

AZERBAIJAN REPUBLIC

In the manuscript right

**FORMATION AND DEVELOPMENT DIRECTIONS OF THE
INFORMATION SERVICES MARKET IN AZERBAIJAN**

Qualification: 5312.01- Field economy

Field of science: Economic sciences

Plaintiff: Natavan Filman gizi Hasanova

Doctor of Philosophy degree
submitted for purchase of the dissertation

ABSTRACT

Baku-2024

The dissertation work was carried out at the Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan.

Academic supervisor: Doctor of Economic Sciences, Professor
Ilham Alici oğlu Aslanzade

Official opponents: doctor of economic sciences, associate professor

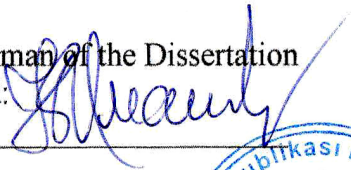
Aliyev Alovzat Garaja oğlu

PhD in Economics
Azizov Adalat Baba oğlu

PhD in Economics
Polukhov Togrul Nizami oğlu

ED 1.10 Dissertation Council operating under the Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan of the Higher Attestation Commission under the President of the Republic of Azerbaijan

Chairman of the Dissertation board:



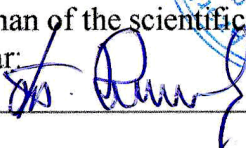
doctor of economic sciences,
professor
Nazim Muzaffarli (Imanov)

Scientific secretary of the dissertation council:

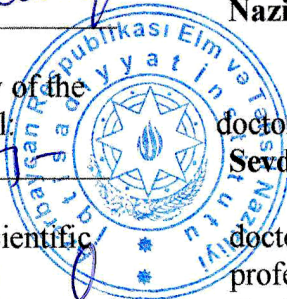


doctor of philosophy in economics,
Sevda Mammad gizi Seyidova

Chairman of the scientific seminar:



doctor of economic sciences,
professor
Tarbiz Nasib oğlu Aliyev



General description of the work

Relevance of the topic and degree of elaboration. The most important of the development trends of the global information society is related to the expansion of the scope of digitization processes and the deepening of the application level. As a result, the digital and innovative economy is developing rapidly. Digital technologies and transformations in fact 4th ST forms the core of its platform and further improves economic processes and relations. The change of the new economic paradigm and the transformation of information into a decisive factor of economic development also led to the emergence of a new sector in the economy. The development of the ICT sector, the expansion of the nomenclature of services and the increase in the volume of production and consumption of information services have a significant impact on the forms of business organization, socio-economic processes, its monitoring mechanisms, the management of the development of regions, as well as the lifestyle of the population. In addition, since information services are a convenient tool for satisfying the population's needs for various types of information, the accessibility of information technologies and the state of the information services market are important in improving the results of the sustainable development of the level of business activity in any state and the welfare of the population, as one of the criteria of the quality of human life in our modern world.

In recent decades, in accordance with the increasing demand of society, the rapid development of education and science, the markets of information products and services, which are widely used in the virtual space, are important for people, and have started to play a serious role in economic development, have been formed and are developing rapidly. These markets are characterized by borderless, global and liberal character. In particular, the Internet network covers all the countries of the world and has created opportunities to transfer information to any point of the world in a short time and at low cost. Today, states and companies that want to be more active in the Internet space create new products and services in order to have more market share, try to get more income in the Internet environment, and take advantage of the economic

opportunities of the Internet. The active activity of trademarks, organizations, companies and other institutions in the Internet environment not only stimulates their development, but also opens up wide markets for economic efficiency. No matter how global and liberal this market is, it has also become a tool for unhealthy and unfair competition in many cases. Currently, states are taking appropriate measures to prevent this process.

World experience has shown that information is one of the constituent parts of the economic system. Because no economic system can exist without information flows. Obstacles in information flows, information blockade, in most cases lead to the failure of the economic system and the weakening of economic development and a decrease in income. In this regard, increasing access to the market of information products and services, improving information provision of the society is extremely important for socio-economic development. Information is a unique substance that refers to all areas of human activity. Information is an indispensable tool that acts as a knowledge and position guide, a tool for communication, mutual understanding and cooperation.

Although Azerbaijan joined the long-standing processes in the countries of the world after the mid-1990s, the main development of ICT accelerated approximately after 1997-1998. Today, the ICT sector is one of the fastest growing sectors of the country's economy. However, the position of our country in the global market of information products and services is not satisfactory. In this regard, the development of this market is very important for the future development of the country. Purposeful measures are being taken at the state level in order to raise the position of the Republic of Azerbaijan in the ICT sphere and the sector of information products and services. Internet infrastructure is almost established in the country. It is important for our country's economic, social and intellectual development to occupy a unique place in the global market of information services and products, targeting the export of information products and services. From this point of view, the selected research topic can be considered relevant not only for the current period, but also for the coming decades.

Recently, in the scientific literature, there has been a significant increase in the number of scientific publications related to the service sector as a whole and its individual fields. A wide range of modern scientific developments of local and foreign researchers is aimed at solving the problems of forecasting, planning, organization, coordination and management of the service sector, as well as the effective functioning of the information services market as an integral part of the information market. The basics of services market activity and the place of information services in the service sector were considered in the works of ONBalayeva, I. Bernard, DXBruce, LLBerry, VQVeledinsky, NAVoskolovich, BMGenkin, JK. Kolli, TAKrakovskaya, F. Kotler, A. Parasuramana, NQFedko, VAZeytami and others.

Development of ICT sector, construction of information society, information economy, researches related to innovative development F. Agion, D. Bell, K. Errou, F. Mahlup, P. Druker, M. Kastels, F. Kotler, E. Toffler, B. Twiss, Y. Schumpeter and others. investigated by scientists.

