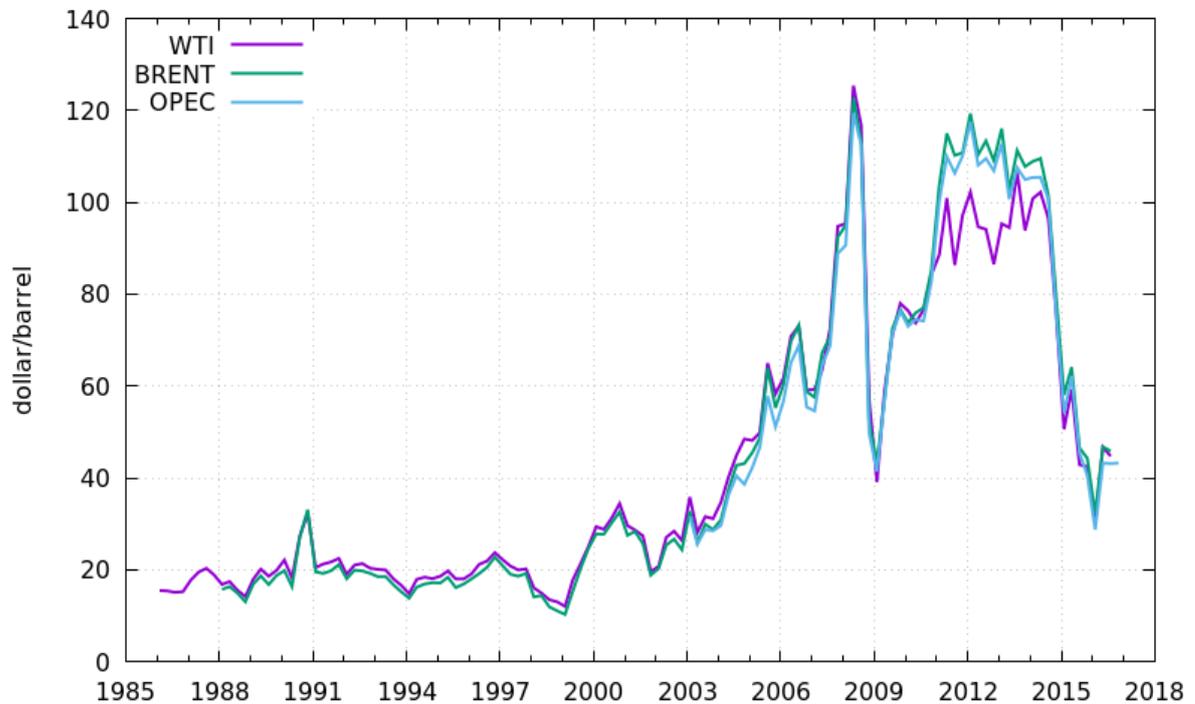
However, it can also cause deflation and a decrease in consumer confidence, and instead of spending, they prefer to save money. In this case, a fall in prices instead of increasing expenditures leads to a reduction in the level of inflation and the likely onset of deflation, which can be extremely difficult to get out of. Another

drawback of low oil prices is that it can slow down investment in alternative "greener" forms of energy, for example, electric vehicles. The fall in oil prices could halt the reduction in the use of cars and lead to increased congestion in traffic and the negative impact of gasoline use on the environment.

Speaking about the law of supply and demand, in general, we expect that OPEC will also prefer the volume of the price and increase production in the near future. However, because of the continuing significant costs of cutting investment, we also expect a healthy growth in demand, along with negative influence on the US and non-OPEC countries, non-US production. We also do not believe that the lifting of sanctions from Iran will lead to a significant decline in oil prices. After decades of inadequate investment in the development of oil fields and production infrastructure, Iran will need to attract billions of foreign investment so that hydrocarbon exports return to pre-sanction levels. And global investors are more likely to be extremely cautious before investing because of the legal and other problems that these investments may face.

In this regard, we expect that the supply / demand balance will shift from an excessive supply of 1.9 million barrels a day to 2015, to 0.6 million barrels per day in 2016, and to provide a balanced market in 2017.

**Figure 4. Average annual OPEC crude oil price from 1960 to 2018**  
(in U.S. dollars per barrel)



Source: <https://www.statista.com/statistics/262858/change-in-oil-prices/>

According to our estimates, the average price for oil per barrel in 2018 and further will be 70 USD. Undoubtedly, unforeseen events, for example, political instability, natural disasters, etc., can lead to more serious fluctuations and high prices in the world oil market.

In the 1980s, the average price for oil was \$ 36 per barrel, about the same as in 2004. By 2008, the price of oil jumped to \$ 97. After the crisis of mortgage lending in the US, accompanied by the bankruptcy of the largest financial companies, caused a sharp drop in economic activity and the collapse of quotations in the stock and commodity markets in 2008, the price of oil in 2008-2009 fell to \$ 70. As a result, in 2009 the world economy contracted by 0.6%, which affected international trade, which decreased by 11% after 8% growth in 2004-2008. However, the world economy and markets have largely recovered in 2010-2011 under the influence of

vigorous fiscal and monetary stimulus measures taken by governments around the world.

One of the major effects of the dropping oil prices is the destruction of economies that are heavily relying on oil. In a latest rating of the Venezuelan debt capability, the country was downgraded, and this is because of a fall in the oil prices, by more than 40%. This is because the country had a very low level of foreign exchange and international reserves. Besides, Venezuela is also experiencing economic recessions and this is because it is incapable to offer essential services such as health care services and pay off its government workers. Russia is another country that is negatively affected by a low oil price.

Just as Venezuela, the Russian economy is reliant on oil; as a result, the value of the Russian currency has depreciated. The rates of defaults were very high, and this means that trading in Russian bonds or debts was very risky in a latest credit rating of Russia. This is evidence that mostly because of oil and partly because of the economic sanctions that the European Union has placed on Russia so the Russian economy is experiencing a recession.

Low-priced oil is not only hurting the economies of states that are reliant on the production and exportation of oil, but it is also hurting economies of countries such as United Kingdom and United States. For example, the British energy sector, especially the oil industry is experiencing some declines, and this has led to the folding of most workers, leading to a rise in unemployment. High rates of unemployment are not good for an economy, and this is especially because it has the capability of decreasing the GDP growth of a given state. Also with the US shale industry experiencing a fall in its production, there is a drop in the US oil production. This is because shale oil producers are eliminating drilling rigs from the margins of Texas and North Dakota. This indicates that the industry is collapsing, and therefore it may cause belt-tightening and job cuts. Another bad effect of low oil prices is a reduction in innovation. Because of low-priced oil, scientists would reduce on their research, hence failing to come up with other innovative ways of depending on oil, or

coming up with other measures on how to lower the prices of oil. It is important to clarify that innovation is one of the factors that has led to the growth of the highly leading economies such as United States, Germany, France, United Kingdom, Japan, China and etc. Chances are high that these countries without innovation would not come up with better innovative resolutions that can help in the growth of their economies. Moreover low-priced oil prices does not only negatively affect companies that are on the oil industry, but also other sectors like service sector, retail, and manufacturing.

The macroeconomic situation in the raw material exporting countries is particularly sensitive to fluctuations in the price of this raw material: economic activity is declining and external and fiscal balances deteriorate when the price of raw materials is falling, and vice versa, an economic boom is observed when raw material prices are peaking. On the other hand, for all other countries in the world, the rise in the price of oil increases the cost of production and reduces the profits of enterprises, thereby affecting economic activity. In the 1960s-1980s, a negative correlation was observed between the price of oil and the growth of world GDP.

However, in the past 20 years, the energy intensity of production in developed countries has decreased significantly, which reduced the share of oil in these countries' GDP and, accordingly, the impact of the oil shock on the aggregate supply. Therefore, we see that the correlation between oil prices and world GDP growth after the 1980s changed sign. The IMF in its recent report gives another explanation: the rise in oil prices in the past two decades was due to the rapid growth of emerging economies, which constantly supported high oil prices. That is, in this case, world economic growth affects the pricing of raw materials, and not vice versa.

In general, the impact of oil prices on the CIS economy depends on, first of all, its structure, theoretically it must be different for countries that receive significant income from oil exports and their importing countries in comparison with their GDP. In periods of high energy prices, there is a flow of income from consumers, importers to producers, exporters of oil. On a global scale, such an income movement should

not lead to a global change in GDP. However, there is a widespread claim that, due to a higher propensity to spend oil consumers than producers, oil exporters tend to save more and spend less. As a result, rising oil prices could lead to a slowdown in domestic demand and ultimately to a slowdown in world GDP growth. Another group of researchers believes that oil producers use their savings to invest in other countries, contributing to lower interest rates and rising asset prices and thereby stimulating economic growth. Therefore, from the point of view of the researchers of the second group, the effect of GDP slowdown cannot be unambiguous.

