



**Journal of Management Value & Ethics**  
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## CONTENTS

S.N o.	Articles	Page
1.	CONCEPTS AND PRINCIPLES OF CORPORATE GOVERNANCE. Adizov Bobir Bakhtiyorovich	6
2.	SCIENTIFIC AND PRACTICAL ASPECTS OF THE NEED TO PROVIDE THE TOURISM FIELD WITH QUALIFIED PERSONNEL Oybek Juliboy ugli	14
3.	FEATURES OF BANK LENDING TO SUBJECTS OF THE TOURISM SERVICES SECTOR AND THEIR IMPACT ON THE ORGANIZATION OF THE LENDING PROCESS Karimova Aziza Mahomadrizoevna	18
4.	WAYS TO IMPROVE THE CURRENT STATE OF CULTIVATION AND PROCESSING OF MEDICINAL PLANTS AND ITS IMPORTANCE N.R.Khujakulova	25
5.	PROSPECTS FOR INCREASING THE EFFICIENCY OF THE PROVISION OF PUBLIC SERVICES IN HOUSEHOLDS Yuldosheva Shakhribonu Anvar kizi	32
6	WAYS OF SUSTAINABLE DEVELOPMENT OF GASTRONOMY TOURISM IN UZBEKISTAN Otabek Ro'zibayev	45
7	IMPROVEMENT OF FINANCIAL REPORTING ON FINISHED PRODUCTS IN THE OIL INDUSTRY OF THE REPUBLIC OF UZBEKISTAN Boronov Bobur Farkhodovich	49
8	SMALL BUSINESS AND ENTREPRENEURSHIP ACTIVITIES IN DEVELOPMENT INTERNAL TO RESOURCES BASED ON TERRITORIAL INFRASTRUCTURE IMPROVEMENT Norkuziyev Anvar Rustamovich	58
9	METHODOLOGICAL ASPECTS OF REVENUE ACCOUNTING IN OIL INDUSTRY ENTERPRISES Urazov Komil Bakhramovich Boronov Bobur Farkhodovich	71
10	ANALYSIS OF THE POPULATION'S NEED FOR HALAL FOOD IN RESTAURANTS (RESULTS OF RESEARCH CONDUCTED IN THE CITY OF BUKHARA) Sharifova Shahloxon Shavkatovna	81
11	HOW DID THE SYSTEM OF HIGHER EDUCATION DEVELOP IN UZBEKISTAN? Mukumova Nargis Nuriddinovna	89
12	PROSPECTS OF EFFECTIVE DEVELOPMENT OF ACTIVE TOURISM IN THE REGIONS Husanov Umidjon Bahodirovich	98
13	INVESTMENTS IN HUMAN CAPITAL AND ACCOUNTING Ochilov Olmos Ikrom ugli,	102
14	THE IMPORTANCE OF DIGITAL TRANSFORMATION PROCESSES IN THE COUNTRY'S ECONOMIC DEVELOPMENT: THE CASE OF UZBEKISTAN Ruziev Abdumalik Artigalevich	111
15	ANALYSIS OF INSTAGRAM ACTIVITY OF LEADING TOURISM DESTINATIONS Khalimova Nigina Jafarbekovna	125

16	THE IMPORTANCE OF THE ALGORITHM FOR CALCULATING ECONOMIC MODELING OF OPTIMAL PROCEDURES FOR THE DEVELOPMENT OF ACCOMMODATION AND PUBLIC FOOD SERVICES Rakhimov Abdikhakim Muhammadievich	129
17	ECONOMETRIC MODELING OF THE EFFECTIVENESS OF INNOVATIVE TECHNOLOGIES IN THE TEXTILE INDUSTRY OF UZBEKISTAN Suleymanova Shoirra Alavkhanovna	133
18	ECONOMIC EFFICIENCY OF USING THE POTENTIAL OF NATURAL RESOURCES IN THE DEVELOPMENT OF INDUSTRIAL ENTERPRISES Khojanova Gulshoda Otamurodovna	145
19	DEVELOPMENT MODELS OF THE INFORMATION SOCIETY AND ITS INTERRELATION WITH THE GLOBALIZATION OF THE WORLD ECONOMY Tursunov Sherzod Abdukodirovich Xidirova Barchinoy Ilxomovna	152
20	DIGITAL MEDICAL PLATFORM FOR THE IMPLEMENTATION OF THE ANALYSIS OF MEDICAL SERVICES PROVIDED TO THE POPULATION Qodirov Farrux Ergash o'g'li	157
21	GLOBAL DATABASE OF IMPLEMENTATION OF DIGITAL TRANSFORMATION PROCESSES IN THE REGION INDUSTRY Khalimov Javlonbek Shakhriyrovich	164
22	FORECASTING FAMILY HOUSEHOLD THROUGH ECONOMETRICAL MODELING Nazarova Gulruh Umarjonovna	170
23	SCIENTIFIC BASIS OF DEVELOPMENT OF DIGITAL TECHNOLOGIES Nurmurodov Zafarjon Nurmurod ugli	179
24	METHODS OF EVALUATION OF THE GOLD MINING INDUSTRY IN UZBEKISTAN Abdullaeva Dilfuza Abubakirovna	184
25	CAUSE-EFFECT CRITERIA FOR ALLOCATING OVERHEAD COSTS TO PRODUCTION DEPARTMENTS Dilfuza Toshnazarova	193
26	IMPROVING ACCOUNTING FOR LONG-TERM TANGIBLE ASSETS. Djumaeva Guzal Akhtamovna	202
27	GROWTH OF HUMAN CAPITAL, AS A PART OF INTELLECTUAL CAPITAL IN THE AGE OF ECONOMY DIGITALIZATION Karimova Latofat Sadullaevna,	206
28	THEORETICAL BASICS OF ALTERNATIVE FINANCING OF INVESTMENT ACTIVITIES Bobokulov Akmal Muborakbekovich	210
29	PROSPECTS FOR THE DEVELOPMENT OF MULTI-BRANCH FOOD INDUSTRY ENTERPRISES (ON THE EXAMPLE OF ENTERPRISES IN ANDIJAN REGION) Abdumuminov Akhrorjon Akhatjonovich	216
30	KASHKADARYA PROVINCEACTIVITY OF ECONOMIC SUBJECTS ECONOMETRIC MODELING OF INTER-TERRITORIAL CLUSTERING Mukhitdinov Khudayar Suyunovich Rahimov Odil Berdievich	222
31	METHODS OF ANALYSIS OF MARKETING ACTIVITY OF RETAIL TRADE ENTERPRISE Khaydarova Malika, Anvarova Lobar	236

32	FEATURES OF THE FORMATION OF THE AGRO-TOURISM MARKET IN THE REGION Amirov Akmal Merojovich,	248
33	RESTAURANT BUSINESS DEVELOPMENT. THE CASE OF UZBEKISTAN Ziyavitdinov Habibullo Hamidovich	260
34	SUSTAINABLE DEVELOPMENT OF REGIONS: ITS ESSENCE AND VALUE Nazarov Nazirjon Narzilloevich 264	264

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***Dr. Prabhakar Singh Bhadouria,***

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# *Message*

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Dear Academicians & Research Scholars,

My dear valuable authors & writers as you know that our open access a double peer reviewed referred an international research journal listed with many research organizations like, Global Impact Factor Australia, SJIF, Google scholar, LinkedIn and also approved in Higher Education Supreme Authority Uzbekistan. We are also member of PILA (Crossref) USA. The real motive of our international research journal is to publish worthy research papers after double blind peer review process. There is no doubt that today we have completed 10 years of our successfully publications and given international platform to our authors for publication in this journal from worldwide. I say thanks to all those authors, who belongs in the management or related field supported me direct or indirectly for the same. During the last previous years of our research journey, you can see that there are so many research papers, case studies, book reviews coming from across the world, in the field of management or related. Many academicians, research scholars & students have approached from different countries like USA, Thailand, Indonesia, Saudi Arabia, Iran, Spain, Nigeria, Kenya, Nepal, Pakistan, Sri Lanka, Uzbekistan to publish their research papers in our esteemed International research Journal. We have considered most of them to publish after peer blind review process. We have also published many research papers from different management institutes of our country. They are sending regularly for publication in the upcoming issues. In addition to, it, there are many academicians, research scholars and institutes subscribing for our journal for reading by students and faculties. There are so many academicians who are approaching for being associated with our editorial & advisory board or as a review expert. We have selected some of them from foreign countries like USA, Nigeria, Uzbekistan and Sri Lanka, Nepal. The standard of our all research papers like empirical, conceptual, book review and case study is increasing the popularity of this Journal day by day. The most inspirable things of our journal are Motivational quotations which are appreciated by readers. Our renowned advisory board & editorial board members giving me advise to maintain quality of the journal and its become a real mile stone of our success. Research is a need of today's life, without research nothing is possible in the universe. Because, research bringing revolutionary change in the life. Research based study always support academicians & scholars to upgrade their innovative skill and academic profile as per UGC and AICTE norms. I would also like to request those, who are interested to get their research papers published in the field of Retail, Tourism, Hospitality, Event Management, Import and export, HRM, Finance, Marketing, Advertising, Accounting, Economics, Aviation, and IT etc. to send their research papers through email.

**Dr. P. S. Bhadouria**

# CONCEPTS AND PRINCIPLES OF CORPORATE GOVERNANCE.

**Adizov Bobir Bakhtiyorovich**  
**Head of the Planning and Financial Department of BukhSU**  
**Independent researcher**  
**adizov.b@mail.ru**

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## ABSTRACT:

The article discusses the concepts and principles of corporate governance, corporate governance methods and their existing systems, the origin and development of corporate governance, as well as corporate governance models.

**Keywords:** corporate governance, components of corporate governance, corporate governance objectives, corporate governance efficiency, corporate governance model.

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## Introduction

One of the management techniques based on the principles of supply, demand, and the market economy is corporate management. It makes sure that corporate management is improved in accordance with the demands of the market economy, that investments are attracted to the production process, and that goods are produced in accordance with international standards. In consequence, this guarantees a rise in the level of funding for corporate management entities' operations.

Corporate governance's efficacy mostly rests on adherence to the laws that have been approved in the nation and on the fact that the leaders of firms understand its importance.

In Uzbekistan, steps were also taken to create a new corporate management system for businesses that are typical of the market economy and boost the effectiveness of their operations. In particular, the legal framework for administering joint-stock firms on a new foundation was established through a series of government decisions and presidential decrees.

Including: The Law of the Republic of Uzbekistan "On Protection of Joint-Stock Companies and Shareholders' Rights" dated 06.05.2014 No. O'RQ-370, the President's Decree of the Republic of Uzbekistan dated April 24, 2015 "On Measures to Introduce Modern Corporate Management Methods in Joint-Stock Companies" Decree 4720, and the President's Decision PQ-5073 of the Republic of Uzbekistan dated April 13, 2021 [1,2,3]

## Literature review

The issues with corporate transformation in global science are approached from several theoretical and methodological perspectives. Y. Schumpeter, M. Hammer, D. Harding, Dj. Champi, M. from Russian scientists, James Chen, I. Ansoff, R. Barr, Dj. Buchanan, H. Wissema, B. Garrett, P. Gohan, D. Depamfilis, G. Dinz, P. Dussoj, T. Keller, R. Coase, A. Laju, P. Morosini, D. North, R. Scientists like L.V. Fatkin, I.A. Khrabrova, Yu.M. Tsygalov, M.A. Eskindarov, and others can be named. Grachyova, I. S. Lozovaya, S. B. Avdasheva, M. D. Aistova, V. G. Antonov, L. M. Badalov, B. S. Bataeva, L. P. Belykh, I.

Issues such as the efficiency of corporate management, the institutional environment of corporate development, the behavioral strategy of corporate management participants, the development of property relations

in the corporate sector, and the consolidation of company assets are discussed by leading local economists D.Kh. Suyunov, Sh.Kurbaniyazov, Sh.N.Zaynutdinov, Z.A. Ashurov, N.I. Akramova, G.M. Kasimov, R.K. Karlibaeva, T.K. Madiyorov, B.J. Makhmudov, D.N. Rahimova, D.Kh. Suyunov, B.Yu. Khodiev and reflected in the scientific works of others.

In the literature, many definitions of corporate governance procedures have been provided. For instance, corporate governance, according to D. Suyunov, a renowned scientist in our nation, is a body of laws and rules that are founded on and controlled by management of businesses. The purpose of attraction is to guarantee that socioeconomic ties are improved. [5] Z.A. and Sh.N. Zaynutdinov According to Ashurovs, "the mechanism of corporate management is a set of factors that activate social, economic, legal, and organizational interactions essential to realize the defined goals of the firm (or corporation)" in their textbook "Corporate management." [6]

M. Grachyova, a Russian economist, added: "Corporate governance, which includes the complex of relationships between the company's management (management, administration), its board of directors (supervisory board), shareholders, and other interested parties (interested persons), is one of the main elements of increasing economic efficiency.[7] Corporate management, in the words of Lozovaya, is "a system of relations between the company's owners, management, and other interested parties on the issues of fair and equal distribution of work results, control of its management by the owners of the company, and ensuring their interests by observing social and public interests." [8]

James Chen, a foreign academic, defines corporate governance as a set of laws, customs, and procedures that manage and direct a business. Corporate governance essentially entails striking a balance between the interests of a company's numerous stakeholders, including shareholders, senior management, clients, vendors, financiers, the government, and the general public.[9]

## **Methodology**

Current scientific research on the management and regulation of natural monopolies, comparative comparison of tariff and price formation, study of statistical data and economic comparison and analysis, logical thinking, scientific abstraction, grouping of information, analysis and synthesis, induction and deduction methods, are studied extensively.

## **Analysis and results**

The establishment of institutional and legislative frameworks for the development of a multifaceted economy and competitive environment, capable of ensuring rapid rates of economic growth and the long-term advancement of society, was prioritized after the Republic of Uzbekistan attained independence. The experience of reforming transition economies confirms that privatization and shareholderization, which aid in the formation of a class of real owners and the introduction of efficient corporate management of privatized property, are important means of a smooth transition from an administrative-planned economy to a market model of economic management. In the first years after independence, when previous state-owned businesses underwent change, the conditions for the development of corporate management in Uzbekistan's firms started to emerge in 1997–1998.

The history of corporate governance across the world may be broken down into many phases:

1. In the 17th century, Ost - Ind (East India Company) established a board of directors consisting of 24 members. For the first time, ownership and management duties were taken over;
2. In 1776, Adam Smith, in his "Inquiries into the Causes and Nature of the Wealth of Nations," states that "Abandoned property is a problem for management," that is, it is a negative mechanism for managing and controlling managers.;
3. In 1844, the law on joint-stock companies was adopted for the first time. Obligations in the form of new responsibility of ownership were introduced into the legislation;

4. In 1931, A. Burley and G. Minzlar published an article entitled "The Modern Corporation and the Private Owner" (USA). It was the first time that ownership duties were clearly distinguished from control duties;

5. In 1933-1934, the United States passed the Securities Act, which regulated the stock market. At this stage, according to the Act "On Securities and Exchanges" (1934y), it became possible to provide information openly, and in this year, a commission on the activity of the securities market and exchanges was established, which will supervise the laws in an orderly manner;

6. In 1968, the European Union adopted the Law on Companies;

7. In the early 1990s, the business empire collapsed. Controversy arose in Great Britain: the fact that a number of companies (Polly Peck, BCCI, Maxwell) were engaged in defrauding shareholders showed that corporate governance in practice should be improved to protect investors;

8. 1992. For the first time, the Cadbury Committee published a code on the financial aspects of corporate governance. (Great Britain). Since 1993, companies listed on the UK stock exchange have started to report on how they are complying with the code.;

9. In 1992-2003, a number of lectures on corporate governance were adopted, the main ones of which:

1) Rutman lecture on financial reporting and internal control in England;

2) Kinga's lecture on comprehensive accounting of participants in corporations;

3) England's Greenbury Report on Incentives for Senior Officials;

4) Hempela's lecture on corporate governance from England;

5) A lecture on the fundamental principles of corporate governance by Veno of France;

6) Peters of the Netherlands report on non-compliance with generally accepted standards of corporate governance and accountability;

7) In the USA, Sarbanes-Oxley Act to determine the composition of the audit committee of financial experts;

8) Higgs of England's report on CEOs failing to do their jobs.

There are several stages of formation of local corporate governance in Uzbekistan:

1. The state's centralized control of the economy under the administrative-ordering techniques in place prior to 1980–1985 became a barrier to the evolution of the macroeconomic situation.

2. The centralized monopolized economy was dismantled and corporate governance was formed between 1987 and 1991. The labor team's input and the involvement of the workforce were used to develop enterprise management. The path was cleared in Uzbekistan for the growth of the financial capital of banks and the insurance industry.

3. The privatization process started in 1991 and the allocation of principal property took place from 1991 to 1994. The earliest cooperative societies were established, but shareholder rights were not precisely stated.

4. The time from 1994 to 1998 when businesses were privatized.

Adoption took place for the laws governing joint stock corporations, securities, the Civil Code, and privatization. Large international corporations, their branches, representative offices, and joint ventures started to be founded, along with key investment funds, depositories, registrars, auditors, and consulting firms.