Theoretical and practical aspects of the formation and subsequent activity of the information services market V.I. Baluta, EGBorshev, D.I.Blumenau, V.N.Bugorski, A.S.Volodkin, S.I. Mayorov, I.S. Melyukhin, T.V.Moiseeva, AYPavlov, SDPodprugin, D.Y.Polukarov, A.I. Rakitov, R.VSokolov, VLTambovtsev, S.M.Treskov, V.P.Tikhomirova, A.V.Xoroshilova and others. has been studied in the works of scientists such as D.Bell, VLInozemtsev, M.Kastells, S.Lavlok, EAPetrova, SDPodprugin, T.Stounyer, D.Stigler, K.Errow have extensively analyzed the problems of the concept of information, its essence and evolution as an economic category in their works.

A. J. Muradov, RM Aliguliyev, Y. Huseynli, G. Imanov, V. Gasimli, A. Huseynova, F. Gasimov, A. Musayev, A. A. Muradov, RM Aliguliyev, Y. Huseynli, G. Imanov, in the problems of innovative development of Azerbaijan, information society, information economy and ICT sector in the years of independence. G. Aliyev, ROSHahverdiyeva, R. Mahmudov, G.I. Ismayilov, SQKarimov, SBHabibullayev, T.I. Ibrahimzade, YAMalikov, A.I. Mammadova, L.A. Allahverdiyeva, GAFataliyeva, TNPolukhov, A.B. Azizov, There

are studies by MNLizadeh, VGNajafova, and NDVerdiyev. This pred-
The analysis of the degree of development of the field of information
technology shows that the process of researching the information
market is still not systematic, and there is no systematic approach to
the planning of activities in the field of information services. This was
one of the main factors that determined the choice of topic, the
purpose, task and structure of the research.

Thus, summarizing what has been said, it can be noted that the
relevance of the research topic is determined by the following:

- from an economic point of view: in modern times, the
information resource has become one of the most important and
valuable resources;

- from a methodological point of view: with the development of
computer and network systems, information technologies have gained
a dominant position;

- from an organizational point of view: the market of
information services in the Republic of Azerbaijan is at the initial
stage of development, which requires special research;

- from the point of view of prospective development: the future
belongs to information technologies, they will determine the dynamics
of socio-economic development in many cases.

Research goals and objectives. The purpose of the research is
to study the state of formation of the market of information products
and services in Azerbaijan, to reveal the existing problems and to
determine the directions of development.

To achieve this goal, the following tasks are expected to be
implemented:

- researching the specific characteristics of the market of
information products and services and the scientific theoretical aspects
of its influence on the acceleration of globalization;

- Investigating the socio-economic significance and impact of
the formation and development of the market of information products
and services;

- Studying the world experience regarding the development
dynamics of the information products and services market;

- Detection of existing deficiencies and problems on the basis of statistical analysis and evaluation of the current situation of the information products and services market of the ICT sphere in Azerbaijan;

- Determining the dependence between the information services sector and economic development;

- Elaboration of scientifically based proposals and recommendations related to the directions of development of the information services market based on world trends and theoretical approaches.

Research methods.When conducting the research, systematic approach, economic and statistical analysis methods, abstract-logical, structural-functional, regression analysis and graphing methods were used.

Main clauses defended.The following main provisions are defended by the author:

- The research of the scientific-theoretical bases of the formation of the information services market in the conditions of the establishment of the National Information Society and its integration into the global market, the formation of economic relations in the market of information services and products, the determination of development characteristics, principles and trends, and the scientific justification of the development of that field in Azerbaijan are of great importance;

- In advanced countries, there is a need to study the phenomenon of globalization of the information economy, including the information services and products market, to justify the new opportunities created by the economic, social and institutional integration of developing countries into that market from a scientific-theoretical aspect;

- The analysis of the current situation of the ICT sphere in Azerbaijan, which is the main technical and technological base of the information services market, confirms the possibilities of achieving dynamic development of the market of information services and products;

- In the conditions of the information society and economy, the scientific investigation of the economic and technical processes taking place in the market of information services and products related to the transformation of information resources into a decisive means of labor and the emergence of a new production method reveals the potential opportunities of that field;

- Evaluation of the dependence between the information sector and economic development by econometric methods and computer modeling confirms that ICT development leads to economic growth;

- Analysis and evaluation of the main factors that directly affect the competitiveness of information services products in the relevant markets, determine the emergence of threats and challenges in that field and lead to the increase of competitiveness at all levels of the global information space;

- The study of the characteristics and structure of the current situation of the segment of the information services market related to electronic commerce in the advanced countries of the world and the results of the study of that issue in local conditions using the survey method show the importance of implementing measures at the state level in the relevant field;

- Researching the problems of forming the main goals, tasks, and legal regime of the current state policy related to the production, processing, dissemination and security of information in the market of information services necessitates the improvement of the existing regulatory mechanisms in that field and the development of new ones.

Scientific novelty of the research.Scientific innovations of the research work can be considered as follows:

–Based on the systematic analysis of existing scientific bases and theoretical approaches, some economic relations with the market of information products and services have been scientifically improved;

–The specific characteristics of the products entering the market of information products and services have been disclosed, their structure and classification have been defined;

–As a result of the analysis of the world experience, it is justified from the scientific aspect that the market of information

products and services develops rapidly in the conditions of an open economy and is more important for economic development;

–The importance of the development of the market of information products and services for the intellectual development of the country has been determined by scientific considerations;

–The ways of state regulation of the market of information products and services were systematically analyzed and the mechanisms of their improvement were indicated;

–In order to improve the effectiveness of the national information services system of Azerbaijan, the conceptual directions of the promotion mechanisms of the ICT sphere, the 4th ST platform, the high-tech park, the network of business incubators, and the mechanisms for the promotion of intelligent production-oriented enterprises are indicated, and the directions of technical scientific cooperation of the state and the private sector in its implementation are defined in a well-founded form. .