Anyway, high oil prices create certain difficulties in implementing macroeconomic policy for governments of both exporting countries and oil-importing countries, since both must simultaneously achieve several, often conflicting goals, including smoothing consumption, ensuring equality in the incomes of different generations and capital investments to ensure economic growth. Therefore, as a rule, at a time of high energy prices, faced with uncertainty about export earnings, the governments of these countries prefer to accumulate buffer stocks in the form of state oil funds and foreign exchange reserves of central banks. Oil importers, on the contrary, demonstrate a deterioration in foreign trade balances, which exerts pressure on the depreciation of the exchange rate and ultimately leads to a decrease in revenues. The impact of the growth in oil prices on inflation generally depends on the macroeconomic policies pursued in the country, as well as on the ability of workers to claim compensation for lower incomes in the form of wage growth and the desire of corporations to save profits. All these factors can lead to the unwinding of the wage-price spiral, when households and corporations are forced to cut their spending following declining incomes, which will lead to deflation.

An unambiguous and more or less proven fact is the growth of uncertainty and volatility in the economy, which affect the real economy through investment decisions. If the rise in oil prices becomes more long-term, the economy shifts to new levels of equilibrium. Thus, for oil-exporting countries, long-term changes in terms of trade lead to higher investments that contribute to GDP growth. Oil importing

countries are not moving to lower levels of economic growth, which involve lower levels of both public and private spending.

The volatility observed in the global oil market hampers the growth of economic growth in Azerbaijan. The analyst says the decline in oil prices over the past four working days indicates that stability in the oil market has not yet been restored. For this reason, oil countries like Russia and Kazakhstan, as well as the main factor supporting Azerbaijan's economic growth - cannot increase the volume of money circulating in circulation.

Note that, the volume of money circulation in Azerbaijan as of March 1, amounted to AZN 6 534.3 million. This is a record high of July 2014, amounting to 11,144.4 million manat. 41.4% less than manat. The increase in the money supply, in the first place, has an adverse effect on the balance of payments by increasing imports. Also, the excessive money supply increases the demand for foreign currency in the event of a crisis.

### **2.3. Cointegration of Oil Prices and Economic Variables for Azerbaijan and other oil industrial countries like Kazakhstan**

Azerbaijan, Kazakhstan, and Russia are three grand oil exporting countries in the former Soviet Union space. These countries are characterized by high reliance on oil in trade and fiscal accounts. The amount of oil in exports in Kazakhstan and Russia, the share varies between 60% and 80%, in Azerbaijan prevails 70%. These countries witnessed a huge inflow of petrodollars when oil prices were high which led to the crucial appreciation of their national currencies and accumulation of considerable foreign exchange reserves. However, as the unfavourable oil price shock hit the oil market, the influx of petrodollars narrowed and this provoked a pressure on the national currencies. Initially, the central banks expressed willingness to preserve their currencies through spending their reserves.

During the periods of high oil prices, the governments of these countries were receiving a great volume of oil income, one part of which was accumulated in the wealth funds and the other amount was directed to the budget and spent on rising pensions and wages of the public employees and infrastructure development. In 2013, the additive of oil revenues to the budgets in Azerbaijan and Kazakhstan overlapped 50% and in Russia, the contribution to the budget was nearly 50%. After the oil market started falling, the governments of these countries began optimizing their expenditure and suspending the projects of the relatively low priority.

High dependence on oil profits and high volatility of oil prices call for influential economic policy and management in Azerbaijan, Kazakhstan, and Russia. The possibility of designing accomplished economic making better governance and policy depends on understanding the rule oil price shocks interact with other economic variables and hit the economy. There is a lot of studies which conduce to the analysis of the relationship between changes in oil prices and macroeconomic variables in oil-exporting countries.

"The Central Bank of the Azerbaijan Federation in the September macroeconomic report blatantly accuses Azerbaijan and Kazakhstan of violating the agreement to limit the production of OPEC + oil. Moreover, it is completely unclear what data the Azerbaijan department relies on, making such statements. This indicator indicates a prejudiced attitude of the Azerbaijan Federation to its neighbours," said chairman of the Center for Petroleum Research Ilham Shaban.

According to him, Kazakhstan's energy minister Kanat Bozumbayev made a statement, where he indicated that Kazakhstan exceeded its obligations in August. The country should produce 1.68 million barrels, and 1.643 million barrels were produced.

"Azerbaijan is generally the most disciplined country that has never violated an agreement on the reduction of oil production. In August, daily oil production in Azerbaijan amounted to 734.8 thousand barrels, of which 704 thousand barrels fell on crude oil, and 30.8 thousand barrels - on condensate. According to the agency, 617.6

thousand barrels of crude oil, 30.8 thousand barrels of condensate and 6.6 thousand barrels of oil products were exported daily. The ministry stressed that Azerbaijan fully fulfilled its obligations to reduce production by 35,000 barrels per day. It turns out that neither Azerbaijan nor Kazakhstan violated the agreement, "the expert explained.

Ilham Shaban is perplexed why the Central Bank of the Azerbaijan Federation accuses neighbouring republics of non-compliance with the agreement on limitation of OPEC + oil production.

"Azerbaijan is well aware that if in Kazakhstan there is an increase in oil production due to the launch of the Kashagan field last year, then, alas, there is a significant decline in Azerbaijan. Only in the first half of this year, according to the State Statistics Committee of Azerbaijan, the volume of decline compared to last year's figures amounted to 2 million tons, "- said the expert.

"Azerbaijan is not yet able to produce over 800,000 barrels of oil. Today, there is a gradual decline in the country, which will continue in the next year, "he explained.

I.Shaban said that, according to the forecasts of the government of the AR and the State Oil Company, the volume of oil production will begin to grow in 2019.

"This will happen because in the second half of 2018 the Shah Deniz 2 project will be launched, and in a year more than a million tons of condensate will be produced, which is comparable to 8 million barrels of oil," he said.

At the same time, as Nezavisimaya Gazeta writes referring to the September macroeconomic report of the Azerbaijan Central Bank, oil exporters will not be able to balance the world market due to increased production in the US, Kazakhstan, Azerbaijan and other undisciplined countries that violate the OPEC+.

Recall that the agreement of the oil exporting countries on the reduction of production formally operates until the end of March 2018. Azerbaijan actively participated in the preparation of this agreement, since its budget and the economy as

a whole are critically dependent on oil prices. Under the agreement of OPEC + countries of this cartel should reduce oil production by 1.2 million barrels. per day. And the countries outside OPEC pledged to reduce production by 558 thousand barrels. oil.

Azerbaijan presented to the joint technical commission of the OPEC monitoring committee data on daily oil production in the country in August as part of the Vienna agreement on production reduction. According to the report, in August, daily oil production in Azerbaijan amounted to 734.8 thousand barrels, of which 704 thousand barrels fell on crude oil, and 30.8 thousand barrels - on condensate. According to the agency, 617.6 thousand barrels of crude oil, 30.8 thousand barrels of condensate and 6.6 thousand barrels of oil products were exported daily.

The ministry stressed that Azerbaijan fully fulfilled its obligations to reduce production by 35,000 barrels per day. It should be noted that in January of this year Azerbaijan produced 793.9 thousand barrels of oil per day, in February - 776.4 thousand barrels, in March - 733.3 thousand barrels, in April - 781.1 thousand barrels, in May - 785, 3 thousand barrels, in June - 793.7 thousand, in July - 796.7 thousand barrels per day.

In January-March 2017, 76.28 percent of Azerbaijan's total exports were crude oil, 10.22 percent - natural gas, 3 percent - oil products (2710 goods). The State Customs Committee reported to AZERTAC.

Caspian Barrel adds that Azerbaijan's total exports in the first quarter of the current year amounted to \$ 2 billion 606 million 306.06 thousand. During the period from January to March last year, this revenue was \$ 1 billion 746 million 861.72 thousand. During the quarter, exports increased by 49.2 percent. The main factor affecting the increase is oil prices. Thus, the average increase in oil prices was 55.9 percent.

It should be noted that 85% of Azerbaijani oil is exported to the world markets through the Ceyhan terminal. The prices for Azerbaijani oil, exported from this port under the BTC FOB Ceyhan brand, are as follows:

**Table 1. Azerbaijani oil prices for 2016-2017**

Months	2017	2016	Difference between prices (%)
January	55.14	32.33	+70.55
February	56.63	33.43	+69.39
March	52.86	39.80	+32.81
Average price	54.88	35.19	+55.95

The economies of almost all the countries that joined the CIS recovered after the economic shock of 1990-1995, but this process was uneven. From 1990 to 2017, only Azerbaijan and Kazakhstan were able to more than double the real gross domestic product (GDP), while economic activity in these countries increased 2.6 and 2.03 times, respectively.

All the countries that joined the Commonwealth, including Georgia, during the collapse of the USSR and the subsequent period of transformation of economies faced a significant decline in economic activity. The peak of the fall was in 1995, when the decline in the economy in comparison with 1990 was on average 48% in real terms.