5. Between 1998 and 2001, future property and capital distribution processes started to be examined as a result of default, a lack of financial resources, capital emigration from Uzbekistan, and the underdevelopment of the corporate securities market. The knowledge of the donors' rights served as the foundation for all that was done. Corporate governance was implemented in the case of particular corporations, and all of them were widely used on the basis of the fundamental legal documents of the state, namely the corporate code, the laws on shareholders, the laws on securities, as well as the standards and procedures tried and true in everyday life.

6. The National Council on Corporate Governance, the Code of Corporate Governance, and its adoption by major organizations and businesses have all been guaranteed since 2002. The Corporate Code specifies the rights of management bodies in joint-stock firms as well as the processes for keeping internal documentation of joint-stock businesses.[10]



One of the most significant developments of the 20th century is the science of corporate management. In contrast to other nations, the United States has established all the "traditional" structural components of corporate governance, including the roles and responsibilities of owners and managers, a hierarchical pyramid, and a managerial staff with well defined duties.

It should be noted that the word "**corporatio**", which has the connotation of union, union, or partnership in Latin, is how the notion of "corporate management" is defined. Even if the issue of corporate governance is extremely pertinent to Uzbekistan, the term "corporate governance" is still understood in several ways.

According to one of the interpretations, corporate management refers to a set of relationships between the three parties in the triangle "owners, management (managers), and recruited personnel" that are responsible for ensuring the smooth running of the company.

In a different understanding, "corporate management" is commonly understood to mean that economic entities manage any socioeconomic entity that already exists.

Corporate management is also viewed as a framework for communication between a joint-stock company's governing bodies and its shareholders over matters pertaining to the joint-stock company's management.

Corporate governance combines company management methods with laws, rules, and regulations governing the private sector.

*Corporate governance* is a set of institutions that oversee a company's operations in accordance with the law, keeping in mind the interests of the company's members and other stakeholders (creditors, investors, employees, suppliers, and customers, as well as governmental organizations) in order to ensure the company's effectiveness and profitability.

There isn't a definition of corporate governance that is widely used at the moment, however we may take the World Bank's definition into consideration:

"Corporate governance is the collection of laws, rules, and business practices in the private sector that enables businesses to draw in capital and labor, run operations effectively, and raise the value of their shares, thereby boosting their long-term economic value and advancing the interests of shareholders and the company as a whole. permits continued action".

With this definition, the idea of corporate management may be seen broadly, studied as a distinct form of management to enhance its regulation, and appropriate practical advice on the workings of various types of organizations can be developed.

The following are generally accepted as the three pillars of corporate governance:

1) corporate law norms that govern the process for forming and dissolving a corporation, as well as the rights and obligations of shareholders and managers;

2) current business practices that are influenced by the state of the economy and the nature of the work environment;

3) corporate culture, which refers to the general cultural level of society and a set of norms and customs based on ethics and moral standards.

According to Western literary interpretation, the goal of corporate governance is to regulate employees' behavior rather than to carry out managers' wishes. Shareholder interests are so safeguarded.

The terms of the present legal papers, foundation documents, and other internal regulatory documents of the economic entity are taken into consideration while designing the corporate management system.

The American Law Institute's team created 6 corporate governance principles<sup>1</sup>:

1) reporting;

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<sup>1</sup> The American Law Institute was founded in 1923 to clarify and simplify the common law of the United States and adapt it to the changing needs of society.

- 2) transparency;
- 3) justice;
- 4) vote;
- 5) codes of principles;
- 6) strategic planning.

1) **Reporting**- is seen as the primary duty of the management bodies that have been elected or assigned to the shareholders. This approach enables managers and the entire organization to be continuously monitored and evaluated in terms of the chosen objectives and the interests of specific shareholders.

2) **Transparency**- it is closely connected to the preceding concept, is based on established reporting requirements, and is the outcome of adherence to the Code of Principles of Relations with Shareholders. Transparency allows for the evaluation of how closely the corporation's operations' executed goals and criteria adhere to the actual intended principles, the correction of deviations from the planned plan, and the investigation of the causes of such occurrences.

3) **Justice**- as a rule of corporate governance, it requires businesses to make sure that all shareholders, regardless of their citizenship or the quantity of shares they possess, are treated equally and fairly. This rule states that each share has one vote.

4) **Vote** - It is based on the idea that the organization should make the crucial choices affecting its operations. The use of this concept raises the standards for proxy voting, shareholder meeting planning and execution (including vote counting), shareholder rights protection, and other issues.

5) The creation and use of **Codes of Principles** relates to interactions between all shareholder groups and management of the firm. By developing entrepreneurial conduct that complies with international norms, the firm hopes to build strong relationships that boost competitiveness. The corporate environment is continuously changing, thus codes of ethics should be evaluated frequently to make them better.

6) **Strategic Planning** to ascertain the operations of the corporation's long-term potential. Due to the fact that corporate operations have associated but distinct vector orientations, this idea is particularly crucial for big firms with corporate ownership. Paying dividends is one example of reinvesting earnings. Other examples include achieving short-term (rapid) outcomes in order to ensure long-term profitability, stabilizing the relationships between various management bodies in order to advance the business, etc. By constructing current strategies, strategic plans, programs, and projects that are a requirement for the corporation's long-term activity, these issues may be resolved with the aid of long-term, step-by-step measures.[11]

**OECD**<sup>2</sup> member governments have created and embraced the following corporate governance principles:

**1. Shareholder rights.** This comprises a range of rights include safeguarding share ownership, taking part in elections, deciding whether to sell or modify corporate property, including combining businesses and issuing new shares.

**2. Treating stockholders fairly.** By creating policies that forbid directors and management from misusing their authority, this entails defending the interests of minority shareholders.

**3. What other stakeholders may do to influence corporate governance.** Employees, for instance, have a voice in the formulation and execution of business policy.

**4. Complete disclosure and openness.** **OECD** provides a variety of methods for disseminating fundamental data. Independent auditors do the annual audit control.

**5. The Board of Directors' obligation.** The **OECD** 's fundamental principles outline the role of the board of directors in defending the corporation and its shareholders. This covers planning, risk assessment, executive compensation, and other things.

**OECD's** guiding concepts can be used generally. They do well with both the English-American and German

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<sup>2</sup> Organization for Economic Cooperation and Development

systems. The overall strategy of General Motors, which is frequently utilized as a model for corporate governance by other businesses, is a well-known illustration of the concepts of the **OECD** corporate governance model that are most frequently employed.

Further study is needed in order to use the aforementioned corporate management concepts in the practice of Uzbek businesses in order to explain and extend prospects because they do not completely expose all of their complex contents.

A nation may greatly benefit from a robust corporate governance structure. According to studies, nations that have robust corporate governance to safeguard small shareholders have bigger and more liquid capital markets. The majority of businesses are owned by large investors in nations with inferior corporate governance, which deters small investors from stock investment. Corporate governance is therefore crucial for nations that seek to draw investors.

**Figure 1**

**Distinctive features of corporate and non-corporate management**

<i><b>Corporate governance</b></i>	<i><b>Non-Corporate Governance</b></i>
Separation of ownership rights and management powers	Combined ownership and management functions
Formation of a new independent subject of corporate relations - hired managers	Management is carried out by the owners themselves
Being a management function, owners minimize contact with the business and focus on their core activities	Owners are bound by management relationships and are forced to engage in business (non-core activities)

The unequal distribution of property rights is a problem that many developing nations face. As an illustration, insiders depreciate the value of the assets and shares held by external shareholders, as well as their own, and they withhold dividends.

It is also crucial to consider the initial terms of privatization and the distribution of the assets of the firms.

State-owned businesses were converted into joint-stock corporations in the majority of the former USSR countries, including Uzbekistan, and the directors who oversaw the firms' extensive internal activities (operations conducted for non-profit purposes) came to control of them. Insufficient openness in governance, a lack of effective court sanctions for corporate law crimes, and non-compliance with court orders are a few factors contributing to the ineffectiveness of corporate governance. The board deliberately slowed down the company's performance, so no dividend was paid on the shares. As a result, the firm was driven into bankruptcy, the buildings were sold as building materials, and the land was sold for other uses after being purchased at low rates (sometimes for free) from the employees.

A national corporate governance model should be created that is specifically tailored to Uzbekistan and not just a carbon copy of existing models from other CIS nations. Supporting a nuanced management strategy is essential since the ideal management model will differ not only from company to company but also alter throughout the course of a single firm's life cycle. The supremacy of the law over the market economy, an efficient state system for regulating the economy, a vibrant market for securities, labor, and goods, the ability of foreign investors to export profits to their home country, and currency convertibility are all necessary for the effectiveness of the national model of corporate governance.

The economic growth of private business cannot be directly controlled by the state, despite their being a period of economic expansion. However, in more recent times, including the USA, challenges of raising production efficiency in the state's economic sector have received more focus.

Corporate management will be based on the organizational development of huge production technology organizations, such as in the past, that is, during the era of the previous system, which are types of industrial scientific production associations.

The corporate structure of the production process and its improvement reflect the future growth of the Uzbek economy, which is the primary instrument of the global market that is put to use in daily life.

During this time, corporate departments acting as the major financial-industrial structure are used as a foundation, rather than autonomous small company production companies. The foundation of social interaction is reciprocity:

- on the basis of socio-economic relations based on ownership relations;
- the systematic administration of business via reciprocal economic interactions should include the organization of production on the basis of organizational-economic relations. Corporate management may be viewed in terms of market economy organizational-economic relationships and the approach to managing interdependent economic activities. Corporate association management also plays a significant part in the independent and moderate growth of the national economy, the absence of economic crises, the investment of production, and the efficient use of these investment funds. A unique socioeconomic and organizational framework of society and the economy is formed by corporate subjects and corporate structures.

Corporate management establishes the best circumstances for the growth of the production forces and the use of contemporary production technology in the market economy. Studying the theoretical and methodological evolution of company management during the development of the present market economy is therefore crucial.

Even while each innovation, including corporate governance, differs from previous corporate governance, it nevertheless emerges as a new governance feature, tailored to the needs of the market economy, based on the governance components that were previously understood.

**Conclusions and suggestions.** For the Republic of Uzbekistan, the development of the production process on a corporate basis is a brand-new issue that hasn't been fully investigated. To help with this research, it is possible to look at how corporate governance is structured in other nations, including its various aspects and workings, as well as how corporations are organized, how they adopt technological visions, what their strategic priorities are, and how they manage their shareholders' money. Utilize your experiences frequently.

Various elements, such as the legislative framework governing business interactions and the distinctive management structure that has developed in a certain country, influence the form of corporate management in various nations. Each country's corporate governance framework differs from that of other nations in a number of ways. The Anglo-American model, the German model, and the Japanese model are three widely acknowledged primary corporate management paradigms.

All classic models have pieces distributed throughout them in Uzbekistan nowadays. The ensuing trends can demonstrate these.:

- With the rapid growth of financial and industrial organizations, Uzbekistan began to follow the Japanese model, which is based on bank control and finance and is generally closed;
- similarities with the Anglo-American model were observed, including the model's encouragement of action focused at boosting the company's worth and short-term profit;
- support for the management system's high level of flexibility; it is also feasible to observe how businesses are oriented to adjust to the outside environment, news, and risk.

As a result, no specific corporate management system is in charge in Uzbekistan, and the national corporate management model is now in the creation phase.[12]

In conclusion, it can be mentioned that the current stage of Uzbekistan's social and economic growth makes it pertinent to study the corporate management concepts practiced in other nations and choices for the interaction of firms with the external environment.

## References

- Law of the Republic of Uzbekistan "On protection of rights of joint-stock companies and shareholders", O'RQ-370 dated 05.06.2014, <https://lex.uz/docs/2382409>;
- Decree PF-4720 of the President of the Republic of Uzbekistan dated April 24, 2015 "On measures to introduce modern corporate management methods in joint-stock companies", <https://lex.uz/docs/2635197>;
- Decision PQ-5073 of the President of the Republic of Uzbekistan dated April 13, 2021 "On measures to further improve the capital market regulatory system", <https://lex.uz/docs/5370971>;
- Increasing the efficiency of corporate management in joint-stock companies. Central asian academic journal of scientific research ISSN: 2181-2489 Volume 2 | ISSUE 2 | 2022
- Specific features of determining the effectiveness of corporate management. Scientific electronic magazine "Economy and innovative technologies". No. 6, November-December, 2016
- Sh.N. Zaynutdinov and Z.A. Ashurovlar "Corporate management" textbook. - T.: TDIU, 2010.
- M. Gracheva Corporate governance.
- [https://www.cfin.ru/investor/ao/corporate\\_management.shtml](https://www.cfin.ru/investor/ao/corporate_management.shtml).
- "Corporate boshkaruv", darslik, Tashkent davlat iqtisodiyot university, T: 2012 yil.
- "Uzbekiston Respublikasida corporate boshkaruvning milliy modelini rivozhlantirish istiqbollari" G.M. Ostonakulova, Ph.D., Associate Professor, S.S. Odilova, talaba TDIU "Iktisodiyot va innovation texnologiyalar" ilmiy electron journal. No. 6, April, 2013
- Corporate management of business activity in non-equilibrium conditions: monograph / Ed. Aniskina Yu.P. - M.: Omega-L, 2018.
- Raspopov, V.M. Corporate governance: Textbook / V.M. Raspopov, V.V. Raspopov. - M.: Master, 2019. - 384 p.
- Corporate governance: principal approaches to its unification. Bulletin of the ASTU series: Economics 2010 No. 1 JAMES CHEN Corporate Governance
- <https://www.investopedia.com/terms/c/corporategovernance.asp>
- <https://studizba.com/lectures/menedzhment-i-marketing/osnovy-korporativnogo-upravleniya/14594-suschnost-principy-i-modeli-korporativnogo-upravleniya.html>
- What is corporate governance? Author: John Colley, Year 2005, 95 pages

# SCIENTIFIC AND PRACTICAL ASPECTS OF THE NEED TO PROVIDE THE TOURISM FIELD WITH QUALIFIED PERSONNEL

Independent researcher **Oybek Juliboy ugli**  
Samarkand State University  
oybek.marketing@gmail.com

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## ABSTRACT:

The article gives an author's definition of the concept of personnel in the field of tourism and the scientific and practical aspects of training qualified personnel in the field of tourism. Information is also given about the basic structure of personnel training in the field of tourism and hospitality.

**Key words:** personnel in the field of tourism, personnel training, structure, definition of authorship, qualification, staff.

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## Introduction

In today's modern industrialized innovative society, the main aspect of the activity of organizations and industries is competitiveness against the crisis, and it depends on the training of qualified specialists in the relevant fields. This process takes place only in the continuous education system, which is gaining the status of a special mechanism of social and cultural development as an important factor of social and working life.

### Analysis of the literature on the subject

According to I.P. Fedorov, the term "personnel" is often used in a narrow sense when it means the most qualified part of physical and mental workers. This statement has not lost its relevance to this day.

Taking into account the above, in the category of "personnel" we understand the actual contingent of a part of the workforce that works permanently in organizations. In our opinion, such an understanding allows for the development of a unique quantitative and qualitative mechanism of personnel management.

The concept of "qualification" in the basic lexical approach is "1) an action according to the meaning of the verb to qualify - to determine (clarify) the quality or value of someone, something, to evaluate; determine the level of preparation for any type of work; 2) level of training for any type of work (highly qualified specialist); 3) profession, speciality. It came from the Latin language and *qualitas* means quality and *facere* is to do.

It is noteworthy that Ya. D. Lychak notes that the concept of "Qualification" is used both in a normative sense, for example, "the job requires high skills", and in the sense of describing a certain person, for example, "this person is highly qualified". In the first case, the qualification refers to the qualitative and quantitative requirements of the professional activity imposed on the employee, what the employee of the first, second, third category should know and be able to do in this process. Consequently, the qualification classification of the employee is the requirements for different levels of performance of the profession.

### Research methodology

Methods such as systematic approach, analysis and synthesis, induction and deduction, and comparative analysis were used in the research process.

### Analysis and results

As a result of rapid reforms in Uzbekistan in recent years, a new system aimed at ensuring effective employment in terms of quality and quantity was formed. In the process of forming the labor market and ensuring the level of effective employment of the population in the Republic of Uzbekistan, the Law "On Employment of the

Population" and the Labor Code of the Republic of Uzbekistan are important legal bases. Based on today's situation, effective employment for our country is determined by the following criteria:

- growth of national income, development of local production, production of products necessary for society, development of the economy;
- the level of well-being of the population and the increase in the level of professional qualifications and the state of scientific and technical development in the country;
- the possibility of creating new jobs as a result of socio-economic changes;
- level of socio-economic development of state administration, conditions created for workers in enterprises, etc.

In the action strategy (harakatlar strategiyasi), "creating new jobs and ensuring the employment of the population, first of all, graduates of secondary and higher educational institutions, ensuring the balance of the labor market and the development of its infrastructure, reducing the level of unemployment" was defined as one of the important directions. Especially in the context of the global coronavirus pandemic, special attention was and is being paid to supporting the population by increasing the level of employment and income, encouraging new forms of self-employment.

At the same time, it is very important to have a scientific understanding of the concepts of personnel and qualifications, and it is appropriate to pay attention to different opinions. "Personnel" generally refers to intelligent employees who have a past history of professionalism, as well as specialized knowledge or skills in their chosen field of work. Employees are without exception hired workers engaged in labor or all persons acting in accordance with an employment contract. In contrast to "personnel", the concept of "employees" is comprehensive, it is used to identify those who work in all organizations, firms, etc.