Theoretical and practical significance of research.The theoretical significance of the research consists in the interpretation and improvement of the scientific theoretical and methodological bases of the formation and development of the information services market as a whole object of the services market in the Republic of Azerbaijan. Research materials can be used in the teaching of relevant subjects in higher education institutions, in the study of service sphere problems, in scientific research and project work, in the concept of the development of the ICT sphere. In this sense, the research carried out can create a scientific basis for the researchers in the indicated field for deeper study and research of the relevant field. The practical results and evaluations obtained during the research, as well as the proposed proposals and recommendations, can be used during the activities of the central and local government bodies that formulate and implement the state policy in the relevant field. This increases the practical importance of research work.

Research approval and implementation.Author's research 22 articles were published, one of which was abroad, and one of which was devoted to the analysis of various aspects of the subject and reflected the main content of the dissertation work. In addition, the

author participated in many scientific-practical conferences and delivered reports on the results obtained on the problems covered by the dissertation. Those reports have also been published.

The total volume of the dissertation with a sign indicating the volume of the structural sections of the dissertation separately.The dissertation consists of 3 chapters covering 10 paragraphs, a conclusion, and a list of references. The dissertation has a total of 245,681 characters and 166 pages.

STRUCTURE OF THE DISSERTATION

INTRODUCTION

CHAPTER I. ANALYSIS OF THE SCIENTIFIC-THEORETICAL AND METHODOLOGICAL ASPECTS OF THE FORMATION OF THE INFORMATION PRODUCTS MARKET

1.1. The nature of the market of information products, features of formation and stages of formation

1.2. Analysis of the existing literature and scientific-research works related to the market of information services

1.3. Study of the world experience of the information economy, which is the basis of the information services market

CHAPTER II. RESEARCH AND ASSESSMENT OF THE CURRENT SITUATION OF THE INFORMATION PRODUCTS AND SERVICES MARKET IN AZERBAIJAN

2.1. Analysis of the current situation of the ICT sector, which is the technical market of the information services market in Azerbaijan

2.2. Research and assessment of the current state of the information products and services market

2.3. Determining the dependence between the development of the information sector and economic development by econometric methods

CHAPTER III. DEVELOPMENT WAYS OF THE INFORMATION PRODUCTS AND SERVICES MARKET IN AZERBAIJAN

3.1. Targeted perspective application directions of ICT in the aspect of information services market development

3.2. Ways to increase competitiveness of information products and resources in the market

3.3. Analysis of regional development aspects in the electronic commerce segment in the information services market

3.4. Directions for improving the mechanisms of regulating the production and dissemination of information

CONCLUSION

BIBLIOGRAPHY

BASIC SCIENTIFIC PROVISIONS SUBMITTED TO THE DEFENSE

Clause 1. The study of the scientific-theoretical bases of the formation of the information services market under the conditions of the establishment of the National Information Society and its integration into the global market, the formation of economic relations in the market of information services and products, the determination of development characteristics, principles and trends, and the scientific justification of the development of that field in Azerbaijan are of great importance earns;

The increase in the role and importance of information in public life has led to changes in the formation of the information market and has created a broad basis for the development of the information products and services (IMX) market. This, in turn, led to the formation and development of the information market. Currently, most researchers do not distinguish the IMX market from the information market, they use these two terms as synonyms. Although the concept of IB is widely used by both scientists and practitioners, there is no fully agreed upon single definition of this concept, and as a generalized definition it can be noted as follows: Information market - where relationships are formed in connection with the buying and selling process and is the area of product exchange where there is a specific activity on the organization of the transfer of information products from the producer to the consumer.

Currently, BU combines two large markets: The first is the market of information resources and the second is the market of information products and services. Information resources are knowledge used by people for social purposes in society and recorded in material carriers. Information resources serve as a basis for the creation of information products. Accordingly, it acts as an integral part of the PU structure of the market of information products and services.

The market of information products and services is a system of economic relations, and it is created between subjects. The market offers computing equipment, electronic components, software, communication tools and more to buyers. This or that information product and services market is considered extremely important for the information structure. It is characterized above all as a set of information structures operating in a given exchange system.¹

The world market of information services and products includes a large segment of the world economic system. The intellectual wealth of society (scientific, technical and commercial information) is redistributed through the information market and creates new value. World information products - governed by strict rules, responding to the laws of competition and incorporating the interaction of hundreds of thousands of subjects.

The development of the information services market in many cases serves to improve the information provision of the society. The emergence of new technical tools, IT and ICT are tools that facilitate the timely collection, collection, prompt processing and transmission of information to any point in the world. As a result of this, it is significantly easier to make operational decisions and to have a purposeful impact on society and socio-economic development. For this reason, developed and developing countries have been paying special attention to solving problems related to the generation, distribution and processing of information in recent years.

Clause 2. There is a need to study the phenomenon of the globalization of the information economy, including the information services and products market in advanced countries, and justify the new opportunities created by the economic, social and institutional integration of developing countries into that market from a scientific-theoretical aspect;

¹Introduction to information business: Teaching manual / Under the editorship. V.P.TiKhomirova, A. B. Khoroshilova. -M.: Finance and statistics, -1996. -268 p., p.68

In the scientific literature, the concept of "information economy" means the economy that ensures the flow of internal products as a result of activities in the production, storage, processing and distribution of information and knowledge. The main point to note here is that more than half of the employees are involved in this process.

The concept of "information economy" began to be studied more widely in 1994 with the research of the American economist John Harsani, who received the Nobel Prize in economics. His research was considered the theoretical foundation for the information economy, which appeared as a relatively new field of economic science. He wrote: "In the modern era, it can be boldly declared that information and technologies related to it are becoming one of the main areas that determine the growth rates of GDP."²At the same time, it determines the formation, development and organization of the civil society, which, in turn, is reflected in the increase in the speed of the social sphere, economic growth and development.