The first began to recover the economies of Armenia and Georgia, the last - Ukraine, whose economy began to grow only in 2000. From 2003 to 2007, the economies of most of the CIS countries reached the 1990 levels and surpassed them. Tajikistan (by 2013) and Georgia (by 2017) were the last to recover, while the economies of Ukraine and Moldova did not recover completely after the recession.

Nevertheless, starting from 2010 (even taking into account the fact that for most of this period oil prices remained at a rather high level), the actual rate of GDP growth in Azerbaijan slightly deviated from the potential.

The decline in the economy in 2016 is due to both the oil factor and the dynamics of the economy's potential (in 2015-2016 the trend of relative oil prices became a negative factor). At the same time, the economy has not undergone a more significant decline due to the factor of the business cycle, which can be linked with the devaluation of the national currency and the subsequent tight monetary policy of the authorities.

As a result of 2017, the non-oil part of GDP showed an increase of 2.7% in real terms, reflecting the positive contribution of the business cycle component. In 2017, oil prices acted more as a deterrent, which resulted in a nominal increase in GDP (by 0.1%).

As for the prospects for the near future, according to experts, from 2018 to 2019 Azerbaijan's GDP should be fixed in the growth zone, given the quite positive expectations from the dynamics of oil prices (according to ACRA forecasts, in 2018 and in 2019 the price of a barrel of brand oil Brent will be \$ 58 and \$ 60, respectively).

As a result, it is not necessary to expect overheating in the country's economy, which minimizes the risks of a gradual weakening of inflationary processes and the release of average annual inflation to the level set by the Central Bank of Azerbaijan for the period 2018-2019 (6-8%), analysts conclude.

According to the experts of the International rating agency Moody's, Kazakhstan (Baa3 "negative") and Azerbaijan (Ba1 "negative") experience similar difficulties in connection with the fall in oil prices from the highs noted in mid-2014, including a sharp slowdown in the economy, double-digit inflation, the reduction in the volume of foreign exchange reserves and the worsening of the situation in the banking sector. According to Moody's in the material Kazakhstan more resilient than Azerbaijan in adjustment to lower oil prices, the high diversification of the economy of Kazakhstan, stronger state institutions and a lower level of debt in comparison with the situation in Azerbaijan, cause a higher resistance to these factors.

Moody's conclusions are set out in the just published comparative analysis of the economies of the two CIS countries exporting oil, entitled "Azerbaijan and Kazakhstan. Comparative analysis of differences in the level of economic stability, the degree of development of state institutions and the magnitude of the debt burden cause differences in creditworthiness. "The growth rates of the economy and the filling of the budget of both countries depend to a large extent on the income from hydrocarbon exports, but Azerbaijan is more vulnerable to lower oil prices, since its economy is three and a half times less than Kazakh, and the income level is half as much. Kazakhstan has also made more progress in improving its business climate and removing other structural obstacles to economic growth.

In 2015, oil and gas accounted for 89% of Azerbaijan's merchandise exports and 26% of nominal GDP, and provided 60-70% of revenues of the consolidated state budget. While for Kazakhstan, oil and gas accounted for 76% of merchandise exports and approximately 18% of nominal GDP, providing about 42% of the consolidated state budget revenues.

In addition, the level of development of state institutions in Kazakhstan is higher than in Azerbaijan, which allows it to respond more effectively. Kazakhstan demonstrates higher public administration performance indicators, the availability of its statistical data is higher, which increases the transparency and effectiveness of decisions, it is more advanced in the way of reforms, which will strengthen the institutional structure in the medium term. Moreover, a smoother transition to a floating exchange rate and a more rapid reaction of monetary policy to prevent rising inflation allowed Kazakhstan to better cope with the fall in oil prices.

Azerbaijan is more exposed to geopolitical risks due to its ongoing territorial conflict with Armenia (B1 is "stable") because of Nagorno-Karabakh. Kazakhstan maintains good relations with Azerbaijan and China, as well as with Japan, the United States and the European Union in the framework of its "multi-vector" foreign policy strategy. Particularly good is his relationship with Azerbaijan, primarily in the areas of defence and security.

Banks of both countries are under pressure. The forecast for the banking systems of both countries is negative, since the share of problem loans is 25% of the total volume of loans issued in Azerbaijan and 37% in Kazakhstan. However, the risks are reduced as a result of the measures recently taken by both countries to strengthen their banking systems, as well as the small size of both sectors: in 2015, the total volume of bank assets was 53% of Azerbaijan's GDP and 60% of Kazakhstan's GDP.

Finally, Azerbaijan's public debt is higher, but both countries have sufficient financial resources. The country's debt-to-GDP ratio rose by almost 30 percent between 2014 and 2016 as a result of direct support to the banking sector. Kazakhstan's debt to GDP for the same period grew by less than 10%. However, a significant amount of reserves and high availability of credit resources support a high level of fiscal sustainability in both countries.

From the foregoing it is clear that currently the economy of all three countries have high dependence on oil in trade. This cannot be considered a positive aspect. First of all, if we pay attention, we see that the availability of oil opens new opportunities for each country from the economic point of view. But while the oil sector is progressing rapidly, there is a decline in other areas of industries. Also when oil prices drop economy these countries suffers greatly. Because the price of oil and economy these countries have the opposite relationship. These cases increase the risk of "Dutch Disease" in these 3 countries. If the necessary actions are not taken, this problem will eventually reach an unresolved level after a certain time. Some of the listed symptoms of the "Dutch Disease" are being observed in the economies of the countries listed in some degree. These symptoms may include the following:

- Strengthening of the national currency is mainly due to revenues (foreign currency) from oil production and export;
- Rapid growth of crude oil production, unilateral development as a result of reduction of production capacities of non-oil sector of industry;
- Increasing dependence of state budget revenues on oil;

- Increasing the risk that the budget may encounter from the fall in oil prices in the world market;

At the same time, it should not be forgotten that the countries with oil industry are constantly exposed to pressure from other countries. Nowadays other countries are trying to slow down development oil industrialized the country's economy.

## **CHAPTER III. FOREIGN ECONOMIC FACTORS OF AZERBAIJAN'S ECONOMY AND GLOBAL CRISIS PERSPECTIVES**

### **3.1. Economic Factors Affecting Development of Economy**

Factors of economic growth are processes and phenomena that have an objective and subjective influence on the ability to actually increase the volume and scale of production of goods.

Allocate subjective and objective factors of economic growth. Objective are those factors that have a direct and decisive influence on the rate of economic growth. Subjective factors are those that have an indirect and indirect effect on the pace and scale of economic growth.

Objective factors of economic growth are:

- 1) increase in volumes and qualitative composition of fixed capital;
- 2) change of production technologies;
- 3) increase in the volume of resources involved in economic activity;
- 4) growth of entrepreneurial activity of the population;
- 5) increase in the quantity and quality of labour resources;
- 6) activation of the demand of the population, allowing to increase production volumes for its fuller satisfaction.

Subjective factors of economic growth are:

- 1) expansion of the credit system, allowing the population to purchase goods in the quantities necessary for them, which stimulates production;
- 2) reduction of monopolization of production and marketing markets, stimulating entrepreneurial activity;
- 3) lowering the cost of production resources, stimulating an increase in production volumes and affecting the decline in the price of consumer goods, which leads to increased demand;

4) reduction of the tax rate, favourably affecting overall economic activity.

At the current stage of economic development, the following factors have a big impact on economic growth:

1) natural resources that directly affect economic growth. Their importance is steadily increasing, as their reserves are limited and exhaustible;

2) an increase in the population, the volume of labour;

3) increasing the degree of concentration of capital within the national economy, allowing to expand the scale and volume of production, invest in new scientific and technical developments, human resources;

4) the scientific and technological revolution, which is the fundamental factor of economic growth, since it is connected with the economy's exit to a qualitatively new stage of its development.

Within the national economy, the influence of economic growth factors is complex between each other. The main task of the state is to make full use of existing economic factors as much as possible, to redirect them to the right side in order to orient economic growth towards realizing the interests of the entire population.

Economic growth is difficult in its assessment of the indicator, which is widely used to compare the level of economic development of national economies among themselves, as well as individual sectors of national economies. All these objective indicators are necessary for the development of effective state economic policy.

For the first time the issue of assessing economic growth in the early twentieth century. S. Kuznets took up the job, defining it as a real ability of the national economy to meet the growing needs of the population through the complication and development of new production technologies and into the overall essential structure of the national economy. He outlined the following characteristics of economic growth:

1) strengthening the degree and scale of integration of the national economy into the world economy;

2) the unevenness of economic growth, consisting in the fact that only a small number of national economies are characterized by real economic growth;

3) a small impact of economic growth on the growth of living standards of the population. Recently, the increase in the quality of life of the population does not correspond to economic growth;

4) economic growth, associated not with the involvement in the production process of an increasing volume of resources, but with a change in production technologies. This is due to the fact that the economy has exhausted the opportunities for extensive growth, and therefore it must transform into an intensive one;

5) global structural changes related to economic growth and consisting, for example, in the growth of the scale of production, labour migration;

6) changes in the social, political and spiritual structure of society as a result of interdependent interaction with economic growth. It is impossible to single out the primary source of these changes, but they proceed simultaneously, economic growth is everywhere accompanied by global changes in the social structure of society, and so on.