It should be noted that at the organization (network) level, in our opinion, the terms "employees" and "personnel" are used more often. When the concept of "employees" is used, it means the employees of a particular organization forming a group on the basis of professional or service provision. In this regard, it is not appropriate to use this concept in considering staffing problems at the network level.

When describing personnel, it is important to pay attention to quantitative and qualitative indicators such as their number, gender and age, level of general and professional training, qualification composition or belonging to a certain qualification level in a professional group, work experience. Depending on the type and complexity of work and the nature of the functions performed by employees until 2007, according to the classification of personnel professions, their positions and salary categories are divided into main categories within the framework of the unified classification and information coding system of Uzbekistan: working personnel, service personnel, scientific personnel, managerial personnel. This classifier is still used in the work practice of personnel services in the field of tourism. This is due to the fact that professional standards have not yet been introduced in the field, according to which all employees are divided into seven skill levels within professional groups. However, in relation to the concept of "Additional" and the two meanings of the concept of "qualification" (normative and individual), "additional qualification" can be defined as follows:

- requirements for increasing the level of performance of specialized types of professional activity (in the logic of normative interpretation);
- qualification description of a specialist capable of fulfilling the requirements of highly specialized types of professional activity (in the logic of individual interpretation).
- Comparative analysis of the content of basic competencies, implementation of basic competencies and basic skills.

During the years of independence, special attention was paid to the issues of training qualified personnel, in particular, to the training of personnel in the secondary special vocational education system (SVET) in the regions. At the same time, today there are problems waiting to be solved in the training of qualified personnel for the tourism sector, and one of the important issues is providing employment to graduates, effectively organizing and improving the management of the system of training qualified personnel with higher and secondary special education. Systematic organization of training and management of qualified personnel based on the requirements of the world education standard, increasing the efficiency of educational institutions, implementation of modern management methods in the training of qualified personnel requires the implementation of scientific researches that will ensure the economic development of the country.

Training of personnel in the field of tourism is primarily related to the quality of education and the availability of scientific support in the field. Timely identification of problems in the training of tourism personnel, as well as

identification of factors and conditions affecting the effectiveness of the training of tourism specialists will increase the competitiveness of regional tourism workers and the tourism product of Uzbekistan in general.

Since the subject of this study is the problem of staffing the tourism sector of Uzbekistan, it is appropriate to use the concept of "personnel" which describes the skilled workers in the sector, i.e. a part of the workforce permanently operating in this sector and having relatively the same professional and qualification composition. In addition, a special feature of personnel is that they are represented by permanent participation in the main economic activity of one of the organizations of the sector in the form of an employment contract (contract) and their inclusion in the main wage fund.

Tourism is very labor intensive and an important source of employment. It is one of the best job-creating sectors in the world, requiring a wide range of skills and providing opportunities for youth, women and migrant workers to find and quickly enter jobs. In some countries, tourism has a large share of employment; For example, India ranks second in the world in creating jobs in the tourism sector with 25 million jobs.

Tourism covers various sectors of the economy, which makes it difficult to accurately calculate the number of employees employed in this sector. The problem of realistic assessment of the number of employees is complicated by the specific nature of work and various relations between the tourism sector and other sectors of the economy.

About 70,000 people work in the tourism industry in Uzbekistan, which is about 0.2% of the working population. Structural changes have begun in the tourism industry of Uzbekistan, active development of domestic and inbound tourism is being observed. In fact, what we are seeing now is the process of import substitution in the field of tourism, revealing the huge recreational potential of our country. Serious economic, social and image results can be achieved only through the simultaneous development of all three main components of tourism, i.e. infrastructure, quality of tourist services and promotion of tourism products. After all, tourism stimulates the development of 53 sectors of the national economy, serves the development of small and medium-sized businesses. For one job in the tourism industry, up to five jobs are being created in related fields.

Training and retraining of personnel in the field of tourism and hospitality can become one of the main advantages of the organization, because the quality of the provided services directly depends on the skills of the employees, and the satisfaction of guests in the service sector is achieved by the skills of the employees.

The main structure of personnel training in the field of tourism and hospitality:

- 1) restaurant business;
- 2) transport network;
- 3) providing residential housing services;
- 4) tourism and hospitality industry.

For the tourism and hospitality industry, various levels of personnel are trained, from porters and waiters to hotel managers and managers. As it relates to customer service, all employees must act as one unit and be held to the same service standards.

Tourism education is unique in its versatility. It prepares personnel with management, economic, technological, technical, scientific and other knowledge and skills in various areas and specialties. Therefore, tourism education is a complex, continuous improvement mechanism that enables the active implementation of innovative training programs, including the use of foreign experience. Today, there are many problems in the process of training personnel in the field of tourism in Uzbekistan. Suffice it to say that until the beginning of the 1990s, there was not a single higher educational institution that trained professionals for the tourism industry in our country. Therefore, one of the main problems of the development of tourism in the country can be considered as the lack of qualified personnel capable of raising the tourism of Uzbekistan to the international level. But the task of vocational education is not only to meet the needs of the domestic tourism market, but also to prepare personnel for it in an advanced mode.

Of course, it is necessary for the state to pay more attention to the problems of training special personnel for the tourism sector. Training in tourism specialties is often carried out only at a theoretical level, although it is not decisive in this profession. Skills that can be imparted to students through internships, teaching practices and training are sorely lacking. At the same time, the professional training of managers and tourism specialists should be based on the specific characteristics of entrepreneurial activities in the field of tourism and rely on the principles of pedagogical didactics.

Improving the effectiveness of personnel training for the tourism industry is largely related to practical activities, technological processes of modern tour operations. The training program and the design of textbooks



should take into account the characteristics of the tourism market, respond to the dynamics of the tourism market, and be oriented to the functions of the tourism organization in the market of tourist services.

### **Conclusions**

A characteristic feature of the historical and cultural mentality of Uzbekistan is that the level of education has always been considered the main strategic resource of the nation, and this determines its place in the processes of world development. In this regard, modernization of Uzbekistan's education, scientific review and assessment of the achieved level, identification of shortcomings and their causes, development of new strategic directions and conceptual theories are of great importance in the formation of a person who can meet the demands of the times. The educational system at any level and each of its links can successfully fulfill its tasks only if its structure, organization and work methods are sufficiently mobile, not only fully meet today's requirements, but also have a strategic orientation. In modern education, objective trends such as the need for professional training for higher education and practical activities in the profession, integration and differentiation of types and levels of education based on the principle of continuity and integrity, activation of innovative processes in the development of the education system are observed and serious attention is paid to them. All the main areas of education are also relevant for continuous professional training of tourism personnel.

In the development of the national economy, the socio-economic nature of the training of qualified personnel is determined based on the requirements of the society for the provision of economic services. On the one hand, choosing the specialty of an tourism sphere based on one's desire and interest, on the other hand, the role of the state in the acquisition of tourism knowledge or the formation of the demand for tourism personnel is important. The process of training qualified personnel directly depends on the goals and tasks of education, methods, content, and effectiveness of the educational system. The purpose of training qualified personnel is to increase the general level of knowledge of the society and improve management by training specialists who have deep knowledge in the required direction, qualified personnel operating in various sectors or creating a qualified layer of personnel in the region.

### **List of references:**

- Decree of the President of the Republic of Uzbekistan dated January 5, 2019 No. PF-5611. "On additional measures for rapid development of tourism in the Republic of Uzbekistan" - <https://lex.uz/docs/-4143188>
- Law of the Republic of Uzbekistan "On providing employment to the population" (new edition). - T.: Sharq, 1998.
- Labor Code of the Republic of Uzbekistan. - T.: Adolat, 1996. - 256 p.
- Shadmanov H.N. Ensuring effective employment in the labor market: problems and solutions. - "International Finance and Accounting" scientific electronic journal. No. 2, April, 2019. 1-9 p.
- Decree of the President of the Republic of Uzbekistan. On the strategy of Actions for the further development of the Republic of Uzbekistan. PF-4947, February 7, 2017. - [www.lex.uz](http://www.lex.uz).
- Guzhina G.N. Criteria for the effectiveness of personnel policy. – M.: 2015. S. 117
- Maslow A. Far limits of the human psyche / A. Maslow. - St. Petersburg. : Eurasia, 1999. 430 p.
- Vavilova E.V. Fundamentals of international tourism. - M.: Gardariki, 2005.- p. 160
- Fedorov I.P. The quality of education is a fundamental category / I.P. Fedorov // Higher education in Russia. 2000. No. 2. S. 3-7.
- Dictionary of the Russian language: In 4 volumes / USSR Academy of Sciences, Institute of the Russian Language.; Ed. A.P. Evgenieva. - 3rd ed., stereotype. - M.: Russian language, 1985-1988. T. 2. K-O. 1986. 43s
- Lychak Ya.D. Formation of key qualifications for specialists in the field of tourism services based on the intensification of training: Diss. ... Candidate of Pedagogical Sciences: 13.00.08. 2009 - p.34p.

# FEATURES OF BANK LENDING TO SUBJECTS OF THE TOURISM SERVICES SECTOR AND THEIR IMPACT ON THE ORGANIZATION OF THE LENDING PROCESS

Karimova Aziza Mahomadrizoevna<sup>1</sup>

<sup>1</sup>Candidate of Economic Sciences, Uzbekistan,  
Samarkand Institute of Economics and Service  
([karimova.aziza2105@mail.ru](mailto:karimova.aziza2105@mail.ru))

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## ABSTRACT:

This article discusses issues related to the peculiarities of bank lending to subjects of the tourism services sector and their impact on the organization of the lending process. The subjects of tourist services in need of financial and credit support and factors hindering their development are considered in detail. The proposals contributing to the improvement of credit support for the subjects of the sphere of tourist services are given.

**Keywords:** bank, bank lending, consumer, tourist product, economy, tourism, private business, tourist activity, small enterprises

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## Introduction

The level of development, scale and structure of the service sector today occupy a special place in assessing the economic status of the country. The experience of the developed countries of the world shows that the service sector is one of the main factors in the comprehensive development of the country's economy. The share of the service sector in the GDP of many civilized countries ranges from 70-75%. It should be noted that the bulk of the population employed in the economy falls in this area, and this figure in the United States is 80%, in Japan – more than 70%. A significant part of the services, in particular, 99% of household services are provided by small businesses. In turn, up to 90% of the expenses of small enterprises are financed by loans and investments of commercial banks (in large corporations, this figure is about 30%).<sup>3</sup>

**The degree of study.** Many scientific economists such as: Zaitseva N.A., Krivulya M.A. Fedorova S.V., Kozybagarov A.A., Dmitriev M.N., Zabaeva M.N., Malygina E.N., Oborin M.S., Nagoeva T.A. and others were engaged in research in the field of crediting subjects of the tourism market.<sup>4</sup>

**Research methodology.** This study was conducted using the methods of scientific abstraction, induction and synthesis.

**The main part.** Today, one of the significant problems faced by most enterprises in the field of tourism services is the lack of funds. And in case of a shortage of their own funds, they need an additional source that

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<sup>3</sup> Khamraeva S.N. Dynamics of development of the service sector in Uzbekistan.

<https://conf.ztu.edu.ua/wp-content/uploads/2018/12/549.pdf>

<sup>4</sup> Zaitseva N.A. Investment activity in tourism and hotel business in the Russian Federation // Service in Russia and abroad. 2009. No. 4. - pp. 84-90.; Krivulya M.A. Mechanism for stimulating investment activity in the tourism sector // Bulletin of the Northeastern State University. 2011. -Vol.: 15. No. 15. - pp. 135-139.; Fedorova S.V. Financial relations in tourism // Collection of materials of the V International scientific practice. Conf. "Architecture of Finance: strategy of interaction between the financial and real sectors of the economy". St. Petersburg: St. Petersburg State University of Economics, 2014. - pp. 403-406.; Kozybagarov A.A. Foreign experience of investing in tourism // Bulletin of the University of Turan. 2015. No. 4. - pp. 166-169.; Dmitriev M.N., Zabaeva M.N., Malygina E.N. Economics of the tourist market: textbook for university students studying in the areas of service and tourism / - 2nd ed., revised and supplemented. – M.: -DANA, 2015. - P. 154 UNITY

contributes to the implementation of various needs that require additional investments. In this situation, credit support makes it possible to replenish the subject's account at the expense of funds issued by commercial banks.

For the banking sector, lending to tourism activities contributes not only to generating income in a separate segment of lending, but also makes it possible to diversify credit risks and increase the volume of additional income.

In their scientific work, M.S. Oborin and T.A. Nagoeva, regarding the development of lending to tourism market entities, note that, "credit support from commercial banks is carried out within the framework of developed bank lending programs. Accordingly, the specifics of any program depend on the financial capabilities of banks and the objectives of lending".<sup>5</sup>

"The unification of travel agencies and credit institutions in the form of a strategic alliance, the purpose of which is to stimulate consumers to purchase a package of services of participants, is the subject of research by N.A.Zaitseva. The role of credit institutions in the process of investment activity in the field of tourism is reflected in the works of M.Krivuli and V.Fedorova".<sup>6</sup>

After analyzing the experience of investing in the tourism industry of foreign countries, A. Kazyrbagarov, "identified a number of more effective tools, in particular, lending to business entities in the tourism sector, in turn, which, in combination with other tools, contribute to the stable development of the tourism sector. Credit support is an integral part of the infrastructure block of the travel market, its interaction with market enterprises and consumers of services is provided through investment, settlement and credit operations"<sup>7</sup>.

The conducted research in the field of business lending in the field of tourism revealed the following features:

- price uncertainty and unanticipated profitability;
- insufficiently developed infra structure of tourism;
- dependence on natural and climatic conditions;
- defending tourism enterprises from obstacles, for example, industry, production, etc.

It should also be noted that the characteristic features of lending to business entities in the field of tourism services are:

firstly, to entities engaged in entrepreneurial activities in the field of tourist services, the provision of funds to both legal entities and individuals.

secondly, both banks and other financial and credit institutions can act as subjects of credit support.

thirdly, the entities to which concessional lending is allocated, in turn, require a special system of supervision of the allocated budget funds, as well as an assessment of their effective use.

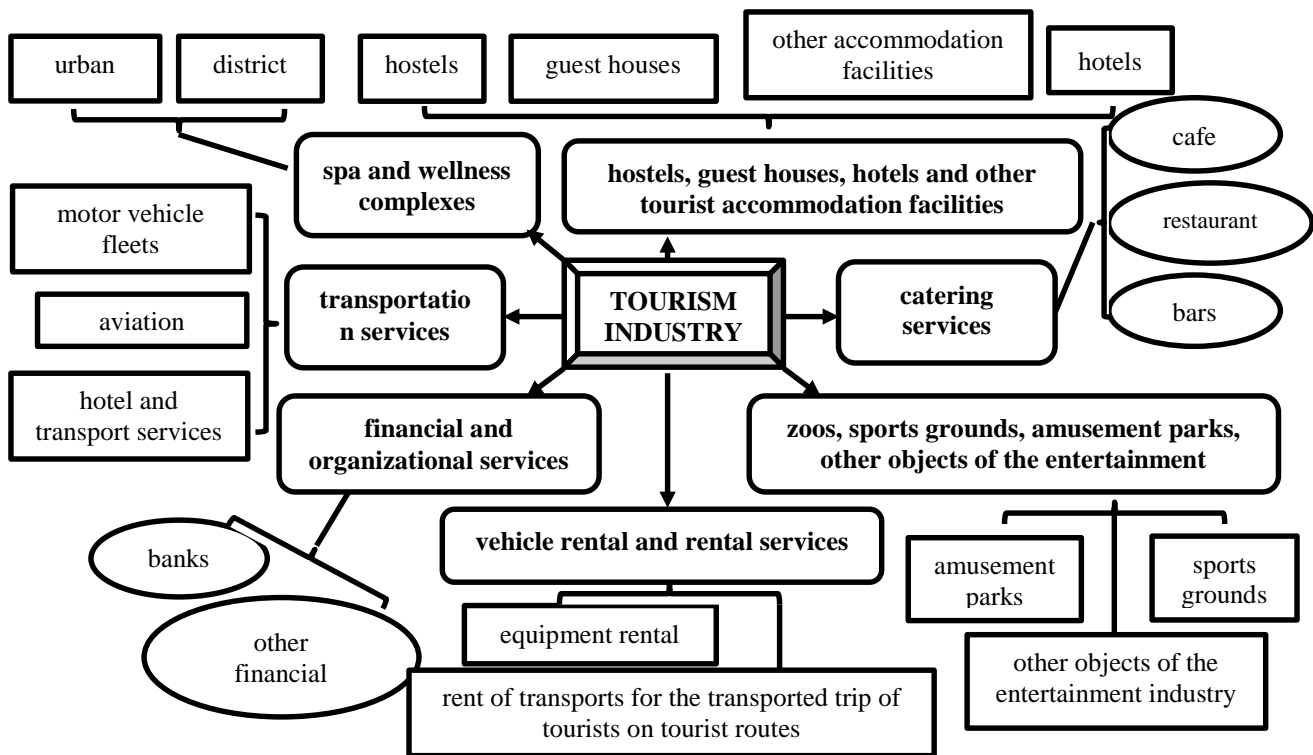
To consider in more detail the subjects of travel services in need of financial and credit support, you can consider below. (fig. 1).