Analyzing the experience of the formation of information society in different countries of the world, three main models can be distinguished: the Japanese model (Southeast Asian countries also follow this model), the American model (England, Canada, Latin American countries use the US experience), the European model (its the main directions of which were adopted by the CIS countries).

The active study of foreign "success stories", the ability to take examples from them and adapt their most effective business models, technologies, processes, finished products, management methods and other advances to the conditions of our country, should be the most effective means of digitizing the economy. Successful and quick adaptation of ready-made solutions ensures ninety percent success. For the largest companies, it is more appropriate to actively participate in the formation of the market by forming partnerships with other industry participants and solution creators, while effectively and quickly adapting and implementing ready-made platform solutions

²Malikov YA Information economy. Baku: ADNA, -2009. 265 p., p. 116

and services. Each country that has demonstrated success in forming an information economy has its own history, and there is no absolute leader in the development of all aspects of it.

Clause 3. The analysis of the current state of the ICT sphere in Azerbaijan, which is the main technical and technological base of the information services market, confirms the possibilities of achieving dynamic development of the market of information services and products;

Azerbaijan maintains its leadership in the CIS region in terms of the level of ICT use. Significant work has been done related to the population's access to information bases. According to the report of the World Economic Forum, Azerbaijan ranked 49th among the countries of the world in terms of the use of ICT at the state level, and 31st in terms of the use of ICT in state authorities. In the report, the factors of legislation and state regulation related to ICT in our country were also evaluated satisfactorily. According to the level of access to the Internet in schools, Azerbaijan took the 56th place, and the 29th place according to the innovation potential in business. The rating of the state readiness of the government of Azerbaijan for the implementation of ICT was also highly evaluated. Based on this parameter, our country was ranked among the top 30 countries in the world, the government priority in the field of ICT was 38th, the purchase of advanced technologies at the state level was 16th, and the state's attention to the importance of this sector in terms of future development was 40th.³

Thanks to targeted measures implemented in the ICT sector, the volume of information and communication services in the ICT sector (in relative terms) increased by an average of 20% per year in 2000-2016. This indicator is higher than the average annual growth rate worldwide. During those years, the volume of investments directed to fixed capital in the information and communication services sector increased by 4.3 times, including the volume of domestic investments

³Azerbaijan in numbers 2018/ trans.ed. State Statistics Committee of the Republic of Azerbaijan. -Baku, 2018. -138 p., p.54

by 4.1 times, and the volume of foreign investments by 7.9 times. If in 2000 the volume of investments in fixed capital in the information and communication services sector was 45 million manats, in 2016 the volume of these investments was 199.4 million manats. Along with information and communication services, investment in other areas of ICT has also increased.⁴

This in the paragraph based on the conducted statistical analysis, it can be concluded that the infrastructure provision of the ICT sector in Azerbaijan (ASAN service, Electronic government, Satellite service, etc.) is at a satisfactory level for the development of the market of information products and services. The development of the market of information products and services first requires the creation and use of intellectual potential.

Information and communication technologies (ICT) play a preventive and stimulating role in ensuring the continuity of the economic development of each country. In the current period, ICT, which is one of the dominant directions of Azerbaijan's rapid development policy, has rapidly penetrated all socio-economic areas and people's daily life activities, becoming an integral part of socio-economic relations and one of the important components of the economy.

Admirable steps are currently being taken to popularize and develop the use of ICT in Azerbaijan. Today, Azerbaijan has entered a new stage in the development of information and communication technologies (ICT). Today, the opportunities provided by the ICT sector are widely used in the interaction of state bodies, business institutions and citizens in our country. The ICT sector is considered the second priority sector in the country's economy after oil.

Today, the following three directions of informatization are forming and developing in Azerbaijan:

-Development of management of state structures, telecommunication means;

⁴State Statistics Committee of the Republic of Azerbaijan. Information society: [Electronic resource]. – October 4, 2019. URL: https://www.stat.gov.az/source/information_society/

- Informatization of production areas, as well as information technologies and transport;
- Informatization of territorial management areas.

ICT plays a preventive and stimulating role in ensuring the continuity of the economic development of any country. In the current period, the amount of public and private investments should be increased in the development of the ICT sector, which is an integral part of socio-economic relations and one of the important components of the economy, which is one of the predominant directions of Azerbaijan's rapid development policy, which is rapidly penetrating all socio-economic areas and people's daily life activities. For this, the private sector promotion mechanism should be applied.

At the same time, the said sector has created a foundation for the introduction of innovation and the attraction of foreign and local investments. Thus, in order to ensure the continuity of the development dynamics of the ICT field, it is required to carry out work in the following direction.

1. Taking into account the increase in the demand for ICT products and services, achieving sustainable development in the said sector;

2. Taking into account the rapid development of the ICT sector in the world trend, not only quantitative and qualitative changes should be made in this field;

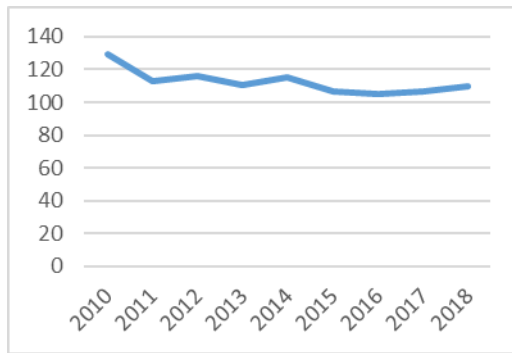
3. Based on the fact that the improvement of the current development indicators of the ICT field reflects the informatization level of national economies in sufficient detail, measures should be taken in the direction of developing the weak sides of Azerbaijan.