Also there are numerous negative factors of the Azerbaijan economy, which many experts are not tired of saying.

One of them is corruption. It not only disastrously reflects on the development of individual industries, but also significantly reduces the competitiveness of the Azerbaijan economy as a whole.

Another factor that negatively affects the Azerbaijan economy, experts refer to as a "resource curse". What is the essence of this factor? The fact is that nature has endowed our country with the richest mineral resources, which ensured the fastest and easiest possible profit. However, this factor does not at all stimulate real economic activity, find more rational ways of managing and develop new industries.

In addition to these, there are other negative points. Among them - the monopolization of production facilities, outdated production technologies, insufficient level of skills of labour resources and others.

Azerbaijan was the main oil base of the Soviet Union, before the Second World War. Absheron has invested heavily in oil and related industries, and due to the rapid development of these industries, industry in Azerbaijan was relatively rapidly developing. Before the Second World War, 65% of all capital investments in the nation's economy were directed to the development of the industry. In the next five decades, the share of industry in the economy was not so high. At the same time, 80 per cent of the total investment in the industry, including 86.4 per cent during the first five years, fell on oil and related industries. All this provided rapid development of industry in Azerbaijan due to the oil and its related fields until the Second World War. In 1941, the most oil in the Azerbaijani oil industry produced 23.5 million tons of black gold.

During the Great Patriotic War great work has been done to reconstruct the industry, which is an important area of economy in the republic. Industrial production declined in the demand for a quiet period. In order to meet the needs of the war, the development of oil and related fields was highlighted. In spite of all the difficulties, oilmen worked more selflessly than they were in the past, providing fuel and fuel for all sectors of the economy. From the first years of the war, Azerbaijani oil workers and scientists working in the petrochemical industry worked diligently to supply the war with high quality oil products.

Significant improvements in the development of the Azerbaijani industry, improvement of the field and territorial structure took place in the 50-60s of the 20th century. It is enough to show such a fact that the production in the republic's industry increased 5.5 times in comparison with 1940, and in 146 or 1941 - 1970s, 60% of industrial facilities built in 1920 and 1970, built and put into operation.

Sumgayit tube, aluminium and synthesis rubber plants, Ganja aluminium plant, Dashkesan ore purification plant, Mingachevir hydroelectric power station and

other large-scale enterprises, which play an important role in the development of the Azerbaijani industry, were put into operation. However, in those years, the heavy industry was based on a wide range of areas such as energy, chemical and petrochemical, oil refining, black and nonferrous metallurgy, instrumentation and electrical engineering.

Executive Review Opinion, an important element of the Global Competitiveness Report, is an annual instrument for measuring the national economic situation and the continued growth of the economy, reflecting 150 questions. The inquiry provides valuable information about broad-spectrum parameters where statistical data is missing or absent.

**Table 2. Azerbaijan weight factor of sub-indexes on economic development stages**

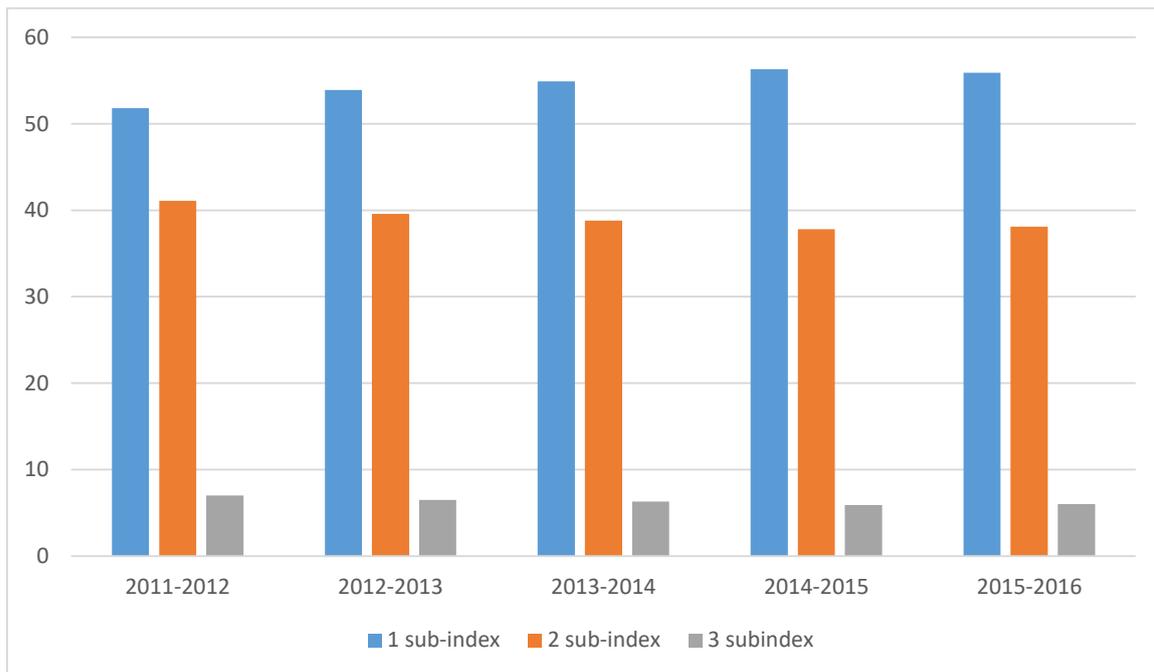
The stage of economic development	Transition from factor 1 to 2	Investment	Transition from 2 to 3	Innovation
GDP per capita (\$)	2000-2999	3000-8999	9000-17000	More than 17,000
Market conditions	40-60 %	40%	20-40 %	20 %
Conditions that increase effectiveness	35-50 %	50 %	50 %	50 %
Innovation and business environment	5-10 %	10 %	10-30 %	30 %

Source: <http://stj.sam.az>

GDP per capita for countries with very strong dependency on natural resources is not the main criterion determining country's development stage.

It should be noted that weighting factors of sub-indexes are determined individually, taking into account the economic situation of the country, starting from the 1st stages of the 2011-2012 period and from stage 2 to stage 3. For example, for Azerbaijan, these weight coefficients are taken as follows:

**Figure 5. Azerbaijan's weight coefficients (%)**



Source: <http://stj.sam.az>

Apparently, the position of our country has steadily declined from the stage of investment to the stage of the factor, which is due to the fact that the economy's dependence on natural resources does not decrease.

It should also be noted the Order of the President of the Republic of Azerbaijan "On approval of the" Directions of reforms that will be carried out in the tax sphere in 2016 and improvement of tax administration "of August 4, 2016. As a result of the execution of the Order, the Tax Code of the Republic of Azerbaijan was amended 201, covering a total of 56 articles. In order to increase the transparency of operations and settlements conducted between the participants of civil turnover, a

new law of the Republic of Azerbaijan "On non-cash settlements" was adopted. In general, the changes envisage an increase in economic activity, development of entrepreneurship, and sustainable development of the country as a whole.

As a continuation of business support, one can also note the Decree of the President of the Republic of Azerbaijan "On additional measures to increase the efficiency of procurement in the activities of executive bodies and organizations financed from the state budget". This Decree not only improves the efficiency of executive bodies and organizations financed from the state budget, but also aims to expand business activities in the country, as well as further improve the business environment and investment environment. It can be confidently said that this decree opens new opportunities for Azerbaijani entrepreneurs to substitute imports, as well as increase exports.

Most likely in the 21st century, economic development will move to a new revolutionary quality stage. This transition can be compared with the transition to labour division, the transition to manufactural production, the discovery of engines, the transformation of the world economy to the global economic system, the formation of supersonic regulatory systems, globalization and virtualization of the economy, and the internationalization of production. The most important sign of the new development phase, in our opinion, will be a significant weakening of economic independence in parallel with the strengthening of mutual dependence of national economic systems. The first and most effective signs of this are already showing itself since 2008. The downfall of national economic independence is that in two ways: the first direction is related to the nature of production - the acceleration of replacement of traditional natural resources in production with "Scientific-Technical Progress Products" creates comparative advantages for countries with a more favourable position in the value chain. the sustainability of the shaped model is rapidly decreasing, and therefore, the countries with high production technology and flexible technological capabilities drive leading positions, while others focus on the "integrity" of the global economy, including the TNC, integration associations and

the fact that the international economic organizations are actually integrating their economic space under the globalization curve has seriously diminished the independence of national economic systems etc. In such a perspective, in our opinion, it is very important that the "small economy" like Azerbaijan, but with a rich resource, favourable geo-economic position and "labour-powered" countries, accept global challenges as a guide rather than a target.