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<sup>5</sup>Oborin M.S., Nagoeva T.A. Directions of development of crediting of subjects of the tourist market. -M.: Finance and credit. 2017.- pp. 2646-2662

<sup>6</sup>Krivulya M.A. Mechanism of stimulating investment activity in the field of tourism // Bulletin of the Northeastern State University. 2011. -Vol.: No. 15. - pp. 135-139.; Fedorova S.V. Financial relations in tourism // Collection of materials of the V International Scientific practice. conf. "Architecture of finance: strategy of interaction between the financial and real sectors of the economy". - St. Petersburg: St. Petersburg State University of Economics, 2014. - pp. 403-406..

<sup>7</sup> Kozyrbagarov A.A. Foreign experience of investing in tourism // Bulletin of the University of Turan. 2015. No. 4. - pp. 166-169.



**Fig.1. Subjects of the tourism industry in need of financial and credit support**

Based on the scheme, we conclude that the sphere of tourist services is diverse, and by providing financial and credit support to it, we are simultaneously developing other branches of economic activity, which indicates the importance of lending to this sphere.

Having researched the practice of enterprises related to travel services, we have identified the following main financing problems that increase the risk of lending, as well as the ability to receive credit support provided by commercial banks:

First of all. Basically, most entities in the field of tourism services have limited funds of their own.

Secondly. One of the factors influencing the financing is the problem associated with the formation of the reputation of the enterprise in the field of tourism services.

Third. One of the problems that comes to light when crediting entities in the field of tourism services is that a certain part of the assets of the enterprise is of a specific nature, which manifests itself in the following:

- the assets of the enterprise are difficult to sell on the secondary market;
- specific assets of tourism services enterprises may not always act as collateral for a loan.

Tourism service companies constitute a special risk group for commercial banks. In turn, the development of enterprises of this nature depends on the relationship with the bank serving them.

Strengthening of own capital and access to bank credit are significant tasks for the heads of business entities in the field of tourism services. And with a lack of equity, as well as a low level of self-financing, tourism services enterprises depend on the bank's policy and fluctuations in interest rates on the loan.

Usually banks are wary of companies providing travel services, considering this market risky. This, in turn, seriously complicates the use of a bank loan on favorable business terms. And the opportunity to get a loan from large banks at market rates does not always meet the interests of entrepreneurs. The high interest rate and bank charges are among the main reasons for the dissatisfaction of tourist enterprises with the services of banks.

Both in the developing spheres of the economy and in the tourism sector, there are now many factors that

hinder the formation of profit (income) and the development of tourism services enterprises. Next, we will consider the factors that hinder the development of tourism services enterprises (Fig. 2)

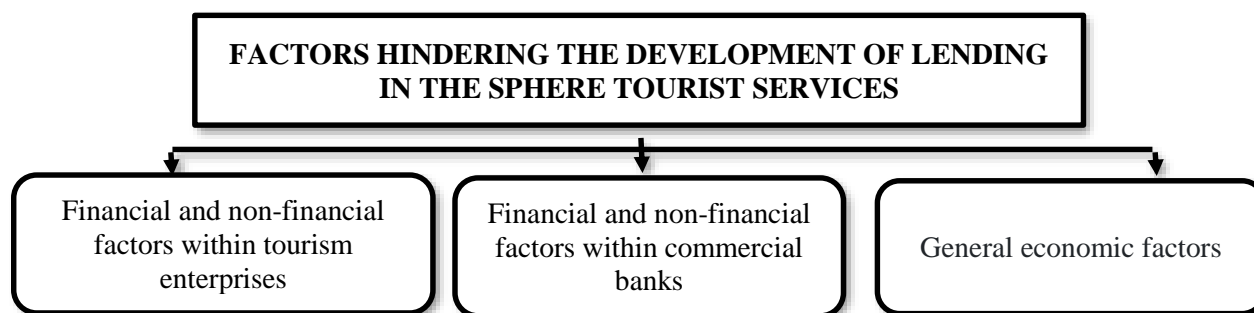


Fig.2. Factors preventing lending<sup>8</sup>

Having considered the factors affecting the financial condition of entrepreneurship in the field of tourism, it is fundamental that:

- the current lending system usually does not include the category of borrowers of "microenterprises" or entities in the field of tourism services, as a borrower of a special form of entrepreneurial activity and forces lenders to use lending programs as part of a commercial loan;
- the degree of risk on a loan from tourism service companies is much higher than that of borrowers of the category of small businesses;
- opacity of full-fledged financial statements;
- when conducting a credit transaction, banks pay special attention to the state of the current account of a tourist enterprise, the higher the balance of funds, the higher the probability of approval of the decision to grant a loan.<sup>9</sup>

The results of the systematization of factors influencing the development of entrepreneurial activity in the field of tourism services have shown that the scientific economic literature does not pay enough attention to the analysis of factors affecting the financial situation of enterprises in the service sector. Below we will consider the factors (external and internal) that have a decisive impact on the financial condition of the enterprise.<sup>10</sup> (Fig.3)

<sup>8</sup> Developed by the author on the basis of the conducted research

<sup>9</sup> Oborin M.S., Nagoeva T.A. Directions of development of crediting of subjects of the tourist market. -M.: Finance and credit. 2017.- pp. 2646-2662

<sup>10</sup> Grishanina A.V., Kharlamova E.E. Study of factors influencing lending to small and medium-sized businesses. Novosibirsk. Economics and business. 2019. -p.117-120

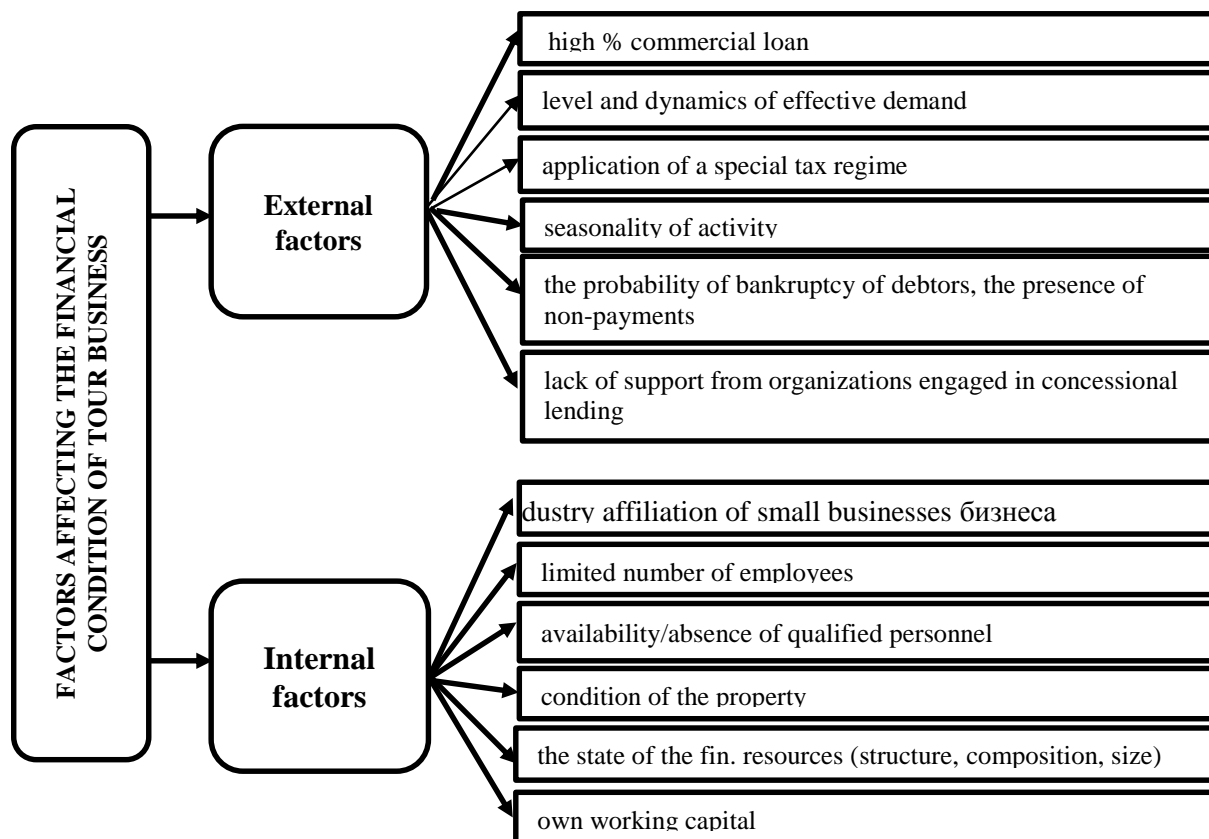


Fig.3. Factors affecting the financial condition of entrepreneurship in the field of tourism<sup>11</sup>

Also, the conducted studies indicate that at present the volume of the lending market has stopped growing due to: the unstable economic situation caused by external factors and high risks; insufficiently developed activities of small businesses, the inability to support them with the necessary number of competent specialists.

These problems can be significantly affected with state support, in particular, when it comes to lending to business entities in the field of tourism services. The state has the opportunity to support a tourist enterprise through numerous targeted programs regarding financial and credit support.

Also, the main factors determining financial and credit support for the development of subjects of the tourism services sector are:

- within the framework of the first, the formation of tourist space; tourist resources; areas of concentration of tourist complex facilities, primarily of national importance; the cost of tourist products; tourism segments; income level of consumers of tourist products (services); market capacity; sales volume of travel packages;
- within the framework of the second, priority factors are: competitiveness of subjects of the sphere of tourist services; evaluation of tourist services (quality, price, marketing, development strategy (offensive, defensive));
- within the framework of the third factor providing the directions of development of subjects of the sphere of tourist services, the following are more significant: export of tourist products, information, advertising of interregional and interterritorial cooperation in the field of tourism, active participation of subjects of the sphere of

<sup>11</sup> Developed by the author on the basis of Grishanin A.V., Kharlamova E.E. The study of factors affecting lending to small and medium-sized businesses. Novosibirsk. Economics and business. 2019. -p.117-120

tourist services in exhibitions and fairs, which is important in the implementation of tourist products (travel services).

12

Taking into account these factors and developing measures to regulate and evaluate them will create a dynamic, competitive sphere, boost the development of tourism in the territory, including: the growth of mandatory payments to budget revenues at all levels, an increase in the number of jobs, stimulating innovative tourism products, significantly expand the opportunities of vulnerable groups for recreation and treatment, strengthen the country's currency potential, to attract foreign investment in specific territories as part of a comprehensive tourism development program. this will allow them to increase their consumer value and, thereby, contributes to the successful implementation in the tourist market.

**Conclusion and suggestion.** Thus, having considered the factors affecting the financial condition of entrepreneurship in the field of tourism, it is fundamental that the subjects of the sphere of tourist services within their activities have a high dependence on the factor of seasonality of demand for tourist services. Therefore, the financial indicators of the subjects of the tourism services sector, when considered as part of a loan application, are assessed by most banks as unsatisfactory (Fig.3).<sup>13</sup> In this regard, banks can no longer objectively determine the creditworthiness of enterprises in the field of tourism services.

Elimination of the identified factors is possible with:

- changes in legislation concerning financial and credit support for entrepreneurship in the tourism sector;
- formation of a favorable climate for the activities of entrepreneurship in the field of tourism services;
- reduction of the tax burden, in particular for business entities whose activities are related to tourism;
- organization of a guarantee system that allows banks to be more proactive in the process of crediting enterprises in the field of tourism services;
- increase in the volume of micro-loans for subjects of the tourism services sector, which will provide an opportunity to support start-up entrepreneurs in the field of tourism services;
- creation of modern technologies for assessing the financial condition of optimizing the credit process and creditworthiness of customers, taking into account the specifics of the activities of tourism entrepreneurship and the best practices of foreign countries.<sup>14</sup>

The creation of a fully functioning activity is often impossible without the active participation and financial support from the state. However, if we consider each element separately, it turns out that its creation can be carried out with the help of a fully developed functioning lending mechanism, as well as private investments of individual investors.

Thus, summing up, it can be concluded that the solution of the problems of crediting entities in the field of tourist services should be considered at all levels. In our opinion, the main role here is played by the state, its desire and ability to influence the development of tourism services by providing financial and credit support, primarily through bank lending.

Having conducted an analysis to identify the main problems faced by most enterprises in the field of tourism services, we consider it appropriate to identify the following factors that have a significant impact on the availability of bank lending:

- 1) sufficiency of a normal source of repayment, meaning that the tourist services company has reason to expect to receive revenue from the sale of products that allows after taxes to cover the principal amount of the debt and interest;
- 2) creating conditions for a business entity in the field of tourism services that contribute to remaining stable

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<sup>12</sup> Zdorov A.B. Tourism economics. Textbook. -M.: Finance and Statistics. 2007 – p.19

<sup>13</sup> Oborin M.S., Nagoeva T.A. Directions of development of crediting of subjects of the tourist market. -M.: Finance and credit. 2017.-pp. 2646-2662

<sup>14</sup> Grishanina A.V., Kharlamova E.E. Study of factors influencing lending to small and medium-sized businesses. Novosibirsk. Economics and business. 2019. -p.117-120.

even under the influence of unfavorable conditions, ensuring payments on obligations of insufficient sources of repayment;

3) the credit history of the business entity, i.e. information that indicates how the borrower paid off his obligations in the past;

4) the possibility of obtaining preferential financing, since the policy of state and regional authorities has a significant impact on the availability of credit;

5) transaction costs incurred by the firm in connection with obtaining a loan. For a large organization, these costs per sum of funds provided are significantly lower than for a small one.

In turn, to ensure the effective operation of entrepreneurship in this area, financial resources are required, the use of which contributes to:

– increase of business entities in the sphere of tourist services – in particular, hotels, guest houses, boarding houses, hostels, catering establishments, transport, cultural institutions, sports, etc.;

– increase in the volume of services provided by tourist enterprises – i.e., accommodation, catering, information and advertising, transport, as well as other types of services aimed at meeting the needs of tourists.

#### **References:**

- Zaitseva N.A. Investment activity in tourism and hotel business in the Russian Federation // Service in Russia and abroad. 2009. No. 4. - pp. 84-90.;
- Krivulya M.A. Mechanism of stimulating investment activity in the field of tourism // Bulletin of the Northeastern State University. 2011. - Vol.: 15. No. 15. - pp. 135-139.;
- Fedorova S.V. Financial relations in tourism // Collection of materials of the V International scientific practice. Conf. "Architecture of Finance: strategy of interaction between the financial and real sectors of the economy". St. Petersburg: St. Petersburg State University of Economics, 2014. - pp. 403-406.;
- Kozybagarov A.A. Foreign experience of investing in tourism // Bulletin of the University of Turan. 2015. No. 4. - pp. 166-169.;
- Dmitriev M.N., Zabaeva M.N., Malygina E.N. Economics of the tourist market: textbook for university students studying in the areas of service and tourism / - 2nd ed., revised and supplemented. – Moscow: UNITY-DANA, 2015. - p. 154
- Oborin M.S., Nagoeva T.A. Directions of development of crediting of subjects of the tourist market. - M.: Finance and credit. 2017.-pp. 2646-2662
- Grishanina A.V., Kharlamova E.E. Study of factors affecting lending to small and medium-sized businesses. Novosibirsk. Economics and business. 2019. -p.117-120
- Zdorov A.B. Tourism economics. Textbook. -M.: Finance and Statistics. 2007 – p.19
- Grishanina A.V., Kharlamova E.E. Study of factors affecting lending to small and medium-sized businesses. Novosibirsk. Economics and business. 2019. - p.117-120.
- Khamraeva S.N. Dynamics of development of the service sector in Uzbekistan. <https://conf.ztu.edu.ua/wp-content/uploads/2018/12/549.pdf>



# WAYS TO IMPROVE THE CURRENT STATE OF CULTIVATION AND PROCESSING OF MEDICINAL PLANTS AND ITS IMPORTANCE

N.R.Khujakulova  
Karshi Engineering-Economics Institute, a PhD student,

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## ABSTRACT:

The system of cultivation and processing of medicinal plants was analyzed, the main factors affecting its effectiveness were classified, and several recommendations of scientific theoretical and practical importance were developed for the development of cultivation and processing of medicinal plants.

**Key words:** medicinal plants, processing, raw materials, economic growth, economic basis, efficiency, mechanism, resources.

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## Introduction

According to the forecast of international experts, today the world's demand for natural medicines has increased by 6-7% per year, and in 2020 the annual turnover exceeded \$ 35 billion. Countries such as China, India, Canada and the United States have a lot of experience and coolness in terms of preserving medicinal and spice plants growing wild, breeding them in a cultural plantation method. In particular, the average annual turnover of Chinese medicinal plants and medicines is \$ 100 billion, the volume of exports is \$1 billion, and imports are \$ 274 million<sup>1</sup>.

Unfortunately, despite the high potential of the industry in our country, the available opportunities are not used sufficiently. In 2019, 19 thousand tons of medicinal plants were grown in our republic. 48 million from medicinal plants. Exported finished, semi-finished or raw materials worth US dollars.