Clause 4. Scientific research of the economic and technical processes taking place in the market of information services and products related to the transformation of information resources into a decisive means of labor and the emergence of a new production method in the conditions of the Information Society and economy reveals the potential opportunities of that field;

As a result of statistical evaluations, we see that the amount of added value created in the telecommunication services sector in the country has increased approximately 10 times. During this period, the

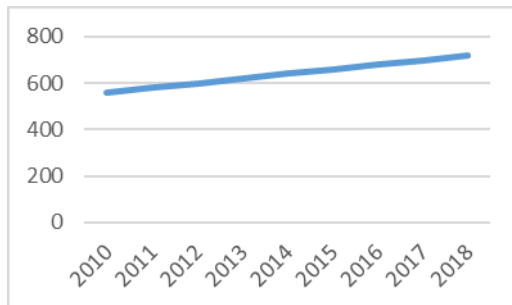
average annual growth of the volume of information and communication services (at comparative prices) was 20%. (Chart 1.)

As we mentioned earlier, the information and communication sector is one of the rapidly developing sectors of the Azerbaijani economy. Especially in 2000-2016, the added value created in the information and communication sector increased by 9.3 times, the volume of net profit and gross profit increased by 7.6 times, and the volume of gross profit increased by 9.6 times (Charts 2 and 3).



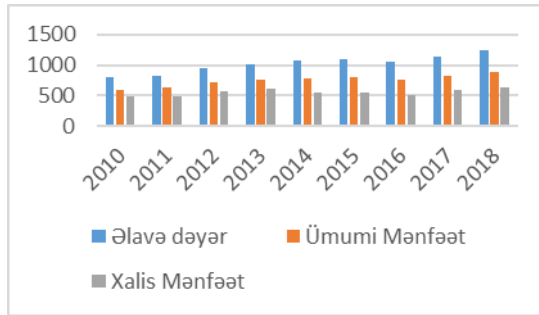
Source: The chart was prepared based on the materials of the DSK.

Chart 1. The volume of information and communication services (at comparative prices) compared to the previous year, in percent



Source: The chart was prepared based on the materials of the DSK.

Graph 2. Growth of added value created in the information and communication services sector (at current prices)

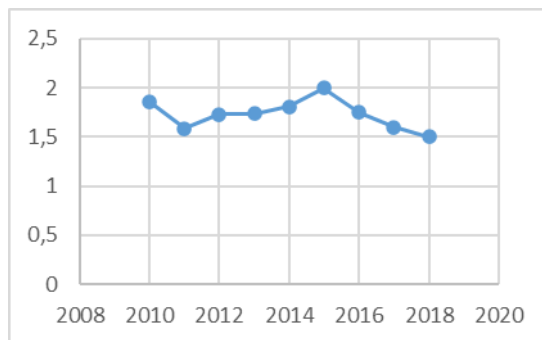


Source: The chart was prepared based on the materials of the DSK.

Chart 3. Added value, total, profit, net profit, million manats for the information and communication sector

As can be seen from graph 3, after the devaluation in 2015, there was a certain decrease in the mentioned indicators.

Based on statistical data, it can be said that in 2005-2016, there was a decrease in the ratio of the GDP produced in the communication and information sector to the GDP of the country. Thus, in 2005, the specific weight of the GDP produced in the information and communication sector (at market prices) in the country's GDP was 2.13%, in 2015 it was 2%, and in 2016 it was 1.75% (Graph 4 .).



Source: The chart was prepared based on the materials of the DSK.

Chart 4. Share of GDP in the information and communication sector in the total GDP, %

The "State Program for the Development of Information and Communication Technologies in the Republic of Azerbaijan for 2005-2008 (Electronic Azerbaijan)" approved by the decree of the President of Azerbaijan Ilham Aliyev dated October 22, 2005, which enables the wide application of information and communication technologies, as well as It was a perfect activity concept that ensured its wide distribution in the regions. According to the program, in 2008, Azerbaijan reached the world average in the field of information technology development, and 150 million US dollars were directed to the development of this sector.⁵

Thus, the development of the market of information products and services directly depends on the level of ICT development. ICT equipment and information infrastructure form the framework for the development of the market of information products and services. Information products are the product of intellectual labor, and the sale, transmission and processing of this product is carried out through intellectual labor or ICT infrastructure.

Clause 5. Evaluation of the dependence between the information sector and economic development with econometric methods and computer modeling. Confirms that ICT development leads to economic growth;

Today, investment in the ICT sector is driving the economy in both developed and developing countries. There is a close interaction between ICT readiness and the level of competitiveness. Countries with a more developed ICT sector have a higher level of competitiveness, as information technologies provide an opportunity to increase the efficiency of the economy in the long run.

Data covering the years 2000-2018 were used as a database for building the econometric model mentioned above. The data was obtained from the official website of the World Bank. To determine

⁵The State Program for the development of information technologies and information technologies in the Republic of Azerbaijan for 2005-2008 (Electronic Azerbaijan) // Approved by the Decree of the President of the Republic of Azerbaijan dated October 21, 2005: [Electronic resource]. URL: <http://eganun.gov.az/framework/10778>

the relationship between ICT and economic growth, GDP was used as the dependent variable, the number of landline users, the ratio of Internet users to the total population, and the import of ICT products as the independent variable.

One of the important conditions when evaluating with the application of econometric models is the reliability of the obtained results. In order to achieve this, various methodologies have been applied to date, and different approaches have been put forward in order to check the reliability of the results. All evaluations in the dissertation work were conducted using Eviews 9 software.