Thus, in spite of the expected main trend of the new development stage, it is expedient that Azerbaijan is a perspective development paradigm - the formation of a self-sustainable, market-based, stable, socially structured economic system that includes natural resource inclusion.

### **3.2. The role of Azerbaijan in regional and global economic arena**

In the modern era, the passage of geopolitical games with great speed and the daily occurrence of incidents in a new direction, completely complicates the world order. The modern political picture of the world and the system of international relations further broadens the scope of the geopolitical concept.

Since the end of the 20th century, the formation of new centers of power in the international arena, the development of bilateral relations in various aspects, has become the reason for the creation of a new world order and the emergence of important problems of peace. Azerbaijan, located on one of the most important, sensitive points of the global world, inevitably joined this reality.

The geopolitical situation and the current international situation in the Republic of Azerbaijan, creates the opportunity to play a key role in the implementation of regional projects. In this regard, the theses that made Azerbaijan relevant in the system of modern international relations can be listed as follows:

- Transformation of the system of international relations into an independent member with the restoration of the independence of the Republic of Azerbaijan;

- Since the beginning of the XXI century, Azerbaijan's representation in the role of innovator in the new world politics, rapid integration into the world community, creating the image of the leading actor in the region;

- The policy of Azerbaijan's integration into the West, becoming a leading actor of international relations, acting as a catalyst for current projects and innovations in the region, characterizing cooperation with international and regional organizations;

- Perspectives of the two-year effective activity of Azerbaijan as a non-permanent member of the UN Security Council, assessment of the membership of the positive effects of the world image of our Republic;

- A successful and pragmatic energy strategy, the transformation of Azerbaijan into one of the leading countries in ensuring energy security in the West, the adoption of the image of the necessary employee.

Due to the fact that world politics is mainly determined in Eurasia, this region is important from a geopolitical point of view. To what extent an important part of the political and economic power that has been assembled has an important role in the new world order of Europe, part of Asia is no less important. Azerbaijan, which plays the role of a bridge between East and West, voluntarily intervenes in the new world order. Since it is impossible to settle in the region, which is the central arena of world politics in Eurasia, and remain neutral. And also, from the geographical side, Azerbaijan is not completely Europe or Asia. Azerbaijan, which is considered to be the golden bridge of Europe and Asia, is a vital geopolitical space for states defining world politics.

For independent Azerbaijan, already in the politics of the world order, time is spent preparing and exhibiting an integrated, comprehensive and long-term geostrategy. Since not the activity in political processes of a global nature in the present and the future, for our Republic can lead to negative results. The activity in this global policy ensures the development and security of the country.

The geographical position of Azerbaijan creates all conditions for becoming one of the managers in the world order. Our country, located at the crossroads of Eastern and Western culture, on the border of the Islamic and Christian religion. And therefore, can play a decisive role in interreligious dialogue, in the activity of forming a single world culture and in many other ways. This position further increases the importance of implementing the new world order of Azerbaijan. Although Azerbaijan, in comparison with the developed countries of the world is considered lower, because of its potential is an average state. One of the main factors in improving geopolitical importance and in ensuring the national interests of the Republic of Azerbaijan in the international arena is related to oil. According to the American political scientist Konata, oil plays an important role in geopolitics. More than 200 promising oil-bearing structures, 145 are identified in the Azerbaijani sector of the Caspian Sea. The location of Azerbaijan in the geographical area with rich oil resources, was correctly estimated in the 90s of the XX century by the national leader Heydar Aliyev. At the time, the state oil strategy gained national interest.

Today Azerbaijan is a leading force both in Europe and in the world energy market. Due to the fact that Azerbaijan entered the energy market, there was a revival in the direction of the branching of the oil and gas infrastructure, practical policy was realized. As can be seen, all the steps related to energy policy are being taken deliberately. At present, Azerbaijan, in dealing with issues of energy security in Europe, is working with Europe as a partner.

Even if the Trans-Adriatic Pipeline (TAP) of Turkey is organized by Azerbaijan, Turkmenistan, Kyrgyzstan, Uzbekistan, Kazakhstan, Tajikistan, such factors as its mission, environment, its civilizational orientation, etc. allow additional states to be admitted to this bloc. And also, the reception of other states is possible here because TAP protects the idea of the New World Order.

The manifestations of the realization of the national interests of the Republic in geopolitical aspects can be summarized by the following theses:

- Protecting the independence of the state, territorial integrity in geopolitical aspects, is of particular importance from the point of view of Azerbaijan's national interests. Since Azerbaijan, playing the role of a bridge between East and West, is located in a complex geopolitical space, where interests and benefits collide. In this connection, the problem of the realization of national interests against the backdrop of geostrategic changes becomes particularly urgent;

- The realities of the modern era prove that energy is a vital need of the state. In countries rich in oil, a geopolitical oil space is emerging. As a result of the successful oil strategy, Azerbaijan also entered this space. In this case, the effective and efficient use of oil wealth by Azerbaijan, its direction for the further development of the people, is constantly in the center of attention;

- Azerbaijan, with the use of all its capabilities, is actively represented in the modern international security system. And this, in turn, creates the opportunity to carry out serious activities in the direction of strict control and elimination of new threats, as well as in protecting national interests.

The South Caucasus region and its most promising country Azerbaijan, is a territory that is in the focus of attention of regional forces and forces outside the region. Here, bilateral and multilateral interests were grouped together. In this regard, the role of the Republic of Azerbaijan in the new world order continues to increase significantly. Today, any state trying to turn into a geopolitical force on a global and regional level considers it a priority to strengthen its influence in the Caspian Sea region in Azerbaijan, which is the leading country in the region.

Azerbaijan, representing the West at an appropriate level its important geopolitical position and rich energy resources in the Eurasian space, maintains the status of the leading country in the South Caucasus. At the moment, in the main economic, political and cultural events and processes taking place in the region and in the world, Azerbaijan appears in a worthy manner, notifies about its positions and defends its interests. Democratic reforms, economic changes and an active foreign policy in our Republic, today sent attention of the most powerful countries of the

world, influential organizations and institutions to Azerbaijan, created favourable conditions for establishing and developing mutually beneficial cooperation in accordance with international standards. The geopolitical interests of the Republic of Azerbaijan are a key factor in economic, political and cultural development, in the creation of a national state in all its spheres and in achieving its goal in this direction.

Realization of the development strategy of our republic against the backdrop of new geopolitical expectations is a multifaceted and complex process. The factors that complicate this process and the expectations associated with the national development strategy can be expressed in the form of the following theses:

- The Caucasus region, in which Azerbaijan is located, from the point of view of its geostrategic position, is of great importance in the new world order. This circumstance is evident from the standpoint of forming a balance among the great powers under the new conditions, and is also clearly seen from the economic point of view because of the possession of oil reserves. The implementation of a proper foreign policy under these circumstances is very important for the authority of Azerbaijan;

- The existing conflicts in the region, especially the unfair involvement of the Nagorno-Karabakh conflict, always make it urgent to ensure the security of our Republic. The sincere attitude of the members of the OSCE Minsk Group to the process of conflict resolution, efforts to ensure their own geopolitical interests, military-strategic resources, mobilization of military build-up makes it necessary to create a strong defensive capability. At the same time, it is important to strengthen the military-technical and personnel potential of the armed forces. And this shows that Azerbaijan, expanding the priorities of military-strategic and safe policies against the backdrop of cooperation with NATO, will try to ensure its territorial integrity, to create a balance among the interests that are facing in the region;

- Azerbaijan's active participation in ensuring international energy security strengthens our country's position in the energy security of Europe. In general, Europe expects much from Azerbaijan in the field of energy security. In the coming

years, gas exports from the Shah Deniz field will reach the maximum level. And the beginning of production from Umid and Absheron, in fact in the future, will show Azerbaijan as a country with a large exporter of gas in the world. And this, in turn, will further strengthen the geopolitical position of Azerbaijan in the South Caucasus;

- A favourable geostrategic position allows Azerbaijan to be at the center of such transnational projects as energy, transport, communications and so on. That is, Azerbaijan will also participate in the future in providing the countries of Central Asia with geo-economic and geopolitical interests, regional security. Since the Republic of Azerbaijan has the necessary opportunities (favourable geopolitical situation, natural reserves, high human potential, etc.) in order to play the role of a bridge between East and West, North and South. This is confirmed by the proposal of the famous Norwegian researcher Bjorn Vegge: "Azerbaijan is the biggest crossroads in the world".

The flexible economic policy pursued by the President of the Republic of Azerbaijan, the Chairman of the New Azerbaijan Party, Mr. Ilham Aliyev, preserved the economy of the country even in the conditions of complex political and economic processes at regional and global levels. As a result of systematic and preventive measures, the Azerbaijani economy has sufficiently prepared for the onset of the ongoing global economic crisis, which began in 2008 and later, in spite of the high investment risks in the crisis and the impact of the devaluation wave in the neighbouring countries, Azerbaijan has pursued a rational macroeconomic policy, created foreign exchange reserves have played a significant role in managing financial risks in a predetermined mode.