Today, 93 enterprises are preparing medicines from 89 different plants. Domestic manufacturers account for only 7% of the volume of natural medicines in general consumption.

**Analysis of literature on the topic.** 10 centuries ago, Abu Ali Ibn Sina, in his immortal works, explained the secrets of the effective use of medicinal herbs and was recognized by scientists and experts from all over the world. Pharmacists, specialists in folk medicine and scientists of the world are using the rules and regulations of using medicinal herbs in his works to this day.

In economic literature, issues such as agricultural development, placement, specialization and cooperation, mutual relations between farms growing medicinal plants and processing enterprises, and evaluation of efficiency have been studied by economists.

Based on his many years of research in the field of economics, Professor R.Kh. Ergashev makes the following points about economic efficiency in agriculture:

"Economic production - economic efficiency - the results of the joint effect of technological production efficiency and economic mechanisms. It is measured by value indicators - cost, gross income and net profit and others<sup>15</sup>.

Economic efficiency is determined by comparing the obtained results with the used resources or costs.

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<sup>15</sup>Ergashev R.Kh./Agricultural economy/ Textbook. Tashkent-"EXTREMUMPRESS" 2011. -412 pages (27).

Determining the economic efficiency of production based on a comparison with production resources, as with the total costs of live and materialized labor, means that the result of production is predetermined by its costs, as well as the volume of all resources involved in this process.

According to O. Zakirov, an economist devoted to such issues, "Economic growth is the purposeful task of social reproduction expressed in the form of increasing the amount of social products and their production factors and improving their quality. Economic growth in agriculture is defined as an increase in gross output both in absolute terms and per capita. Its main goal in agriculture is to satisfy the population with food products, increase their material well-being, and ensure food safety"<sup>16</sup>.

The well-known economist F. Joraev expresses the following opinions regarding the location and specialization of production in agriculture: "Specialization is defined as the social labor placed in such a way as to produce certain types of products, based on the natural and economic conditions of the enterprises in the regions of the country, taking into account the market demand. It is said to the distribution". Also, "Production placement is the appropriate placement of one or another type of agricultural crops or livestock and the services provided to them, taking into account the natural, economic and ecological factors of the regions of the country for the purpose of production and service of agricultural products"<sup>17</sup>.

Also, in relation to this issue, the current regulatory document - the Regulation states that "Planting of agricultural crops is a set of measures to be implemented on the organization of the placement and cultivation (production) of certain types of agricultural crops on the contours of cultivated land and the section of land users."<sup>18</sup>

**Research method.** As a result of our research, a scientific-methodical proposal and practical recommendations aimed at improving the economic bases of cultivation and processing of medicinal plants in agriculture and ways of their effective use have been developed. Abstract thinking, logical approach, comparative analysis and perspective forecasting methods were widely used during the research.

### **Analysis and results.**

Today, medicinal plants are grown in all regions of our republic, in forestry and agricultural lands. However, the growers of medicinal plants did not always find buyers for their products, and the processors of medicinal plants faced a shortage of raw materials for natural medicines.

Currently, about 100 forest farms are operating within the State Forestry Committee of our republic. There are about 1,200 species of medicinal plants that grow wild on the forest fund lands under the control of forestry enterprises.

It should be noted that cultivation of medicinal plants in forest farms has also been established. Today, more than 60 types of medicinal plants are cultivated. In particular, plantations of the wild-growing kavark plant have been established and maintained on an area of 9,000 hectares.

Preparation of Kavrak glue officially started in 2006. Along with the state forestry enterprises, farms and some private entrepreneurs have been operating in this (Table 1).

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<sup>16</sup>O. Zakirov. "Agricultural Economics" Textbook. Tashkent - "ILMZIYO" 2017, page 262.

<sup>17</sup>F. Joraev Organization of production in agricultural enterprises (textbook). - T.: Istiklol. - 2004. - 320 p. (94 p.).

<sup>18</sup>"REGULATION on the order of rational placement of agricultural crops" approved by the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 505 of August 24, 2020

Table 1

**2021 information on planting and production indicators of Kavrak medicinal and spice plants on agricultural land in the Republic of Uzbekistan in 2021<sup>19</sup>**

№	Regions	Medicine and spice		From this	
				Kavrak	
		га	тн	га	тн
1	Republic of Karakalpakstan	1447	11576		
2	Andijan region	15,8	10,8		
3	Bukhara region	153,6	109,06	32,6	3,26
4	Jizzakh region	3039	1914,2	502	50,2
5	Kashkadarya region	8156	1211,21	7452	745,2
6	Navoi region	41,5	35,25		
7	Namangan region	201	172,5		
8	Samarkand region	161	163,1	14	1,4
9	Surkhandarya region	1385	165,5	1343	134,3
10	Syrdarya region	171	1348,5		
11	Tashkent region	788	364,1065	421	42,1
12	Fergana region	195	242,24	26,4	2,64
13	Khorezm region	53	11,8	40	4
<b>Overall</b>		<b>15 807</b>	<b>17 324</b>	<b>9 831</b>	<b>983</b>

Today, forestry companies have established cooperation with more than 50 enterprises processing raw materials of medicinal plants in our republic. Raw materials of medicinal plants are supplied to them on the basis of a contract. In 2019 alone, 5,000 tons of raw materials of medicinal and food plants were grown in forestry farms. 70 percent of it was delivered to pharmaceutical enterprises that process medicinal plants.

It should be said that in our country there is enough stock of medicinal plants that can replace pharmaceutical drugs. However, not all of the existing 150 pharmaceutical enterprises in our country have started processing raw materials of medicinal plants.

The financial difference between selling cultivated medicinal plants as raw material and processing it and delivering it to the consumer in the form of a finished product can be seen in the example of chamomile.

Today, one kilogram of dried chamomile flowers can be sold to processors for 25,000-35,000 soums. However, in pharmacies, chamomile is packed in small 2-gram packets, and the selling price of ten grains in a cardboard box is 5-6 thousand soums. The price of 1 kilogram of chamomile packed in such packages is 250-300 thousand soums. It can be seen that the difference between the price of a product sold in raw form and a processed, direct-to-consumer product is tenfold.

What is the benefit of recycling to the farmer? When it comes to the benefits of recycling, the question arises

<sup>19</sup>It was developed by the author based on the data of the Statistical Committee of the Republic of Uzbekistan.

as to what interest the farmer or landowner has in this process. Officials of the Navoi department said that farmers and landowners can share up to fifty percent of the profit from the sale of finished products after covering the costs of post-raw materials and processing. Therefore, the producers of quality products are also interested in such a fair cooperation of scientists and farmers and landowners, and they will earn not 25 thousand soums per kilogram of chamomile, but 100 thousand soums.

Now many medicinal plants are used in medicine. There are many wild medicinal plants in our country. A medicine for heart disease is prepared from the rosehip that grows in the forests, and a sedative is obtained from the valerian plant that grows in the forest foothills and wet meadows. In short, each of the medicinal plants growing in nature has its own characteristics. Growing and selling them under special conditions is important as it increases the export potential and provides an additional source of income to the population.

It costs 11 million soums to grow valerian root on 1 hectare of land and 50 million soums. you can earn soums. 45 mln. 63 mln. soum income is earned. 21.1 million from Namatak. 48 mln. a net profit of Rs. Thus, 40 million from ittikanak-chereda. 25.5 million soums from peppermint. 38.3 million soums from floor to floor. 33.2 million soums from licorice. you can see a profit of soum.

In 2018, medicinal plants were grown on 54,600 hectares of land owned by farms and other organizations and enterprises in our republic and were directed to the domestic and foreign markets. It is planned to increase medicinal plant plantations to 103.7 thousand hectares during 2020-2023.

But despite this, unfortunately, today the level of use of natural medicinal plants does not meet the demand. According to the received data, only 2.3% of the 6,400 types of drugs used in our country are natural drugs.

Naturally growing plants also have a limited supply of raw materials, and one of the urgent problems is to protect them, study their bioecological properties, properly use the raw material stock, and develop scientifically based methods of reproduction.

Therefore, in Uzbekistan, it is necessary to supply the needs of the pharmaceutical industry with raw materials of medicinal plants, to enrich the local flora with new introduced plant species, and to develop technologies for their cultivation. In our country, special farms for growing medicinal plants have been established in Bukhara, Kashkadarya, Samarkand, Surkhandarya and Tashkent regions.

We know from scientific research that medicinal properties of medicinal plants are not the same everywhere. The preservation of the medicinal properties of plants directly depends on the composition of the soil and the natural climate. However, due to the lack of scientific research and conditions for the natural reproduction of medicinal plants, 3-4 plants per year are included in the "Red Book". In particular, the reserve of Tajik kavrag is only 105 tons. Stocks of medicinal plants such as licorice, Turkestan ayuga, liverwort, ittikanak, and Samarkand boznochi are about to disappear.

In the following years, the area of some types of medicinal plants in Kashkadarya region increased significantly. We can see this in the example of medicinal plants grown in the private enterprise "BBU-AZAMAT". In 2021, the area of the main types of medicinal plants grown at the private enterprise "BBU-AZAMAT" increased by almost 46 hectares or 8 times compared to 2019, of which the area of marigold flower increased by 16 times and the area of medicinal valerian root by 600%. We can see that the areas of Libestock root and Cauliflower root have also increased during the study (Table 2).

Table 2

**2019-2021 dynamics of cultivation of the main types of medicinal plants at the private enterprise  
"BBU-AZAMAT"**

Crop types	2019.		2020.		2021.		Change in 2021 compared to 2019, in %
		In relation to the total		In relation to the total		In relation to the total	
	area	In %	area	In %	area	In %	
<b>Area, hectares</b>							
Chamomile flower	1	15,4	1	4,3	5	9,6	400
Gulkhairi flower	2	30,8	10	43,5	32	61,5	1500
Medicinal valerian root	1	15,4	5	21,7	7	13,5	600
Lobster root	0.5	7,8	5	21,7	5	9,6	900
Gulkhairi root	2	30,8	2	8,7	2	3,8	0
<b>TOTAL:</b>	<b>6,5</b>	<b>100</b>	<b>23</b>	<b>100</b>	<b>52</b>	<b>100</b>	700
<b>Gross yield, kg</b>							
Chamomile flower	810	10,5	955	2,9	4923	6,6	507,8
Gulkhairi flower	2260	29,2	12160	37,4	48920	65,6	2064,6
Medicinal valerian root	1310	16,9	6842	21,05	8450	11,3	545,04
Lobster root	920	11,9	9871	30,4	9565	12,8	939,7
Gulkhairi root	2430	31,4	2680	8,2	2708	3,6	11,4
<b>TOTAL:</b>	<b>7730</b>	<b>100</b>	<b>32508</b>	<b>100</b>	<b>74566</b>	<b>100</b>	864,6
<b>Productivity, kg/ha</b>							
Chamomile flower	810		955		984,6		21,6
Gulkhairi flower	1130		1216		1528,75		35,3
Medicinal valerian root	1310		1368,4		1207,1		-7,8
Lobster root	1840		1974,2		1913		4
Gulkhairi root	1215		1340		1354		11,4

Over the past years, due to the increase in the area of some types of medicinal plants, the amount of the total yield obtained from them has also increased significantly. For example, in 2021, the gross yield of medicinal plants increased by 66,836 kg or 9.6 times compared to 2019, while the gross yield of chamomile flower increased by 4,113 kg or 6 times, marigold flower by 46,660 kg or 21.6 times, medicinal valerian root by 7,140 per kg or 6.5 times, while the root of libestok increased by 8645 kg or 10.4 times, we can observe that the root of cauliflower

increased by 274 kg or 1.1 times during the study period.

In the private enterprise "BBU-AZAMAT" in 2021, the average yield of chamomile was 984.6 kg/ha, while this figure was 1528.75 kg/ha for marigold flowers, 1207.1 kg/ha for valerian root, 1913 kg/ha for marigold root, and 1913 kg/ha for marigold in the root was 1354 kg/ha (Table 2). In other words, in 2021 compared to 2019, the average productivity of marigold flower increased by 398.75 kg/ha or 35.3%, chamomile flower increased by 174.6kg/ha or 21.6%, and marigold root by 139 kg/ha or 11 increased by 4%. We can see that the yield of Libestock root increased by 73 kg/ha or 4% during the years studied, while that of medicinal valerian root decreased by -102.9kg/ha or -7.8%.

**Conclusions.** However, due to the fact that some problems in the organizational structures of this field are being highlighted today, we are facing difficulties in achieving the intended goals.

Thus, on the basis of our conducted monographic research and studies, the following important issues related to the improvement of the organizational and economic mechanism of mutual relations between the enterprises growing and processing medicinal plants have created the need to find their solutions. Specifically:

- > increasing the cultivation of high-yielding, disease- and pest-resistant species of medicinal plants suitable for different soil and climate conditions;

- > due to the fact that the incentive mechanism for the cultivation of medicinal plants and its further development, the development of seed production is not at a satisfactory level, the work of those who are active in this field is slow;

- > organization and holding of demonstrative, regional scientific-practical educational seminars with the participation of mature scientists and specialists in the field of providing practical assistance and advice to forest, farmer and peasant farms and homestead land owners on the use of modern resource-saving technologies that reduce the cost of medicinal plants that their work is not satisfactory;

- > cultivation of wild-growing medicinal plants, organization of primary seed production, development of scientific recommendations, extensive involvement of seed-scientists and field specialists are being carried out in an unsatisfactory manner;

- > lack of proper cooperation between scientific institutions and scientists of the republic and developed foreign countries in the issue of obtaining and processing high-quality raw materials from medicinal plants;

- > lack of foreign investments in our region and the republic in the issue of development of cultivation and processing of medicinal plants;

- > as a result of not paying attention to the placement of medicinal plants in a scientifically based manner, the specified yield is not obtained. This causes shortages in raw material supply of processing enterprises.

- > lack of technologies to ensure improvement of the quality of products by enterprises growing medicinal plants;

- > it was determined that problems such as the lack of specialized farms, the lack of proper selection of land for planting medicinal plants, the widespread non-use of modern advanced agro-technologies, and the lack of techniques for harvesting medicinal plants in a timely manner have a negative impact on the efficiency of the network.

Thus, now the time has come to optimize the management system and make structural changes in the structures in order to properly organize the work in the network.

It would be appropriate to implement some recommendations aimed at solving such problems in the field. In particular:

**Firstly**, in order to ensure the demand for highly qualified specialists who serve to grow and further develop medicinal plants, to establish a department of "medicinal plants" in higher educational institutions in the field of agriculture and to train specialized "agronomists" in it;

**Secondly**, in order to alleviate the need and dependence on medicinal plants, including raw seed materials,

and to provide farms with domestically grown and localized seed materials, "after a deep analysis of the soil and development conditions of our republic, to establish at least one business entity specializing in non-traditional medicinal plant seed production in each region" establishment of "seed farms specialized in the cultivation of seeds of medicinal plants";

**Thirdly**, for the purpose of mutual integration of science, education and practice and increasing the scope of scientific and research work on the issues related to the cultivation of medicinal plants, the scientific research institute or center of "medicinal plants" and "Selection of agricultural crops, establishment of the "Coordinating Scientific and Technical Council" for the improvement of agrotechnologies of seed production and cultivation;

**Fourthly**, in order to improve the organizational-methodical and personnel support of the management system in the field of cultivation and processing of medicinal plants, the establishment of the "Medicinal Plants Department" and its regional divisions in the regions and districts in the state management system in the field of agriculture;

**Fifth**, to use the experience of foreign scientists and industry specialists to work directly in Uzbekistan in order to apply the advanced international agrosience, education and practical experience in the cultivation of medicinal plants in the regions, etc.

#### Reference list:

- Resolution PQ-4670 dated April 10, 2020 of the President of the Republic of Uzbekistan Sh.
- "Regulation on the order of rational placement of agricultural crops" approved by the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 505 of August 24, 2020
- Sattarov J.S. Bioraznoobrazie i resursy dikorastushchix lekarstvennyx rasteniy v nekotoryx rayonakh Tsentralnogo Tadjikistana- (dissertation "Doctor Nauk") 2020.
- Pochupayalo O.E. Gosudarstvennaya podderzka predprinimatelskoy deyatel'nosti v sferе proizvodstva lekarstvennogo rastitelnogo syrya (na primere Respubliki Krym)-(author abstract)-"Simferopol" 2019 g.
- Ergashev R.Kh. Agricultural economy. Textbook. Tashkent-"EXTREMUM PRESS" 2011. -412 pages (27).
- O.Zokirov. "Agricultural economics" Textbook. Tashkent - "ILMZIYO" 2017. Page 262.
- F. Joraev Organization of production in agricultural enterprises (textbook). - T.: Istiklal. - 2004. - 320 p. (94 p.).

# PROSPECTS FOR INCREASING THE EFFICIENCY OF THE PROVISION OF PUBLIC SERVICES IN HOUSEHOLDS

Yuldosheva Shakhribonu Anvar kizi  
Independent researcher of the "Innovative Economy" department,  
Karshi Engineering-Economics Institute

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## ABSTRACT:

In this article, in the context of the modernization of the country, in particular, the improvement of the territorial structure of the economy, the effective use of the existing natural and economic potential, and, first of all, the raising of the population's standard of living are extremely urgent issues. Reasonable suggestions and recommendations are given for solving problems especially in rural areas. Also, the influence of development of long-term perspectives of the development of services in housing and communal enterprises in rural areas on the development of our country was expressed.