In this study, the least squares (LS) method was used to check the reliability of the results, or in other words, to evaluate the dependencies that are the object of the study. The method of least squares is one of the main methods of regression analysis and is used in the estimation of variables carrying random errors. The essence of the least squares method, as its name suggests, is based on minimizing the square of the difference (error) between the values obtained as a result of measurement and the expected values. The model of the function is chosen in such a way that the sum of the squares of the differences between its values is a minimum.

The results obtained from the model show that a 1% increase in the import of ICT products increases the economic growth by 0.45%. A 1% increase in the number of landline users leads to a 0.08% increase in economic growth. And finally, a 1% increase in the number of internet users leads to a 3.22% increase in economic growth. The R squared value shows how much of the original variable is explained by the independent variable. In the model, 96% of the main variable GDP is explained by the main variables. A P value of less than 5% indicates that the model is significant.

It should be noted that during the evaluation, only the impact of ICT on economic growth was taken into account, and the impact of other factors was assumed to be constant. To determine the causal relationship between economic growth and ICT, a Granger Casualty test was performed under the VAR model. To determine the optimal lag length, the VAR model was estimated with a randomly selected lag length (Table 1.):

Table 1. Optimal delay length

Information Criteria						
Do not be late	LogL	LR	FPE	Bitter	SC	HQ
0	-677.8573	NA	1.22e+32	85.23217	85.42531	85.24206
1	-625.0875	72.55847*	1.34e+30	80.63594	81.60168	80.68540
2	-600.1532	21.81754	7.28e+29*	79.51915*	81.25747*	79.60817*

Source: Compiled based on calculations made by the author in the e-views program.

Lag size determination tests were applied to the residuals. The results of these tests are presented in table 2.3.2. The optimal delay level was decided to be 2 in the analysis due to the fact that the four criteria indicate a delay size of 2.

Table 2. Granger Causality test results

H0 Hypothesis	ChiSquare	P-value
Log(GDP) is not Granger causality of Log(ICT).	1.167101	0.5579
Log(ICT) is not Granger causal to Log(GDP).	9.747934	0.0076

Source: It was compiled based on the author's calculations in the e-views program.

According to the result of the test, since the p value is greater than 0.05, the H0 hypothesis is accepted, which states that there is no Granger causal relationship from economic growth to ICT. However, if the p value is less than 0.05, the H0 hypothesis is rejected, which means that there is no Granger causal relationship from ICT to economic growth. Based on the results of the test, it was determined that there is a one-way relationship between economic growth and ICT, from ICT to economic growth. The obtained results show that ICT leads to economic growth.

Clause 6. Analysis and evaluation of the main factors that directly affect the competitiveness of information services products in the relevant markets, determine the emergence of

threats and challenges in that field and lead to the rise of competitiveness at all levels of the global information space;

It should be noted that in the conditions of rapid globalization and the formation of the information society, the following are the new main factors that directly affect the competitiveness of the states as a whole and the professional participants of the information market in the information space:

- the increase of available information to the extent that it exceeds all reasonable limits of human understanding and biological capabilities. On the one hand, this determines the tendency of information mass fragmentation, maximum simplification and detailing of information in order to cover the widest masses, and on the other hand, to create an opportunity for people to quickly and efficiently sort the flow of information, that is, the right of conscious (and unconscious) choice of an individual is very concrete. is carried out;

- due to the cross-border nature of information flows, the expansion of unrestricted access of the masses to any information due to the cheapening of information and telecommunication technologies and services, which offer more and more advanced channels for fast and high-quality transmission of information;

- gradual segmentation of the domestic (national) information space into two parallel parts - mass (only local analog and sometimes cable TV; local print media are available) and elite (global satellite TV, news agencies, print media). Already now, in all countries of the world without exception, the existence of two fundamentally different worldviews and behavioral models of society - mass and elite models - is clearly visible;

- transfer of information (content) to an entertaining show format for easier understanding of the public, including news, political, social, cultural information. At the same time, content in an entertaining format (humor, talk shows, educational programs) that tends to be politicized has an increased intellectual load;

- strengthening of the English-American (Anglo-Saxon) format as the main and dominant format of the global and national

information space in terms of both language, thinking and stereotypes, as well as the rules, mechanisms and tools used.

These factors also determine the emergence of new threats and challenges and lead to the strengthening of competition at all levels of the global information space.

Clause 7. The study of the characteristics and structure of the current situation of the segment of the information services market related to electronic commerce in the advanced countries of the world and the results of the study of that issue in local conditions using the survey method show the importance of implementing measures at the state level in the relevant field;

It should be emphasized that, as in the countries of the world, in Azerbaijan, the Internet has influenced the e-commerce sector, which is the most advanced modern sector of the economy. E-commerce is considered as an area where economic activity is changing at a high pace and economic efficiency is increasing. Organizing trade operations through the Internet with the right strategies creates a basis for creating a competitive advantage among competitors, strengthening relations with employees, and optimal use of labor, technology and mechanical resources. It is possible to increase productivity and further develop relationships by benefiting from the information provided by e-commerce. Internet tools are irreplaceable tools for promoting and selling products in other areas of Azerbaijan's economy.

In the modern economic society, e-commerce activity requires the implementation of direct business operations due to information provision, the intensive establishment of relations with existing and potential buyers, suppliers and partners, the production of products and services in accordance with modern requirements and standards, the identification of the target audience and the acquisition of a position that will create a competitive advantage in the market. makes it possible not to lag behind the development perspectives that exist in the world. The internet environment provides opportunities for the implementation of all these activities. As a result, one of the tasks that the state must perform is to make it easier for the population to access the Internet, and to give its support to entrepreneurs who want to

engage in e-commerce. The main goals of the enterprises are to take advantage of the opportunities provided by the Internet and to anticipate any difficulties that may arise and to find the most optimal solutions.