The statistical indicators once again confirm the development and sustainability of the Azerbaijani economy: Strategic currency reserves increased by 26.2 times compared to 2003 and amounted to 42 billion USD at the end of September. US dollar. Gross Domestic Product (GDP) in 2004-2016 increased 3.2 times in real terms, including non-oil sector 2.7 times. In this period, the industry grew 3.8 times in real terms, including non-oil industry 2.2 times, agriculture 1.6

times, construction 3.4 times, trade 3.9 times, tourism 14.2 times, transport 2.6 time, communication increased 10.6 times. The country's economy was invested in \$ 225 billion in 2004-2017. In order to ensure sustainable socio-economic development, state-funded expenditures in the state budget have grown dynamically over the last 14 years, and investment expenditures have a significant impact on the state budget.

Azerbaijan's achievements are regularly reflected in the reports of international organizations and financial institutions. It is no coincidence that our country has been ranked 35th among 137 countries in the Global Competitiveness Report 2017-2018, which is one of the world's most prestigious organizations. Generally, Azerbaijan has risen to 35th position from 34th place to 69th place in 2005 from 2017 to 2017, and since 2009 it maintains its leadership in the CIS. Note that countries such as Italy, Russia, Indonesia, India, Turkey, and South Africa, which are included in the G20, are also behind Azerbaijan for their economic competitiveness index.

Formation of favourable business and investment environment, and reforms in entrepreneurship development are also reflected in the reports of international organizations. Thus, the 8th step in the Doing Business 2018 report, which evaluates the business environment of the countries, is one of the three countries that have risen to 57th position in 190 countries and has 4 or more reformers in Europe and Central Asia. This insider has been achieved as a result of the ongoing reforms implemented in Azerbaijan and the socioeconomic policy.

To properly analyze the successful development of the oil and gas industry of Azerbaijan, SOCAR's role as a locomotive, every stage of this road should be reviewed in accordance with the relevant political and economic context of our newest history. In the first years of our independence, the main tasks facing the company were different from today. The main goals were the signing of the "Contract of the Century", which meets the national interests of transnational oil companies and national interests of Azerbaijan at the time of the fall of the former Soviet Union, to increase oil production for the country's economy and to attract foreign investments

and technologies to develop new deposits in deep sea seas . The signing of this globally significant document, which is changing not only our country, but also our whole region, is related to the name of the great leader Heydar Aliyev, as well as the preparation and implementation of the new oil strategy as a whole. How difficult it is to attract foreign investors to a country that is in a state of economic crisis and war, the National Leader has been able to cope with this task. Thus, the basis of the country's unprecedented socio-economic development was laid. It should be noted that the first vice-president of the State Oil Company, Mr. Ilham Aliyev, played an important role in the signing of the "Contract of the Century", having great diplomatic skills in tense negotiations with foreign partners.

Transforming SOCAR into a transnational, global company was primarily reflected in the giant transnational projects implemented by the company, including international processing and chemical projects, and the expansion of global oil and gas trade. Therefore, in accordance with the subject, I would like to analyze the company's performance from this perspective. But I also need to point out that the company has made significant progress in its field of activity, both in the field of intelligence and production. Now SOCAR builds, installs, exploits, drills, explores new deposits, exploring the deep sea basin with its facilities. The success of exploration and production has created conditions for the expansion of global operations by SOCAR's international investment.

Growth of gas production in modern times, when the demand for natural gas around the world has increased, is one of the main objectives of SOCAR. Like the oil country, Azerbaijan, known from ancient times, has recently been recognized as a natural gas source in the world market as a result of the successful development of the Shah Deniz field. Shah Deniz reserves of 1.2 trillion cubic meters of gas and more than 240 million tonnes of condensate are among the largest deposits in the offshore aqueducts. So far, 64.1 billion cubic meters of gas and 16.3 million tons of condensate have been produced within the framework of the first stage of the field development. From the start of the operation period till September 1, 2015, 63.5

billion cubic meters of gas and 16.3 million tons of condensate were transported to domestic and foreign markets. At present, the average daily production in the field is 29 million cubic meters of gas and 6,900 tons of condensate. The Shah Deniz-1 phase is estimated to generate 9 billion cubic meters of natural gas a year. Phase 2 of development, Phase 2 will take appropriate measures to increase annual production to at least 16 billion cubic meters in the field. Two new platforms will be built within Shah-Deniz-2 project, 26 wells will be drilled, underwater equipment will be installed, Sangachal Terminal will be expanded and 500 kilometres of subsea pipelines will be constructed. At present, 162 equipment suppliers from 23 countries have been involved in the project, engineering, construction and supply contracts have been signed, drilling of 8 wells has been completed.

The Umid field is the first new gas field discovered in the national sector of the Caspian after Shah Deniz. Calculations show that the hydrocarbon reserves of the Umid field are 200 billion cubic meters of gas and 40 million tons of condensate. At present, two operating wells are operating in the field, while another drilling well is in progress. The geological researches indicate that Babek deposit, which is almost two times as much as it is near Umid gas field. Therefore, SOCAR has considered the development of these deposits more favourable. At present, we continue to work on this issue by collecting more information on the geological structure of the block.

Measures taken by SOCAR in the field of gas production have also played an important role in increasing gas production. According to President Ilham Aliyev's instructions, a few years ago, our company has developed a large-scale complex of measures in this direction, and that program is currently being implemented. As a result of these works, productivity has increased in these fields.

Another company in the oil and gas industry of Azerbaijan the British Petroleum Company (BP PLC) arrived in and opened its first office in Azerbaijan in 1992. BP operated world-class projects – Shah Deniz, Azeri-Chirag-Gunashli (ACG), Baku-Tbilisi-Ceyhan (BTC) and South Caucasus Pipeline (SCP) – have contributed

to the expansion of the Caspian Sea as a modern hydrocarbon province in partnership with the Government of Azerbaijan and our co-ventures over the past 25 years.

In 2030, global oil demand will grow sharply. This is stated in BP's Energy Outlook report. It is reported that, despite the increase in the number of vehicles employed in recent years, gasoline-powered vehicles have consumed 18.7 million barrels per day in 2016, remaining at the same level until 2040. According to BP estimates, the share of renewable energy sources in global energy consumption is now 4 percent and will rise to 14 percent in 2040. Robert Dudley, chief executive officer of the company, said: "It is necessary to implement a more decisive plan to reduce carbon emissions globally." BP's chief economist, Spencer Dale, said the cost of transport will be reduced by 40-50 percent when the number of unmanaged cars increases. A massive increase in the number of vehicles used in 2030 is expected.

Analyses show that Azerbaijan is the leading country in the region in the role of geostrategy; initiator and participant of regional projects. And this being a result, it makes it necessary to take strategic steps in preserving Azerbaijan's leadership in the region, on the threshold of new geopolitical changes. Azerbaijan, as a country ready to cooperate with other countries, maintains its loyalty. This creates an opportunity to actively involve our country in the ongoing events and processes, both regionally and globally.

It is extremely difficult to predict the future of political geography in the world. But tectonic clashes, mini-local wars and other numerous factors taking place in the global system partly explain the geopolitical scheme of the 21st century. In order to protect the interests of the state and society, its citizens, a unified foreign policy, diplomatic dexterity should be implemented. Both Azerbaijan and other countries should follow the logic of political realities in the world, their policy should be built in accordance with the new world order and properly coordinate it. If, on the one hand, the interests of the Azerbaijani state are important for the life of Azerbaijan, the support of the international community for its national interests, on

the other hand it is also important for the Western countries, which also cooperate with Azerbaijan and for the security of energy resources.

So, during the deepening of globalization, it is risky to expect where the process taking place on a world order will lead. For this reason, in the future, the power and destiny of the Republic will depend on national unity, ideological security, and on the preservation of economic independence, political sovereignty, and in parallel all this from the ability to further integration in the world. And our Republic, while maintaining its central position in energy, transport and the information technology corridor between East and West, will continue to play the role of guarantor of regional security.

### **3.3. Realities and Perspectives for future economic stability of Azerbaijan**

The national leader of our people Heydar Aliyev as an historical figure, authoritative leader, who created the political and economic foundations of modern Azerbaijan statehood, has gained eternity in our modern history. Deep reforms implemented due to his iron political will played an exceptional role in the fact that the Republic of Azerbaijan, which is on the path to new sustainable development today, occupies a worthy place on a global scale.

The development of all spheres that cover the socio-economic, socio-cultural life of the republic is connected with the name of the great leader. It is thanks to the titanic efforts, decisiveness, indomitable political will of the world-wide social and political figure Heydar Aliyev that the modern Azerbaijan state was created, our country took a worthy place in the international arena.

The comprehensive development of Azerbaijan, the creation of solid bases for its further progress became possible as a result of the implementation of Heydar Aliyev's social and economic strategy, which has rich experience, skills of high political management and leadership, and tireless energy. Heydar Aliyev's merits in the formation of the national economy of Azerbaijan are invaluable.