**Keywords:** utility service, prospects, efficiency, provision, services, households, economic rates, communal facilities

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## Introduction

The long-term strategy of the economy of Uzbekistan was developed by the Institute of Forecasting and Macroeconomic Research. The main goal expected from it is to ensure stable and continuous development of the economy in order to raise the standard of living of the country's population. On the basis of this strategy, the main indicators and options for the long-term prospective development of the economy of Uzbekistan were considered in several cases.

We found it necessary to use trend models in assessing the development processes of service delivery networks to the residents of Kashkadarya region in housing and communal enterprises.

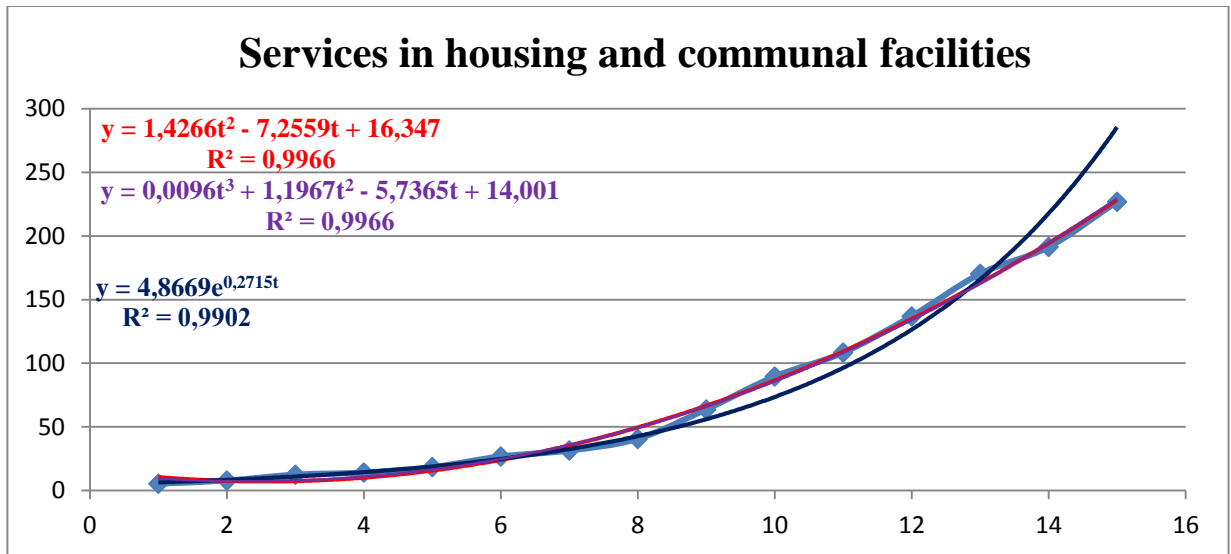
We found it necessary to use trend models in assessing the development processes of service delivery networks to the residents of Kashkadarya region in housing and communal enterprises. We have created n-index and exponential trend models of the development of each service sector in the housing and communal facilities of the region. To do this, we used the least square method to create trend models of the process.

To create a trend model, the following should be done:  $Y_x = a_0 + a_1x + a_2x^2 + \dots + a_kx^k$

$F = \sum(Y - Y_x)^2 \rightarrow \min$  ёки  $F = \sum(Y - a_0 - a_1x - a_2x^2 - \dots - a_kx^k)^2 \rightarrow \min$  If we take a special derivative from it, the following system of equations is formed.

Figure 1 shows the trend models of service-related services for the residents of the region in housing and communal facilities.



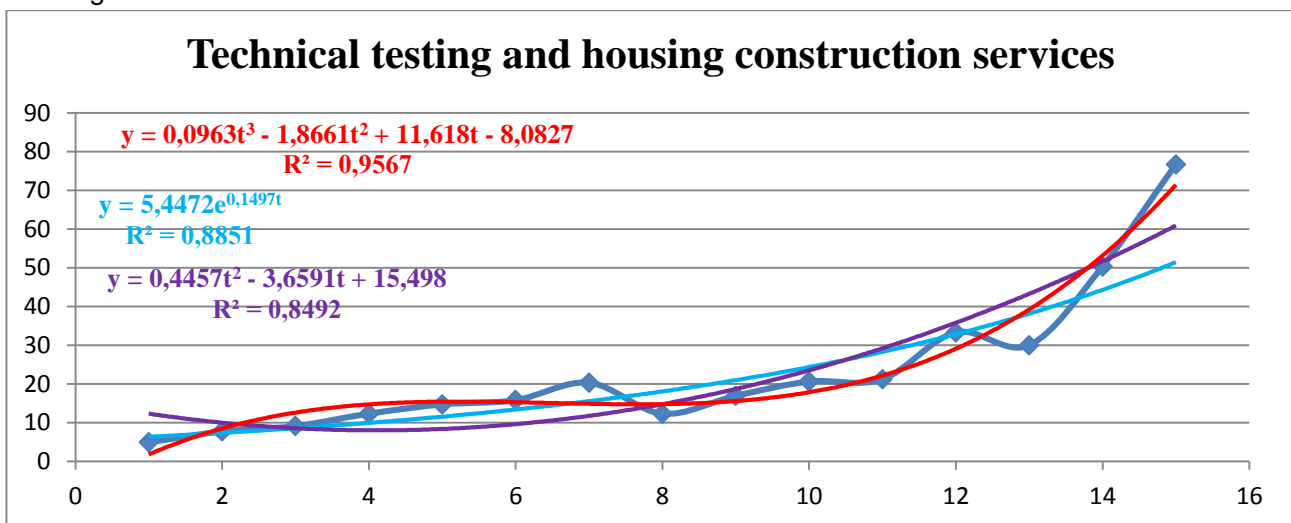


**Figure 1. The trend model of the volume of service provision in housing and communal facilities to residents of Kashkadarya region**

We defined each service network as  $Y$ , we created trend models by relating the observed values to the time factor  $t$ . Based on the statistical data (2004-2018), we created several trend models of each service network and selected the optimal models by evaluating them with evaluation criteria.

As you can see in Figure 1, a number of models were created depending on the trend of service services in housing and communal enterprises, from which we selected a regression equation of the form  $Y=1.4266t^2-7.2559t+16.347$  when  $R^2=0.9966$ ,  $F_{\text{account}}=3237.6$ ,  $t_{\text{account}}=56.89$ . Adequate regression equations were also created in other trend models, but taking into account the increase in the volume of services related to the housing and communal economy, and the ongoing reforms, we chose the quadratic regression equation from the trend models.

Trend models of technical testing and housing construction services to the population of the region are shown in Figure 2.



**Figure 2. The trend model of the volume of technical testing and service provision of housing and communal services to the residents of Kashkadarya region**

As you can see in Figure 2, several models were created based on the trend of technical testing and services related to housing construction, from which we selected the regression equation of  $Y=0,0963t^3-1,8661t^2+11,618t-8,0827$  when  $R^2=0,9565$ ,  $F_{\text{account}}=3202,4$   $t_{\text{account}}=52,73$  ( $\alpha = 0,05$ ,  $t_{\text{жад}}=2,1314$ ,  $F_{\text{жад}}=2,4034$ ). Adequate regression equations were also created in other trend models, but at present, taking into account the increase in the volume of technical testing and services related to housing construction, the ongoing reforms, we selected a third-order regression equation from the trend models.

Based on the created trend models, we calculated that the 5-year development process forecast of service industries can reach the following result (Table 1).

**Table 1**

**Forecast of service provision in housing and communal facilities to residents of Kashkadarya region obtained through trend models (in billion soums)**

Indicators	2019	2020	2021	2022	2023	2024	2025
Services in housing and communal facilities	265,3	305,1	347,8	393,3	441,6	492,9	546,9
Technical testing and services in housing and communal enterprises	93,198	121,7	156,2	197,3	245,72	301,9	366,4

The well-being of the population largely depends on the effective organization and management of service provision in housing and communal facilities. The process of service provision in housing and communal enterprises, in turn, is inextricably linked with the activity of providing and providing services that have specific units of quantity. If this activity is properly managed and optimally planned, the standard of living of the population will be prosperous. This includes the correct assessment of the specific characteristics of regions on the republican scale, what type of business activities to conduct in which region and which district, the efficiency of all types of service sector, the level of supply with production and labor resources, the effective organization of communications and telecommunications, the development of production and foreign and is achieved on the basis of efficient use of domestic investments<sup>20</sup>.

In the research we are conducting, based on the priority tasks, the state of development of service provision to rural residents of Kashkadarya region in housing and communal farms was statistically analyzed. It can be concluded from the results of the analysis that it is necessary to comprehensively study the influencing factors in forecasting the development of services in housing and communal households in the city and other places.

Forecasting the development of service networks for the population of the province based on reforms requires the use of economic-mathematical methods.

The goal of analyzing and forecasting service provision in housing and communal facilities using econometric models is to identify positive and negative factors affecting this process, thereby improving them in accordance with practical requirements. In this case, the accumulated knowledge about the provision of services in housing and communal facilities provides an opportunity to manage this process or object in accordance with the set goals, as well as the feasibility and limitations of the development of the housing and communal services sector are fully taken into account. Probable long-range point projections of outcomes are considered and regionally modeled.

We have selected information related to the reporting years 2000-2018, we have determined the service areas and factors affecting them based on certain characteristics (Table 2).

<sup>20</sup> Makhmudov N. Socio-economic model of rural development and welfare improvement. //Economy and education. 2010, №1. Б. 22.

Factors affecting the development of the service network in housing and communal enterprises are determined in modeling. The impact of influencing factors affects the service network in housing and communal enterprises to different degrees.

**Table 2**

**The service network for residents of Kashkadarya region in housing and communal facilities and the factors affecting them<sup>21</sup>**

<i>Km<sub>x</sub></i> – provision of services related to service enterprises in housing and communal enterprises to the residents of the region. (in billion soums)	Y <sub>1</sub>
<i>TsM<sub>x</sub></i> – providing technical testing and housing construction services to the residents of the region (in billion soums)	Y <sub>2</sub>
<i>A<sub>s</sub></i> – total population of the region (thousand people)	X <sub>1</sub>
<i>I<sub>ba</sub></i> – employed part of the population of the region (thousand people)	X <sub>2</sub>
<i>A<sub>d</sub></i> – total income of the population of the region (in billion soums)	X <sub>3</sub>
<i>U<sub>i</sub></i> – total consumption of the population of the region (in billion soums)	X <sub>4</sub>
<i>SH<sub>i</sub></i> – personal consumption of the population of the region (in billion soums)	X <sub>5</sub>
<i>I<sub>i</sub></i> – social consumption of the population of the region (in billion soums)	X <sub>6</sub>
<i>K<sub>m</sub></i> – capital resources of the population of the region (in billion soums)	X <sub>7</sub>
<i>M<sub>x</sub></i> – providing financial services to the residents of the region (in billion soums)	X <sub>8</sub>
<i>TFO<sub>bx</sub></i> – general expenses related to improving the living conditions of the population of the region (in billion soums)	X <sub>9</sub>
<i>Uyk<sub>xx</sub></i> – costs of providing services to residents of the region in housing and communal facilities (in billion soums)	X <sub>10</sub>

For example, the total income of the population of the region is a factor affecting the service service network in housing and communal enterprises, and the cost of providing service in the regional housing and communal enterprises is a factor affecting the development of the service service network in the housing and communal enterprises of the region.

We created the following functional view on the basis of service delivery networks and factors affecting them in housing and communal households in Table 2 (Table 3).

**Table 3**

**A functional view of the econometric model created for the service sector in housing and communal enterprises of the region<sup>22</sup>**

<b><i>Km<sub>x</sub></i> – services related to the provision of services in housing and communal facilities to the residents of the region</b>	$Km_x = \varphi_1(A_d, K_m, Uyk_{xx}, M_x) + \varepsilon_1$
<b><i>TsM<sub>x</sub></i> – providing technical testing and service in housing and communal facilities to the residents of the region</b>	$TsM_x = \varphi_2(I_{ba}, A_d, TFO_{bx}) + \varepsilon_2$

We used statistical data for the years 2000–2021 to create multifactor empirical models through service networks for the population of Kashkadarya region and factors affecting them (Table 4).

<sup>21</sup> Developed by the author.

<sup>22</sup> Developed by the author.

Table 4

**2004-2021 statistical information on the volume of services provided to residents of Kashkadarya region in housing and communal facilities and factors affecting it**

№	Years	$Km_x$ - volume of services related to housing and communal services to the population of the region $Y_1$	Вилоят аҳолисига уй-жой коммунал хўжаликларида сервис хизмат кўрсатиш хажмига таъсир этувчи омиллар			
			$A_d$ - total income of the population of the region $X_3$	$K_m$ - capital resources of the population of the region $X_7$	$Uyk_{xx}$ - providing services to residents of the region in housing and communal facilities $X_{10}$	$M_x$ - providing financial services to the residents of the region $X_8$
	2004	5.4	541.7	339.3	3.3	16.6
	2005	7.8	653.5	437.3	3.3	19.3
	2006	12.4	850.3	697.9	4.6	26.3
	2007	14.1	1068	830	4.6	37.6
	2008	18.3	1376.6	1630.7	6.1	62.2
	2009	26.7	1803.4	2193	7.3	78.8
	2010	31.4	2380.4	1598	88.3	83.1
	2011	40.6	2692.1	1802.8	97.8	83.3
	2012	63.7	3186	2030.3	98.6	103.4
	2013	89.5	3723.5	2257.6	98.7	207.4
	2014	108.3	4304.4	2484.5	113.8	254.2
	2015	136.9	4928.9	2711.4	140.8	312.9
	2016	170.2	5597.1	2938	165.6	412.8
	2017	191.3	6308.6	3164.5	198.4	566.9
	2018	226.9	7063.8	3390.8	226.9	787.4
	2019	232.3	7073.8	3395.8	232.3	793.4
	2020	236.9	7083.8	3399.8	236.9	797.4
	2021	246.9	7095.8	3398.8	246.9	799.4

Table 5

**Correlation matrix between the factors affecting the service network in housing and communal facilities for residents of Kashkadarya region**

Covariance analysis: $Km_x$ - providing services to residents of the region in housing and communal facilities					
Row: 2004 2021					
Input variables: 18					
Covariance					
	Y1	X3	X7	X10	X8
Y1	5102.509				
Correlation	1.000000				
SSCP	76537.63				
t-Student criteria	-----				

Probability	-----				
X3	88827.99	1599448.			
Correlation	0.983270	1.000000			
SSCP	1332420.	23991720			
t-Student criteria	19.46295	-----			
Probability	0.0000	-----			
X7	60712.48	1132494.	897866.4		
Correlation	0.896975	0.945029	1.000000		
SSCP	910687.2	16987417	13467996		
t-Student criteria	7.315589	10.42047	-----		
Probability	0.0000	0.0000	-----		
X10	5042.888	91678.56	62221.26	5500.237	
Correlation	0.951912	0.977444	0.885406	1.000000	
SSCP	75643.32	1375178.	933318.9	82503.55	
t-Student criteria	11.20262	16.68720	6.867994	-----	
Probability	0.0000	0.0000	0.0000	-----	
X8	15368.86	262228.9	177014.2	14933.13	48908.21
Correlation	0.972879	0.937572	0.844717	0.910478	1.000000
SSCP	230533.0	3933433.	2655212.	223997.0	733623.2
t-Student criteria	15.16458	9.719800	5.690575	7.937872	-----
Probability	0.0000	0.0000	0.0001	0.0000	-----

**Table 6**

**Building an empirical model for the provision of services to residents of Kashkadarya region in housing and communal facilities**

Dependent variable: $Y_1$ $Km_x$ providing services to residents of the region in housing and communal facilities				
Method: least squares method				
Row: 2004-2021				
Input variables: 18				
Variable	Model coefficients	Standard errors	t-Student criteria	P-value
X3	0,043374	0,007248	5,984241	0.0000
X7	-0,020640	0,006587	-3,133338	0.0079
X10	-0,325581	0,119938	-2,714584	0.0177
X8	0,113498	0,018406	6,166350	0.0000
C	-14,13091	4,554479	-3,102641	0.0084
R- coefficient of determination	0.996377	The mean value of the dependent variable		103.3111
Smoothed R-coefficient of determination	0.995263	The standard deviation of the dependent variable		91.59939
Standard error of the regression	6.304624	Akaike's information model		6.750577
Sum of Squares of Residuals	516.7277	Schwartz's information model		6.997902
The value of the maximum similarity function	-55.75519	Hannan-Quinn criterion.		6.784680
F-Fisher's criterion	893.8806	DW- Darbin-Watson criteria		1.751693
Prob(F-Fisher's criterion)	0.000000			

The view of the empirical model built for the provision of services in housing and communal facilities to the residents of Kashkadarya region is as follows:

$$Y_1 = -14,1309 + 0,0434 * X_3 - 0,0206 * X_7 - 0,3256 * X_{10} + 0,1135 * X_8$$

$$t \quad (-3,103) \quad (5,9842) \quad (-3,133) \quad (-2,715) \quad (6,166)$$

Қурилган моделни таҳлил қилиш учун модел параметрларини эластиклик коэффициентларини топиши мақсадга мувофиқ (7-жадвал).