306 people took part in the survey. 153 of the participants are women and 153 are men. The survey consists of 15 questions. The results of the survey show that e-commerce is developing rapidly in Azerbaijan. This is the result of the customers' interest in it. Thus, customers are closely interested in the possibilities of e-commerce, benefiting from its advantages and identifying its shortcomings. It was determined in the survey that the form of e-commerce in the Republic of Azerbaijan is developing more as an intermediary. The predominance of intermediaries among the most widely used online stores indicates that they are more recognized and more sought after. The reason for this is the problems faced by people who want to engage in e-commerce. These problems include the high cost of the Internet, higher taxes, security problems, etc. Due to the increasing interest in e-commerce, it is important to implement measures at the state level.

Article 8. Researching the problems of forming the main goals, tasks and legal regime of the current state policy related to the production, processing, distribution and security of information in the market of information services necessitates the improvement of the existing regulatory mechanisms in that field and the development of new ones.

At a glance at the information market, the state's goals can be shown as follows:⁶

1. Information security control. This issue has several dimensions. First, it consists in ensuring the confidentiality of the information of the government and other state bodies, including the

⁶Skripkin, K.G. Economics of information products and services: Uchebnik / K.G. Skripkin. -M.: Faculty of Economics of Moscow State University named after M.V. Lomonosov, -2019. - 192 p., p. 74

protection of the data of the state bodies both from the criminal world of their own countries and from the relevant structures of other states. Second, it is the support of desirable attitudes in society, provided by various forms of state propaganda and censorship.

2. Financial goals. As is well known, the production of information products is a large sector that creates jobs and brings in large sums of money payments in the form of taxes to the state coffers. This increases the state's interest in the profitability and sustainability of the production of information products and services, especially in protecting copyrights both by law and ensuring their application in practice.

3. Industrial policy. A number of segments of the information market, such as film and software production, are considered important objects of industrial policy. Whether cinema or mass media are supported, at least in part, as actual or potential means of propaganda, software is viewed above all as a means of economic development.

When talking about the formation of a legal regime for the production and dissemination of information, it should be noted that the following provision of the Constitution of the Republic of Azerbaijan serves as the constitutional and legal basis for the separation of this legal regime: has the right to make and distribute.⁷

The requirement to implement information rights "in a legal way" requires the development of a certain set of rules for the purpose of realizing these rights. Such rules must be approved by the state, that is, they must have general absolute power, and must include a system of permissions, obligations, restrictions and prohibitions on information search, acquisition, transmission, production and dissemination.

⁷Constitution of the Republic of Azerbaijan // adopted on November 12, 1995 (amendments and additions dated September 26, 2016). - Baku: Law, - 2017, - 96 p.

CONCLUSION

In modern times, communication and information technologies, broad innovation systems that combine progressive innovations have become one of the important criteria for informing the general level of development and potential of each state, ensuring cultural, intellectual, socio-economic growth. It is an undeniable fact that the countries that have reached the highest stage of development in terms of current economic democratization, progress and the safeguarding of human rights have achieved these achievements as a result of advanced knowledge based on the information economy. World experience shows that countries that consider the development of innovation as an important guarantee of the state-building process, creating their economic development strategy on the basis of scientific and technical knowledge, always based on progressive traditions, have a special place in national progress and the world arena.

The development of economic dynamics as a whole, as mentioned above, is expressed in growth theories formed on the basis of long-term trends. However, along with the growth theory of economic development, the "cycle of development" theories based on the fluctuating nature of economic activity are more common.

It should also be noted that the new edition of the Law "On Information, Information Technologies and Information Protection" does not contain the concepts of owner of information resources and information user (consumer), they have been replaced by the concept of information owner:

In our country, which maintains leadership in every field, attention is being paid to the use of information and communication technologies in the development of education. Now in every school operating in our country, lessons are taught using the possibilities of information and communication technologies. Teachers often use e-textbooks and e-libraries in schools. Every year, hundreds of teachers are involved in information and communication technology courses. The challenge of "one computer per student" is being implemented.

In our modern era, which is considered the age of technologies, attention is being paid at the state level to the expansion of the ICT

sector and the training of qualified programmers and personnel who will work in this network.

Today, every social class is starting to build an interactive relationship with the authorities using these technologies.

Thanks to active efforts to expand the use of e-government solutions, Azerbaijan currently ranks 68th among 193 countries in the UN e-government ranking. Today, 46 central executive authorities of the country have joined the electronic government portal, and the number of services provided on the portal has reached 405.

As a result of research, after seeing the success of some strategies tested in world practice, some suggestions were made to conclude that this implementation can support the development of the country's economy and the development of the country by using the country in the development of the country:

According to the statistics of the Republic of Azerbaijan, 99.4% of e-commerce purchases are non-food products. It is possible to trade food products on the Internet using these conditions. This trade can be analyzed in two ways:

- Export and sale of agricultural products of the Republic of Azerbaijan to domestic and foreign markets;
- It is possible to create a competitive environment in the monopoly food markets of the Republic of Azerbaijan with minimum prices and offer products that are part of it.

Websites are places where e-commerce transactions take place. Internal website design is very important. Website visitors should be able to easily find the information or products they are looking for. For this reason, the development of websites should be entrusted to more professional designers. Moreover, making the sites easy to understand, fun and entertaining will increase the number of visitors and make the site more accessible.

In traditional commerce, the payback period is set at 2 weeks, but this period is for e-commerce. Limited to 1 week. E-commerce companies in the Republic of Azerbaijan do not accept product returns and do not accept the buyer. leads to agreement.

The tax system applied to the e-commerce sector slows down the development of the sector, and to prevent this, the banking system

should create a system that calculates tax deductions for products and not for services. In particular, the state can create incentives and incentives for the development of this sector.