In 1969, with the advent of Heydar Aliyev, the leadership of Azerbaijan initiated the process aimed at creating the foundations of the country's economic development, the future of the rich economic potential, and the improvement of the people's well-being. Heydar Aliyev, who carried out extensive reforms in all areas, to turn Azerbaijan into one of the leading republics of the Soviet Union, achieved a great turn in the history of Azerbaijan at that time.

As a result of purposeful measures taken by the brilliant leader, important structural changes were made in the economy of the republic, development was achieved in all branches of industry and agriculture, new spheres of industry were created, attention was paid to the development of research areas directly related to production. Azerbaijan took the leading place in the whole of the USSR in the field of introducing advanced technologies into production, and the quality of manufactured products was improved. In 1969-1985, samples of new types of machines, equipment, apparatus and instruments of 581 names were created. Production of 350 products in Azerbaijan was exported to 65 countries of the world. For comparison, let's note that if from the XIX century to 1969 735 large industrial facilities were built in Azerbaijan, then in the first period of Heydar Aliyev's leadership the republic - in just 14 years their number reached 1048. The industrial output produced in these years was equal in size to its volume the one that was produced over the past 50 years.

Considering the role of the oil industry in economic development, Heydar Aliyev in the 1970s achieved dynamic development of this sphere, ensured the modernization of the petrochemical industry. It was under the leadership of the great leader that a new stage in the development of the oil industry was launched, and the basis for turning "black gold" into a tool serving the welfare of Azerbaijan was laid.

As a result of the far-sighted and flexible policy of the national leader, Azerbaijan has become then the most advanced agricultural republic in the entire Soviet Union, including cotton growing and viticulture. During this period important

structural changes were made in the republic's economy, new progressive industrial branches were created - hundreds of factories, factories, manufacturing enterprises.

Heydar Aliyev, who personally supervised all this work of strategic importance aimed at the future development of Azerbaijan, in his "Appeal to the Azerbaijani people on the occasion of the new year 2001, the new century and the third millennium", on December 29, 2000, assessed the titanic work carried out in these years: "1970-1985-ies entered the chronicle of the creative work of our people as the brightest pages. The ninth, tenth and eleventh five-year periods occupy the most important places in the new history of Azerbaijan, according to the scale of the ongoing transformations, the nature of the deep structural reforms carried out in the economy and the social sphere, the transition of the people's welfare to a new quality level."

The political crisis that arose in the first years of independence in Azerbaijan, which just restored independence in the early 1990s, seized 20 percent of our country's territory as a result of Armenia's occupation policy, expelling more than 1 million of our compatriots from our native lands, led to an aggravation of the socio-economic crisis and, thus, the country's economy was in an uncontrollable position. As a result of the discrepancy between the economy and the requirements of the new period, the disruption of ties between enterprises at the local and union levels, the economic, political, information blockade of the country in the early 1990s, the volume of GDP, industrial production, and foreign trade contracted, inflation reached an unmanageable level. As a result of the failure of production areas, the unemployment rate has risen, and the incomes of the population have declined.

With the return of Heydar Aliyev to power on June 15, 1993, the foundation was laid for the fateful reforms in all spheres, including the economic life of the country. Heydar Aliyev, who saved the Azerbaijani state and the country's economy from imminent catastrophe, chaos, began to take urgent measures for the economic recovery of the country. Within a short period of time, a legislative base was created for the formation of a market economy in the country, targeted state programs were

adopted, institutional reforms were carried out, and appropriate steps were taken to implement radical changes in property relations.

Most of the 1715 laws and regulations adopted in 1993-2003 to contribute to the deep reforms were submitted to the parliament on the basis of the legislative initiative of the national leader Heydar Aliyev. Over 70 laws were passed during the leadership of Heydar Aliyev, more than 100 decrees and orders were signed, and up to 30 state programs for the regulation of economic sectors were approved.

In the strategy of deep economic reforms of the national leader, a special place is taken by the skilful use of the oil factor for the comprehensive development of the country's economy. Achieving the great leader, despite internal and external pressure, signing with an international consortium of 13 companies, in September 1994, the "Contract of the Century" to develop the Azeri-Chirag-Gunashli oil fields, was a celebration of high political will and determination.

The commissioning of the Baku-Novorossiysk export pipeline in 1996, the Baku-Supsa in 1999 for the delivery of Azerbaijani oil to the world markets, the signing of the agreement on the construction of the main export pipeline Baku-Tbilisi-Ceyhan was the result of the far-sighted policy of Heydar Aliyev. Thanks to a well-thought-out economic policy, macroeconomic stability was achieved, the foundation of sustainable economic growth was laid, serious achievements in improving the living standards of the population were achieved.

One of the important directions of socio-economic policy, defined by Heydar Aliyev, was the development of infrastructure, and the creator of modern Azerbaijan carried out a very important work in this area. From this point of view, development of international and transit corridors and roads on the territory of the country, urban and interregional road and transport infrastructure, as well as rapid integration of the national road transport system into the global communication space, was at the center of the transport development policy conducted under the leadership of the great leader. To this end, the implementation of TRACECA, the transport corridor "North-South", the INOGEYT program began. As a result, Azerbaijan has become a major

multimodal transport hub in the Caspian region and an important oil and gas transit country.

The creation of an economy since 1995, initiated and led by a national leader based on market relations, agrarian reforms, the distribution of state and collective farm lands, livestock and property to peasants, price liberalization and other measures gave impetus to the development of the agricultural sector, serious structural transformations in the rural economy, new spheres were created, new relations were formed in content. The successful implementation of the land reform by Heydar Aliyev, the architect of which was the great leader himself, saved agriculture from the crisis of the early 1990s, laid the foundation for future development.

In order to ensure the development of efficient management of privatized lands, entrepreneurship on the initiative of the national leader, the former tax debts of producers of agricultural products were written off, the long-term tax holidays began to be provided to them, this process is still ongoing. And today, legal entities and individuals engaged in agricultural production are exempt from all tax payments except land tax.

The strategy of entrepreneurship development, determined by the great leader and successfully conducted under his leadership, is characterized by the systematic nature of measures aimed at developing the private sector, liberalizing state regulation, and institutionalizing relations between the state and entrepreneurs.

The adopted state programs played a special role in the development of this sphere, turned the development of small and medium-sized businesses into one of the priority areas of economic policy. A legislative base for the privatization of state property was created, state programs in this area were approved.

At a meeting held on June 24, 1996 at the Presidential Palace on the status of the progress of agrarian reforms in the republic and discussion of the draft law on land reform, the great leader with great foresight set forth the course for further development of our country: "As President, I have already determined the state policy in the economy of Azerbaijan. This is the path of reforms, improvement,

development of production through reforms, privatization of property, encouragement of private sector development, market economy, providing people with independence, creating conditions for entrepreneurship, initiative. These are the basic principles of our state policy."

Looking today at the socio-economic indicators of 1995-2003, we can see the positive results of the economic reforms carried out. In 1995-2003, the gross domestic product increased by 90.1 percent, the state budget revenues - 3.9 times, the country's currency reserves - 85 times, the volume of industrial output - 22.4 percent, agricultural production - 52.8 percent, foreign trade turnover - 4 times, average wages employed in the economy - 6.2 times, the level of inflation fell to 2-3 percent. During this period, investments in the economy at the expense of all financial sources were secured in the amount of 20 billion US dollars.

From the very beginning of his activity as the President of the Republic of Azerbaijan, Heydar Aliyev set as the main goal the improvement of the living standards of citizens.

The success achieved thanks to the inimitable management abilities of the founder of modern Azerbaijan state Heydar Aliyev, his hard work, laid a solid foundation for the sustainable and dynamic development of the country's economy in the years to come.

As a result of the constantly improving, flexible, decisive and far-sighted economic policy of the great leader Heydar Aliyev, the President of the Republic of Azerbaijan, Mr. Ilham Aliyev, the achievements were fixed, our country successfully completed the transition period in the economic sphere, its transition to liberal market economy.

Under the leadership of the President of the Republic of Azerbaijan, Mr. Ilham Aliyev, in 2003-2014, deep economic reforms were continued, the Azerbaijani economy has become one of the most dynamically growing economies in the world. In a short space of time, Azerbaijan has become a country with a high average income, social and economic infrastructure has been completely renewed, it has taken

the 37th place in the world in terms of global competitiveness. In these years, the country's economy increased 6-fold, national per capita income increased more than 5-fold. The country maintained price stability, as a result of a significant increase in foreign currency earnings, large strategic foreign exchange reserves were formed, the international competitiveness of the national currency rate was preserved, and its excessive strengthening was prevented. Azerbaijan, which is one of the leading CIS and Eastern European countries in terms of foreign investment per capita, has become a country investing abroad.