**Table 7**

**The coefficient of elasticity of the empirical model built for the provision of services in housing and communal facilities to the residents of Kashkadarya region**

<i>Km<sub>x</sub></i> - model coefficients of the service sector in housing and communal households of the region			
Row: 2004 2021			
Input variables: 18			
Variable	Model coefficients	Standardized coefficient	Coefficient of elasticity
X3	0.043374	1.172366	1.579793
X7	-0.020640	-0.238687	-0.429537
X10	-0.325581	-0.325473	-0.345646
X8	0.113498	0.381731	0.332169
C	-14.13091	NA	-0.136780

The multi-factor empirical model built for the field of housing and communal services ( $Y_1$ ) for the residents of the region gave the following result: the total income of the residents of the region ( $X_3$ ) of the manager of the services for the residents of the housing and communal facilities ( $Y_1$ ) is 1 bln. if it increases to soums, 0.088 billion. will increase to soums, the capital funds of the region's residents ( $X_7$ ) will be 1 billion. if it increases to soums, 0.028 billion. will decrease to soums, housing expenses for the residents of the region ( $X_{10}$ ) will be 1 bln. if it increases to soums, 0.472 bln. decreases by 1 billion soums, and if the provision of financial services to the population of the region ( $X_8$ ) increases by 1 billion soums, 0.087 billion. will increase to soums.

**Table 8**

**2004-2021 statistical information on the volume of technical testing and service provision in housing and communal facilities to residents of Kashkadarya region and the factors affecting it**

<i>TsM<sub>x</sub></i> - providing technical testing and housing construction services to the residents of the region $Y_2$	<i>I<sub>ba</sub></i> - employed part of the population of the region $X_2$	<i>A<sub>d</sub></i> - total income of the population of the region $X_3$	<i>TFO<sub>bx</sub></i> - general expenses related to improving the living conditions of the population of the region $X_9$
4.9	769.4	541.7	20.3
7.7	821.7	653.5	26.1
9.1	850	850.3	34.5
12.3	877.8	1068	43.9
14.7	908.7	1376.6	79.2
15.8	940.2	1803.4	108.3
20.3	971.6	2380.4	128.1
12.3	1003.7	2692.1	127.3
16.9	1036.6	3186	149.4

20.6	1072.3	3723.5	136.5
21.2	1108.5	4304.4	147.1
33.3	1143.9	4928.9	165.6
30.0	1180.9	5597.1	150.7
50.3	1218	6308.6	165.6
76.7	1262.6	7063.8	239.9

**Table 9**

**Correlation matrix between factors affecting the technical test and the service network in housing and communal households of Kashkadarya region**

Covariance analysis: $TsM_x$ - provision of technical testing and service services in housing and communal enterprises to the residents of the region				
Input variables: 18				
Covariance				
	Y2	X2	X3	X9
Y2	0.472478			
Correlation	1.000000			
SSCP	7.087168			
t-Student criteria	-----			
Probability	-----			
X2	0.094878	0.021350		
Correlation	0.944656	1.000000		
SSCP	1.423172	0.320254		
t-Student criteria	10.38216	-----		
Probability	0.0000	-----		
X3	0.515583	0.118159	0.665278	
Correlation	0.919616	0.991436	1.000000	
SSCP	7.733747	1.772392	9.979175	
t-Student criteria	8.440821	27.37330	-----	
Probability	0.0000	0.0000	-----	
X9	0.441209	0.099271	0.573959	0.540463
Correlation	0.873113	0.924142	0.957185	1.000000
SSCP	6.618133	1.489069	8.609380	8.106940
t-Student criteria	6.457324	8.721514	11.92219	-----
Probability	0.0000	0.0000	0.0000	-----

Table 10

**Construction of an empirical model for technical testing and service provision of housing and communal services to residents of Kashkadarya region**

Dependent variable: $Y_2$ $TsM_x$ -provision of technical testing and service services in housing and communal enterprises to the residents of the region				
Method: least squares method				
Row: 2004 2021				
Input variables: 18				
Variable	Model coefficients	Standard errors	t-Student criteria	P-value
X2	14.95864	3.402974	4.395757	0.0011
X3	-2.573724	0.804573	-3.198868	0.0085
X9	0.802010	0.305123	2.628477	0.0235
C	-84.12462	18.40242	-4.571388	0.0008
R- coefficient of determination	0.884243	The mean value of the dependent variable		2.892511
Smoothed R-coefficient of determination	0.879036	The standard deviation of the dependent variable		0.711496
Standard error of the regression	0.189536	Akaike's information model		-0.265302
Sum of Squares of Residuals	0.395161	Schwartz's information model		-0.076489
The value of the maximum similarity function	5.989765	Hannan-Quinn criterion		-0.267313
Fisher's F test	62.09459	DW-Darbin-Watson criterion		2.427524
Prob (F-fisher test)	0.000000			

The view of the empirical model built for technical testing and service provision of housing and communal services to residents of Kashkadarya region is as follows:

$$Y_2 = e^{-84,125} * X_2^{14,959} * X_3^{-2,574} * X_9^{0,802}$$

$$t \quad (-4,571) \quad (4,396) \quad (-3,199) \quad (2,628)$$

The multi-factor empirical model built for the field of technical testing and service provision in housing and communal enterprises ( $Y_2$ ) to the population of the region gave the following result: the amount of technical testing and service provision of services in housing and communal enterprises to the population of the region ( $Y_2$ ) is the amount of employment of the population of the region if the employment part ( $X_2$ ) increases by 1%, it increases by 14.96%, if the total income of the population of the region ( $X_3$ ) increases by 1%, it decreases by 2.57%, and if the total expenses related to improving the living conditions of the population of the region ( $X_9$ ) increases by 1%, 0, will increase by 8 percent.



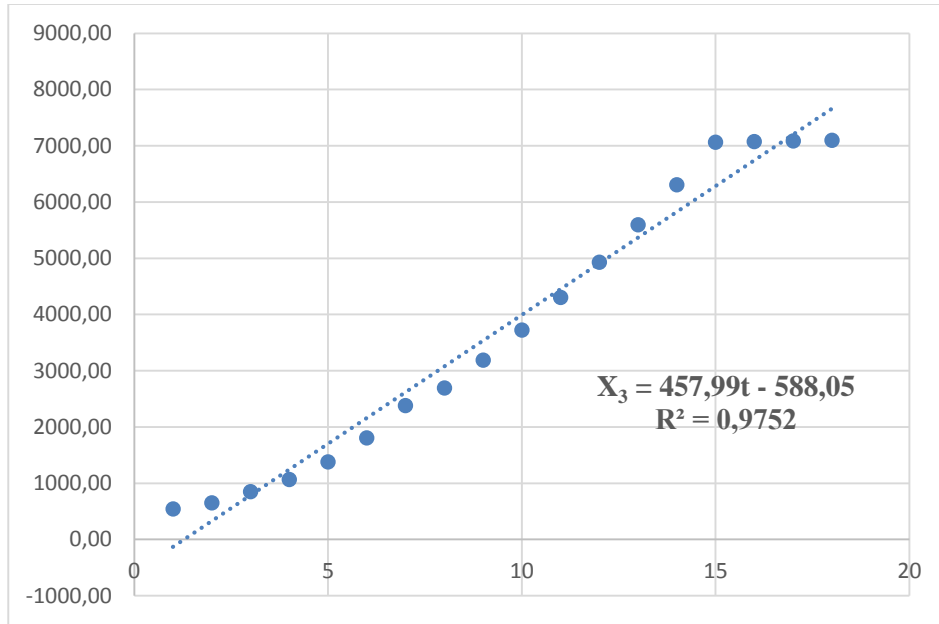


Figure 3. The trend model of the total income of the population of the region<sup>23</sup>

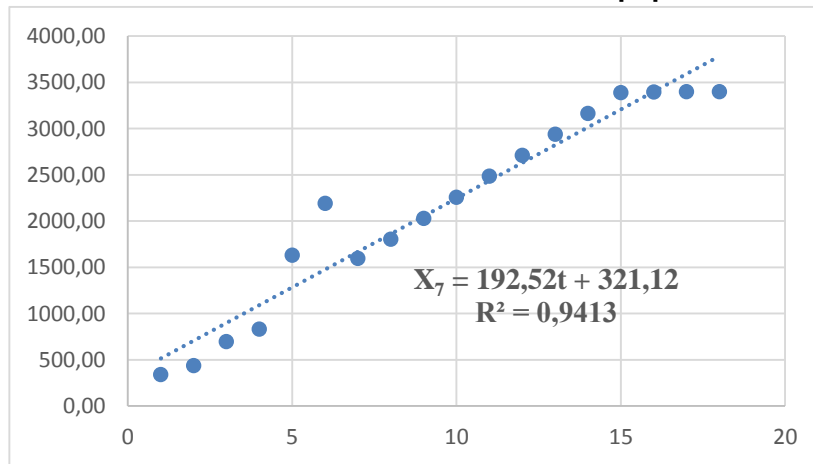
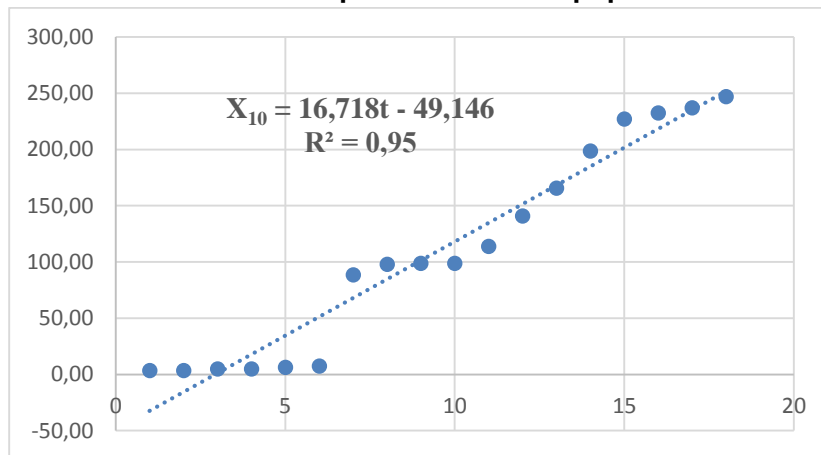
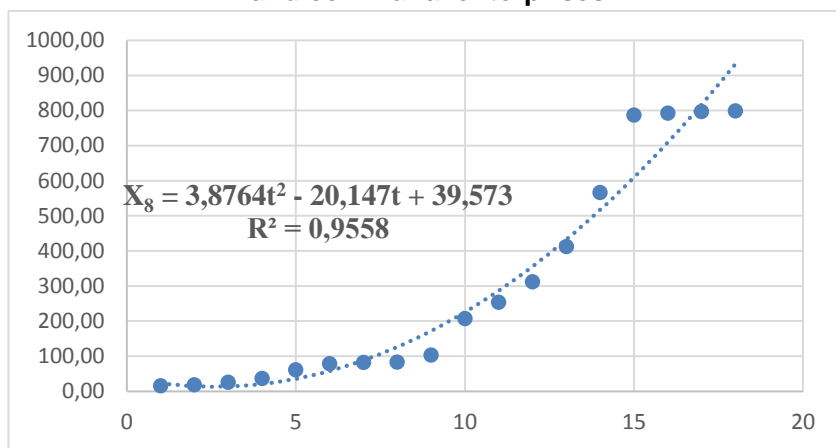


Figure 4. A trend model of capital funds of the population of the region



<sup>23</sup> All trends in the paragraph are compiled by the author

**Figure 5. The trend model of the volume of services provided to residents of the region in housing and communal enterprises**



**Figure 6. Trend model of the volume of providing financial services to the population of the region**

In this regard, a forecast was made using the econometric modeling method to obtain the planning values of the service sectors in the region.

**Table 11**

**Projected values of the volume of services provided to residents of the region in housing and communal facilities<sup>24</sup>**

Years	Indicators				
	Providing services to residents of the region in housing and communal facilities	Total income of the population of the region	Capital resources of the population of the region	Providing services to residents of the region in housing and communal facilities	Providing financial services to the residents of the region
	$Km_x$	$X_3$	$X_7$	$X_{10}$	$X_8$
<b>2021*</b>	<b>246,90</b>	<b>7095,80</b>	<b>3398,80</b>	<b>246,90</b>	<b>799,40</b>
<b>2022</b>	288,49	8113,76	3979,00	268,50	1056,16
<b>2023</b>	313,83	8571,75	4171,52	285,21	1187,19
<b>2024</b>	340,05	9029,74	4364,04	301,93	1325,98
<b>2025</b>	367,15	9487,73	4556,56	318,65	1472,52
<b>2026</b>	395,13	9945,72	4749,08	335,37	1626,81
<b>2027</b>	423,99	10403,71	4941,60	352,09	1788,85

\*-the actual value in the current state

<sup>24</sup> Developed by the author

Table 12

**Forecast of service delivery networks for residents of Kashkadarya region in housing and communal facilities (billion soums/thousand soums)<sup>25</sup>**

Indicators	2021 (real)	Forecast					
		2022	2023	2024	2025	2026	2027
<i>Km<sub>x</sub></i> – providing services to residents of the region in housing and communal facilities <i>Y<sub>6</sub>/per capita</i>	533,06	603,86	679,97	761,53	848,70	977,6	1171,3
	164,13	182,50	201,79	221,98	243,06	275,2	324,1
<i>TsM<sub>x</sub></i> – providing technical testing and service in housing and communal facilities to the residents of the region <i>Y<sub>12</sub>/per capita</i>	77,50	100,95	132,97	176,77	236,76	319,0	431,6
	23,86	30,51	39,46	51,52	67,81	89,8	119,4

When we forecasted through empirical models, we achieved the following efficiency: As we can see in Table 3.3.11, consistent implementation of the priority tasks set by the President's decree "On the strategy of actions in the five priority directions of the development of the Republic of Uzbekistan in 2017-2021", providing services to the residents of Kashkadarya region. The analysis of empirical models built for the future development of industries and the results of forecasts taking into account the reforms being carried out in this field shows the following:

2020, 2020, 1.13-fold increase in housing and communal services to regional residents, 2.20-fold increase by 2025, compared to 2019;

It was determined that the volume of technical testing and service provision (*TsM<sub>x</sub>*) to the residents of the region will increase by 1.30 times in 2020 compared to 2019, and by 5.57 times by 2025.

#### List of used literature

- Decree of the President of the Republic of Uzbekistan dated February 17, 2017 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" No. PF-4947 // Collection of legal documents of the Republic of Uzbekistan, No. 6 of 2017.
- Decree of the President of the Republic of Uzbekistan "On the development strategy of the new Uzbekistan for 2022-2026" No. PF-60.
- Decree of the President of the Republic of Uzbekistan dated April 18, 2017 No. PF-5017 "On measures to further improve the management of the housing and communal services system".
- Makhmudov N. Socio-economic model of rural development and welfare improvement. //Economy and education. 2010, №1. B. 22.
- B.N. Navruz-zoda. "Model of development of communal services to the population in rural areas": "Service" scientific-practical magazine, 2019, issue 3, page 49
- Mukhitdinov H.S. etc. Econometric modeling of the development of public service enterprises. Monograph. -T.: LESSON PRESS, 2020
- Information of the State Statistics Committee of the Republic of Uzbekistan. - Tashkent, 2017-2021.
- David P. The dynamo and the computer: anhistorical perspective on the modern productivity paradox // The American Economic Review. 1990. Vol. 88. № 2. P. 355—361.

- Ф.Котлер. Маркетинг-менеджмент. Экспрес-курс.2-е изд/перевод с англ.Под.ред.Божун С.Г.Спб.:Питер. 2005.с-301.
- Введение в «цифровую» экономику / подбщ. ред. А. В. Кешелава. М.: ВНИИ Геосистем, 2017. 28 с.
- Fox, W.F., Porca, S., 2000. Investing in rural infrastructure. In: Center for the Study of Rural America, Beyond Agriculture: New Policies for Rural America. Federal Reserve Bank of Kansas City, Kansas City, pp. 63–89 (also in International Regional Science Review24 (1), 103-133).
- Yuldosheva SH.A. “The role of services in housing and utilities and their opportunities to increase efficiency” ISSN: 2249-7137 Vol. 11, Issue 2, February 2021, Impact Factor: SJIF 2021 = 7.492
- Yuldosheva SH.A., Fayziyeva SH.SH.“Impact of affordable housing construction and housing and communal services on the welfare of the population by typical projects” Journal of Contemporary Issues in Business and Government. Vol.27,№2, 2021  
<https://cibg.org.au/>  
<http://press-service.uz>  
[www.worldbank.org/eca/russian/data/](http://www.worldbank.org/eca/russian/data/)  
[www.stat.uz](http://www.stat.uz)  
<http://cbu.uz>

# WAYS OF SUSTAINABLE DEVELOPMENT OF GASTRONOMY TOURISM IN UZBEKISTAN

Otabek Ro'zibayev  
Doctoral student (PhD) at Samarkand State University  
named after Sharof Rashidov

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## ABSTRACT:

In the article, the author gave a definition of gastronomic tourism, which is considered an important direction of tourism, and revealed its essence, explaining its content. He studied and analyzed the large-scale reforms carried out in the country in the field of tourism and gastronomy. The author of the article made a number of proposals for the development of gastronomic tourism on the territory of our republic.