According to the results of the dissertation research, e-commerce is developing rapidly in Azerbaijan. This is due to the interest of buyers in it. Thus, customers are closely interested in the possibilities of e-commerce, take advantage of its advantages and identify its shortcomings. As a result of the research, the development of e-commerce as an intermediary in the Republic of Azerbaijan was determined. The distribution of sellers among the most used online stores indicates that they are more popular and in demand. This is because of the difficulties faced by people who want to do e-commerce. These problems include the high cost of internet, higher taxes, security issues, etc. belongs to. It is important to implement measures at the state level due to the increase in interest in electronic commerce.

It is noteworthy that the "e-government" portal www.e-gov.az was launched in the Republic of Azerbaijan in order to organize the exchange of information between the information systems of government agencies and create conditions for citizens to use e-services provided by government agencies on a "one stop shop"

Thus, summarizing the above, we can draw the following conclusions:

1. The state implements three main target groups in the information market: ensuring information security of the country and its citizens, fiscal goals and industrial policy goals.

2. These goals are generally contradictory: the development of information security legislation limits economic activity, which reduces tax revenues and makes it difficult to produce personal information products. Increasing current tax revenues, in turn, complicates the prospects for local producers and allows potentially hazardous activities to enter the market.

3. Regulates information security, restricts the dissemination of information that is potentially dangerous for government agencies, restricts activities that harm the health of citizens and ensures technological security.

4. Fiscal regulation provides for the expansion of the legal information market and the taxation of new activities in this market. For the first issue, the fight against the spread of false information products is of particular importance.

5. Industrial policy solves the problem of cultivating a large and successful national player in the information market. Traditional protectionist measures in this area are limited to almost any national market, except for the cost of the information product, significant transition costs, and the Chinese market.

6. In these circumstances, the recommended goal of industrial policy is to cultivate competitive players in the global information market. These players will certainly not be able to demonstrate skills in all segments of the information market, so the export of some products will be combined with the import of others. In order to solve this problem, standardization of information products, especially based on open standards, is of special importance.

The main terms of the dissertation work, the obtained results and proposals are reflected in the following published articles:

1. Methodology of evaluation of scientific innovations. [Impact factor for the magazine "ECONOMIST"](#), Kiev, 2015 No. 2, str. 47-50

2. The role of commodity circulation of electronic resources in the informatization of the education system in Azerbaijan. ADPU, "ICT in Education" Scientific-methodical journal. Baku, ADPU.2016. #4, pp. 111-117

3. Direction of production, distribution and improvement of information ADPU, "ICT in Education". Scientific-methodical journal, Baku, ADPU, 2018. No. 2, pp. 201-207

4. Current situation of information products and services market in Azerbaijan News of ANAS. Economics series. Region and area economy. 2018 (March-April), pp. 76-82

5. Determining the dependence between the information sector and economic development Scientific and practical magazine "Cooperation" of Azerbaijan Cooperative University, 2018. No. 4 (51)-2018,pp. 167-177

6. Information economy in world practice. Michdzynarodowe czasopismonaukowe Colloquium-journal, 2018. №7(18),pp. 6-9

7. Directions of ICT development and purposeful use. "Cooperation" scientific and practical magazine of Azerbaijan Cooperative University, 2019. No. 2(53),pp. 98-104

8. Information improvement directions. ANAS News "Economy" series, 2019 (November-December), pp. 114-119

9. Methods of electronic commerce in the countries of the world. EUROPEAN UNION OF SCIENTISTS (EU) Monthly scientific journal. 2020. No. 1 (70) - 4 parts,pp. 18-23

10 Electronic means of payment, Azerbaijan University of Architecture and Construction, Scientific and practical journal of construction economics and management, 2020. No. 2,pp. 452-455

11. Organizational methodical aspects of new product information provision Regional Innovation activity: Realities and perspective development. Ganja,December 13-14, 2012,pp. 162-165

12. The role of information and communication technologies in economic development Proceedings of the XXII Republican scientific conference of doctoral students and young researchers. Baku, 2018

13.The role of information resources in the country's innovative development International scientific and practical conferenceren- "Knowledge is a strategic resource of the new economy". Samapa, October, 2015

14. Complex program of NIS Azerbaijan. Moscow international scientific and practical conference "Innovations in the modern world". February 20, 2015.

15. Indicators for evaluating the innovative activity of the National Research Institute of Azerbaijan. International scientific and practical confeconference "Innovations in the modern world" Moscow. Received certificate. February 20, 2015

16. Trade of information products in Azerbaijan. BMU, Dedicated to the 94th Anniversary of the National leader of Azerbaijan, Heydar Aliyev I international scientific conference of YOUNG RESEARCHERS. Baku Engineering University, Baku, Azerbaijan 05-06 May 2017

17. Ways of development of information products in Azerbaijan. Materials of the 1st Republic form of higher school teachers, Baku, 2017

18. Current information products in Azerbaijan and their development XXII republican scientific conference of doctoral students and young researchers.

19. Assessment of the state of innovation financing in Azerbaijan, 2022

20 Evaluation of innovation financing situation in Azerbaijan. GEOSTRATEGY, 2022. No. 3 (69)

21. The Main Global Trends In Scientific And Technological Development In The World, Classification And Assessment Of Scientific And Technological Development Level. Migration Letters, [Vol. 21 No. S5 \(2024\)](#)(Scopus Q2)

Dissertation defense on 13 sentyabr 2024 at 11⁰⁰ ED operating under the Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan 1.10 will be held at the dissertation council meeting.

Address: AZ1143, Baku city, H. Javid avenue, 115

With a dissertation Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan can be found in the library.

Electronic versions of the dissertation and abstract Institute of Economics of the Ministry of Science and Education of the Republic of Azerbaijan posted on the official website (economics.com.az).

The abstract was sent to the necessary addresses on 03 iyun 2024.



Anchor signed: 16.05.2024

Paper format: A5

Volume: 50046

Circulation: 100