In order to systematically and consistently implement the planned measures to diversify the economy, ensure sustainability of the development of the non-oil sector and regions, and further improve infrastructure and social services, two five-year state programs related to the socio-economic development of the regions of the Republic of Azerbaijan were implemented in 2004-2013. Within 10 years of the program implementation, the gross domestic product increased by 3.2 times, including the non-oil sector by 2.6 times, industry by 2.7 times, agriculture by 1.5 times, investment by 6.5% times, incomes of the population - 6.5 times, average monthly wages - 5.5 times. As a result of the measures taken, more than 1.2 million new jobs were created in the country, including 900,000 permanent jobs, 55,600 open enterprises, unemployment dropped to 5 percent, and poverty level to 5.3 percent. Over 130 billion dollars of investments were invested in the economy of Azerbaijan, foreign trade turnover grew by 6.4, and non-oil export - by 4.5 times.

During this period, more than 19.4 thousand entrepreneurs were granted concessional state loans worth over 1.2 billion manat. These loans allowed to open 113 thousand new jobs. State budget revenues increased by more than 14.2, tax revenues - 7.3, state budget expenditures - 13.9, household deposits - 24 times, and bank assets - 18 times. Currently, the share of the private sector in the gross domestic product is 83 percent, and in employment - 73.9 percent.

The successes achieved by Azerbaijan are reflected in the assessment of the leading rating agencies. So, according to Doing Business estimates, in 2009 our

country was rated as "The most reformative country" among the countries of the world.

Under the leadership of the President since 2015, Azerbaijan's economy has entered a qualitatively new stage. In connection with the transformation of global economic challenges into the national economy, new directions of economic reforms were outlined. So, against the backdrop of economic processes taking place in the world since 2016, a number of important decisions were taken aimed at developing the country's economy, further improving the investment and business environment, creating favourable opportunities for expanding entrepreneurship, increasing non-oil export potential, substituting imports, including the strengthening of state support for local entrepreneurs, the main goal is to carry out deep economic reforms of a systemic nature.

According to the latest report of the World Economic Forum, Azerbaijan has become a member of the group of the 50 most competitive economies of the world and has maintained the primacy among the CIS countries. And according to the UN Human Development Report, Azerbaijan on the "Human Development Index" entered the group with a high level of human development.

Thus, with the relevant decrees signed by the President in early 2016, in order to ensure transparency and objectivity in the area of handling complaints by entrepreneurs in the country, protecting the rights and interests of persons protected in the law under the President of the Republic of Azerbaijan, the central and local executive authorities were Appellate councils have been created.

By the presidential decree "On Additional Measures to Encourage Investments" of January 18, 2016, a legal framework was created to provide non-oil products export support to back payments from the state budget.

With the purpose of ensuring the effective development and stability of the country's financial and banking system, enhancing the competitiveness of financial markets, protecting the rights of creditors, insurers, investors and other participants in financial markets, a legal entity of public law was established by the Decree of the

President of the Republic of Azerbaijan on February 3, 2016. markets. The main goal of creating a chamber with a new mandate for activities as part of comprehensive reforms to improve the structural, institutional, organizational and regulatory system is to bring the regulatory framework of the financial sector in Azerbaijan to a new quality level against the background of current global challenges, and ensuring the sustainable development of financial markets, market participants and financial institutions.

Another decree of the President "On additional measures to encourage non-oil exports" from March 1, 2016 provides for the payment in 2016-2020 of persons engaged in the export of non-oil products, export promotion at the expense of the state budget, depending on the specific weight of the cost of local components produced in the territory of the Republic of Azerbaijan, and non-oil products, as well as the type of this exported product.

On April 20, 2016, the relevant Decree of the Head of State approved the procedure for issuing an investment promotion document. In addition, on the basis of the Tax Code of the Republic of Azerbaijan, entrepreneurs who received an investment promotion document are exempt from income tax and a 50 percent tax on income, property and land tax, as well as VAT on imports and import duties on imported machinery, technological equipment and installations for a period of 7 years.

It is also important to establish a commission by the President of the Republic of Azerbaijan on July 13, 2016 to ensure the sustainability of rapid development achieved in recent years in the field of entrepreneurship and to strengthen its competitiveness, further improve Azerbaijan's position in international ratings, and the Financial Stability Board to improve macroeconomic stability and financial sustainability.

## CONCLUSION

Sustainability of the national economy for integration into the world economy has great importance for Azerbaijan. The effective integration of the country's economy into the world trade system through the expansion and development of foreign economic relations is a prerequisite for ensuring the social and economic development of the Republic of Azerbaijan in modern times.

- The detailed analysis of Azerbaijan's economic potential and dynamics of development, will determine the advantages of strengthening the integration of our country into the global economy;

- The most important outcome of the Azerbaijani oil strategy, formed by National Leader Heydar Aliyev, is its transformation into a national energy strategy and a dominant dominance of integration.

- The measures implemented under the leadership of President Ilham Aliyev over the last 10 years are the increase of efficiency in the use of transit potential, the second important integral of sustainability of the national economy. Baku-Tbilisi-Ceyhan, Baku-Tbilisi-Erzurum, Baku-Tbilisi-Gars, TANAP, TAP and other transnational projects prove that.

The TANAP project, one of the most important parts of the Southern Gas Corridor, has emerged as a result of the fall of the Nabucco Project from the agenda. Azerbaijan intends to carry gas to Turkey and Europe within the scope of Turkey and Azerbaijan energy cooperation, the two countries has been realized with its own sources.

TANAP after passing through the territory of Turkey, forming the GGK's European leg will be integrated with TAP pipeline. Along with TAP, Azerbaijani gas will have reached European markets for the first time. Turkey is not rich in terms of natural resources, reduce dependence on foreign energy sources and energy-oriented in order to increase the diversity began to pursue a foreign policy. Gas in the country, the sources and routes to meet the supplier country Azerbaijan as Turkey's gas needs

within the quest for diversification and security of gas supply has emerged TANAP. TANAP is a national project since it is a transit project in Anatolia. It is also a project that has an international dimension as it allows the GGK to pass on its life. When the TANAP project is completed, it will provide economic and political benefits to both countries. TANAP Turkey and Azerbaijan 'will allow the strengthening of its geopolitical position. "

- It is important to form a geo-economic development strategy of Azerbaijan in modern times. Such a strategy should cover the key determinants of development as well as the assessment of the position of Azerbaijan's DTS and the choice of integration vector that meets national and international interests.

Created on the basis of the Decree signed by the Head of State, the "Azerbaijan Digital Trade Hub of Azerbaijan" not only serve to expand the export opportunities of the non-oil sector, but also, as a digital trading hub of regional importance, pursue the goal of further strengthening position of the Republic of Azerbaijan.

The results of research show that there are positive trends in Azerbaijan economy, which are the basis of long-term economic growth. Example of these trends can be stability of the state budget, increase of labor productivity, sufficient availability of labour force, strategic currency reserves and a low level of public debt in comparison with the gross domestic product .

The research shows that the following directions should be achieved in order to implement measures for sustainable and balanced development of Azerbaijan in the future:

- stimulation of long-term investments in non-oil industry and agricultural sector;
- acceptance of labour productivity as one of the main economic indicator;
- substantial improvement of the competitive environment to improve the regulatory framework for limitation of monopoly in production and trade sectors;

- acceleration of modernization in the science-education-healthcare system;
- strengthening coordination of state policy in macroeconomic, fiscal, education, innovation, employment and social protection spheres;

The results of the research can be used in the preparation of laws, programs, projects and proposals for the improvement of the national sustainable development strategy. However, the implementation of the recommendations resulting from the research can lead to greater economic growth and increased effectiveness.

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## ANNOTATION

The energy strategies implemented in Azerbaijan have contributed to the growth of Azerbaijan's foreign trade relations and recognition of the country in the international arena. Today, Azerbaijan is in trade relations with 165 countries around the world. The main objective of the research is to investigate the impact of energy strategies on sustainable development the country's economy and the impact of oil exports on Azerbaijan's trade relations.

## XÜLASƏ

Azərbaycanda həyata keçirilən energetika strategiyaları Azərbaycanın xarici ticarət əlaqələrinin böyüməsinə, ölkənin beynəlxalq arenada tanınmasına şərait yaratmışdır. Bugün, Azərbaycan dünyanın 165 ölkəsi ilə ticarət əlaqələri içərisindədir. Tədqiqatın əsas məqsədi, energetika strategiyalarının ölkənin iqtisadiyyatının dayanıqlı inkişafına təsirini, neft ixracının Azərbaycan ticarət əlaqələrinə təsirini araşdırmaqdır.

## АННОТАЦИЯ

Реализуемые в Азербайджане энергетические стратегии способствовали росту внешнеторговых связей Азербайджана и признанию страны на международной арене. Сегодня Азербайджан находится в торговых отношениях со 165 странами мира. Основной целью исследования является изучение влияния энергетических стратегий на устойчивое развитие экономики страны и влияния экспорта нефти на торговые отношения Азербайджана.