**Key words:** Tourism, gastronomy, gastronomic tourism, tourist, local and foreign tourist, tour, region, hotel, mountain tourism, ecotourism, sports tourism, extreme tourism, brand, halal brand, internet marketing, sundress marketing.

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## Introduction

Tourism has emerged as one of the most important service sectors in the global economy in recent decades. The large range of services necessary to manufacture tourism products contributes to its importance: transportation, lodging, information, marketing, financial services, insurance, and so on.<sup>26</sup>

Furthermore, "Gastronomy" is regarded as a vital tourist direction. Gastronomic tourism is an important and attractive area of tourism that draws the attention of international visitors that visit the country. This direction of tourism is believed to be an area that is continually paid attention to and even demands attention in order to enhance the number of visitors visiting the nations. The visitor is undoubtedly interested in the country's food, customs and traditions, and cultural legacy, and attempts to find out as much information about it as possible on the Internet and social networks. Because the tourist attempts to research where he is going, what sort of hotel he is staying at, the comfort and circumstances made for the tourist in the hotel, the hotel's possibilities, and the current opportunities generated in the country's tourism. It is not incorrect to state that cuisine is the most appealing kind of tourism nowadays. Gastronomic tourism is a practical tourism direction for travelers to learn about the national cuisine of the country they are visiting, see and grasp the secrets and technologies of food preparation, and sample food.

Uzbekistan's gastronomy is always appealing to both international and domestic visitors. We have seen tourists from other countries express curiosity in Uzbek national foods in interviews on various television programmes. Turkic cuisine has long impressed international tourists with its proximity to one another and kindness throughout the tasting process. The use of mostly animal items in Turkish cuisine, seasoning with various natural spices, and the usage of local vegetables and greens with a delicate flavor have always piqued the interest of

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<sup>26</sup> M.Sc Janez SIRŠE Project Lead expert, Gastronomic cities: city strategy on gastronomy as a tool for tourism and employment development. Page of 7/ 2014 march.

travelers. Our country has numerous huge kitchens and restaurants that can serve a significant number of guests. And visitors want to try different foods cooked in these restaurants and kitchens, mostly national cuisine, to be amazed by the excellence, and they are willing to pay for it. Always drawing travelers, surprise them, informing their relatives, acquaintances, and collective members that there is a restaurant or kitchen with such a name in this region, that the food is cooked with great taste, and that these meals are delicious. Giving and urging them to go to places where they have eaten is actually the restaurant and kitchen's success. Obtaining such a result is thought to be free advertisement for the restaurant and kitchen. To attain this objective, restaurants must work hard on themselves, attract experienced cooks, and have extensive expertise delivering services to tourist customers. Currently, we know a lot of professional chefs who create films of the foods they produce and post them on their social media accounts and channels, elevating their restaurants and kitchens to brand status and increasing the number of visitors who visit them. Two Turkish chefs, Nusret and Burak, come to mind as examples. They routinely post video vlogs and videos of themselves cooking on their social media channels and sites. We may claim that they were able to present their faces to the globe and make their brand popular as a result of this. They were successful in getting their clients to talk about them on social media. In today's economy, this is known as sundress marketing. This outcome was reached by combining online marketing with sundress marketing. Talented cooks have recently emerged on social media in our nation. For example, we can see how our chefs, such as Saidmukhtorov Saidakrom, who rose to popularity on Instagram as mazza.world and Saidakromchef, are extending their following via their vast expertise and ability. We can confidently state that such chefs contribute to the advancement of Uzbek gastronomy.

It is now important to briefly discuss the directions of gastronomic tourism. Gastronomic tourism encompasses the following activities:

**Rural tours.** It means tasting food from the products of the region.

**Restaurant tours.** Includes visits to the most famous institutions.

**Educational trips.** They are dedicated to teaching culinary arts and master classes.

**Ecological tours.** Get to know "clean" products and their manufacturers.

**Event tours.** They imply participation in culinary events (festivals, exhibitions, fairs) included in the gastronomic tourism project.

**Combined trips.** Combining several different categories<sup>27</sup>.

On September 19, 2022, during a video selector meeting on methods to further boost the potential of domestic and foreign tourism, our country's President, Shavkat Miromonovich Mirziyoyev, emphasized critical challenges connected to the growth of culinary tourism. Considering the many faiths, sects, and approaches of visitors visiting our nation, the President stated that it is difficult to serve what type of cuisine to representatives of which religion or sect, and how to equip hotels and places of worship without scientific methods. Furthermore, the leader of our nation assigned major responsibilities to the Ministry of Tourism, such as boosting flights from Malaysia, Indonesia, Bangladesh, India, and Pakistan to the areas of Tashkent, Samarkand, and Bukhara. Food for visitors who follow various religions and sects is highly significant in the sphere of gourmet tourism, and it is seen to be so vital that it should be given special attention. This suggests that our country is paying special attention to this aspect of tourism<sup>28</sup>.

In September of this year, the Shanghai Cooperation Organization conducted its 22nd summit in Samarkand. Many international visitors and foreign media visited Samarkand, which is rich in ancient and cultural history, in conjunction with this summit and shared their opinions on local television and periodicals. For example, journalist Murtaza Salangi, who came from Pakistan, stated that he is interested in Uzbek national cuisines and that he routinely visits Uzbek cuisine in Islamabad, highlighting the importance of this feature in our country's

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<sup>27</sup> [Гастрономический туризм: оригинальный способ путешествий \(vawilon.ru\)](http://vawilon.ru)

<sup>28</sup> <https://kun.uz/uz/98633124>

tourism. Kozim Hossein, a TV and radio reporter from the Islamic Republic of Iran, claimed the Uzbek people are kind, the national cuisines are tastier than he expected, and he particularly enjoyed pilaf, which is regarded the national dish of Uzbek cuisine. Considering that over 600 foreign media representatives attended the 22nd SCO summit, the preparation of all the dishes created with their religious beliefs also suggests that the concept of gastronomy tourism is increasing steadily in our nation<sup>29</sup>.

The tourist business is undergoing active developments and innovations. The tourist industry's nature and structure are changing. Mass, conventional, and complicated tourism are being replaced by new sorts of demand-driven routes. This procedure is novel<sup>30</sup>.

Our country's gastronomic tourism is growing by the day. Our national cuisine delicacies, created in our areas, have long piqued the interest of both local and foreign tourists. Samarkand's bread and pilaf, Jizzakh's somsa, Kashkadarya and Surkhandarya oases' umakai jiz and tandir meat, Khorezm's egg yolk, Syrdarya's smoked fish, and the valley's pea soup Bukhara has long captured the interest and recognition of international travelers with its goja and G'iduvan kebab. Uzbek cuisine awes visitors from all over the world with its variety of delicacies. Today, the fraternal nations realize that Uzbek national cuisines have a place in the Turkic peoples' cuisine. Turks, Uyghurs, Turkmens, Kyrgyz, Kazakhs, Afghans, and Tajiks also create our national dish pilaf on their land and are quite interested in the technologies used to prepare it. Gastronomic tourism, like other types of tourism, has the potential to grow in Uzbekistan. In this regard, we may benefit from the chances made available to international visitors in Turkish cities such as Antalya, Istanbul, Izmir, Alanya, and Ankara. The abundance of menus for tourists of various religions and faiths in their hotels and their free service during the booked tour days, the combination of gastronomic tourism with special extreme, mountain, eco, sports tourism for tourists (in which you can spend a certain amount of money and buy a tour, if we consider the cost of the tour to be approximately 30-40 US dollars, it includes you, ziplining in the mountainous area, rowing in the water in a group 5 - You may use services such as diving with an instructor and sea transport with a carter for up to 8 metres. These trips (which include hotel pickup and drop-off as well as lunch) are quite affordable for travellers. We also have the option of combining such species. Surkhandarya and Kashkadarya are the primary mountainous areas. Mountain, environmental, and extreme tourism, as well as gourmet tourism, have the potential to flourish in Samarkand, Jizzakh, Namangan, Andijan, Fergana, and Tashkent. For example, they drive up the mountain by vehicle, and on top of the mountain, there are various orchards, travel roads, and chairs for sitting made of various stones. Depending on the preferences of the visitors, they use various glass staircases and zip ropes to get down the mountain, while some go down in automobiles. We are capable of doing all of this. There are additional amenities for extreme tourism in some regions. We can confidently state that making full use of these prospects would boost tourism potential in our nation and increase the number of tourists from outside and adjacent countries. The creation of such sorts will undoubtedly pique the curiosity of local tourists. Cultural heritage sites may also be used to generate gastronomic tourism. House museums, for example, have been established in the homes of numerous poets and writers, performers and poets in our country. There are more or fewer tourists. Regional tourism administrations and tourism firms operating in the areas collaborate to welcome visitors to visit house museums for a fee, and there is the possibility of organizing small concerts in these objects with breakfast, lunch, and supper, enabling travelers to take a cultural rest.

Finally, Uzbekistan offers numerous potential for the growth of tourism and its diverse sectors. It is just essential to take full use of the chances that have been provided. Finding out about the gender, color, religion, sect, age, and most importantly, the specific reasons why visitors are coming to our nation, is crucial for the growth of gastrotourism. It would be appropriate to research their interests, provide them with a variety of tours, and

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<sup>29</sup> <https://kun.uz/uz/08900247>

<sup>30</sup> Гастрономический туризм как популярное направление в туристической индустрии В. Д. Иванов/ Physical Culture. Sport. Tourism. Motor Recreation. 2018. Vol. 3, no. 2/ 105 ст

supplement these planned tours with gourmet ones. It is advised to place a "halal" sign at the door of kitchens, cafés, and restaurants located in the regions because the bulk of visitors to our republic are followers of the Islamic faith. For the hotel's guests, the construction of second kitchens marked "halal" at establishments where visitors stay will be an added convenience. The creation of strong, experienced staff in their domains and the training of personnel in this direction in technical schools and higher educational institutions are two of the most crucial tasks in the development of gourmet tourism in Uzbekistan. The improvement of the workforce in this field will undoubtedly have a favorable impact on society and the economy. Young chefs who are self-teaching the art of cooking must present themselves on social media, identify their country of origin in video vlogs and advertisements, and demonstrate in their video vlogs or films that they properly adhere to sanitation and hygiene regulations while preparing meals. By taking these steps, they can influence the number of international tourists visiting our nation favorably. They mostly work to build their individual brands. An environment of competition is created by the activation of such professionals. Innovative ideas will undoubtedly flourish when there is competition. This field will advance steadily and quickly where there are creative ideas.

### References

- M.Sc Janez SIRŠE Project Lead expert, Gastronomic cities: city strategy on gastronomy as a tool for tourism and employment development. Page of 7/ 2014 march.
- [Гастрономический туризм: оригинальный способ путешествий \(vawilon.ru\)](http://vawilon.ru)
- <https://kun.uz/uz/98633124>
- <https://kun.uz/uz/08900247>
- Гастрономический туризм как популярное направление в туристической индустрии В. Д. Иванов/ Physical Culture. Sport. Tourism. Motor Recreation. 2018. Vol. 3, no. 2/ 105 ст



# IMPROVEMENT OF FINANCIAL REPORTING ON FINISHED PRODUCTS IN THE OIL INDUSTRY OF THE REPUBLIC OF UZBEKISTAN

**Boronov Bobur Farkhodovich**  
Doctoral student of the Samarkand Institute of  
Economics and Service. Uzbekistan,  
e-mail: bobur-boronov@mail.ru

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## ABSTRACT:

Under the conditions of modernization of the economy of the Republic of Uzbekistan, fundamental changes are taking place in the development and modernization of all sectors of the economy. In particular, a lot of attention is being paid to the production of industrial products and food products, which are the main components of this industry. Today, the role of oil products in the composition of these food products is of great importance. At a time when the country's population is increasing day by day, it is important to develop these industries, to expand the production of various quality and competitive products, and to set their accounts in the right way. Also, in front of oil industry enterprises, in order to provide information that meets the needs of internal and external information users, there are urgent issues such as reflecting them in financial reporting formats that meet the requirements of international standards. This research work is aimed at solving these issues, and proposals and scientific recommendations have been developed on the current state of accounting for finished products in oil-oil production enterprises, their reflection in financial reporting formats, and the improvement of these reports based on international standards. These recommendations presented by the author serve to improve the quality of financial reporting formats for finished products in the oil industry enterprises of the Republic of Uzbekistan. It also serves to more fully meet the needs of domestic and foreign investors for information on finished products.

**Key words:** oil industry enterprises, finished products, oil products, financial reporting, balance sheet, financial statement, national accounting standards, international standards of financial reporting.

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## Introduction

Today, in the context of the deepening globalization and integration processes in the world, generally accepted international laws, the transition to international standards of financial reporting, as well as the requirements for compliance with the rules specified in them are increasing. As a result of these processes, the unification of financial reporting, the harmonization of the national standards of the country with the requirements of international standards in order to improve the investment conditions in developing foreign countries, the correct classification and recognition of financial reporting elements, including the composition of assets contained in them, and the improvement of the methodology of reflection in financial reporting formats special attention is paid.

Today, in the national accounting system of all the countries of the world, the procedures of the international standards of financial reporting, integrated formats that reveal the information in it have not been fully implemented. Also, the forms of financial statements prepared and submitted by all economic entities operating in our Republic today, their structure has been unchanged for a long time. In particular, the forms of financial reports submitted by enterprises in quarterly, half-yearly and annual periods and used to this day were developed based on the order of the Minister of Finance of the Republic of Uzbekistan in 2002 and registered by the Ministry of Justice in 2003. It can be seen that there is a need to improve the forms of financial reporting, which have been unchanged for 20 years, in today's age of economic globalization and information technologies.

In addition, today, the fact that the President of our country has been assigned tasks such as using international experiences, compiling and presenting accounts and reports based on international standards, checking accounts and reports in enterprises and using international audit standards in providing services, determines the current tasks for improving today's accounting system.

## **II. Literature analysis**

The scientists of our country carried out scientific work on the issues of improving financial reporting and transforming them based on international standards. Including them R.D.Dusmuratov<sup>31</sup>, S.N.Tashnazarov<sup>32</sup>, A.Z.Avlokulov<sup>33</sup>, B.K.Khamdamov<sup>34</sup>, M.Yu.Rakhimov<sup>35</sup>, S.A.Djumanov<sup>36</sup> the scientific works of such scientists can be cited as an example. In the scientific and educational works published by the mentioned scientists of our country, issues such as the theoretical foundations of financial statements and their transformation into international standards are covered. Although the above results achieved by the scientists of our country regarding the improvement of financial reporting are of great scientific importance, in the face of today's increasingly developing and globalized accounting and reporting, there are a number of problems, such as the creation of new, modern models of financial reporting that meet and match international experiences. It requires conducting scientific research on solving problems and aligning financial reports with international standards.

## **III. Methods.**

Today, as a result of large-scale reforms carried out in our Republic, on February 24, 2020, the President of the country's Decision "On additional measures to transition to international standards of financial reporting"<sup>37</sup> was adopted. Based on this decision, all joint-stock companies operating in our country, as well as all economic entities that are considered large tax payers, including oil industry enterprises, must prepare their financial reports in accordance with the international standard requirements from January 1, 2021 and submit them to relevant organizations and institutions. specified.

The main objectives of the tasks specified in the above regulatory document are:

- \* application of international rules recognized and implemented in the advanced countries of the world and as a result of them, provision of transparent and real information that meets the needs of information users in a timely manner;

- \* as a result of providing information on the content of financial statements prepared by companies and their components, achieving effective management decisions by introducing an operational management system;

- \* in order to create and improve the investment environment in the country, to attract foreign investments, as well as to ensure the entry of enterprises operating in the country to international stock markets and participation in currency exchanges;

- \* wide introduction of foreign economic activity, in this regard, close assistance to product-producing

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<sup>31</sup> Dusmuratov R.D., Tulaev U.I. Financial reporting: theoretical, methodological and practical aspects. -T.: "Extremum-Press", 2012, -144 p.

<sup>32</sup> Tashnazarov S.N. Improving the theoretical and methodological foundations of financial reporting in the context of economic modernization. Doctor of Economics (DSc) Dissertation Abstract. - T.: 2019, p. 73.

<sup>33</sup> Avlokulov A.Z. Improving the methodology of accounting and auditing of financial results. Doctor of Economics (DSc) Dissertation Abstract. - T.: 2019. p. 71.

<sup>34</sup> Hamdamov B.K. Financial reporting. Study guide. - T.: "ECONOMY-FINANCE", 2008. - 172 p.

<sup>35</sup> Rakhimov M.Yu. Analysis of the financial status of economic entities. Study guide. - T.: Economy and finance. 2015. -356 p.

<sup>36</sup> Djumanov S.A. Compilation of financial reporting information based on international standards. Doctor of Philosophy (PhD) Dissertation in Economics. -T.: 2019.

<sup>37</sup> Decision of the President of the Republic of Uzbekistan "On additional measures for the transition to international standards of financial reporting". February 24, 2020. PQ-4611.

enterprises, creation of socio-economic conditions for them;

\* reducing the cost of finished products in enterprises producing industrial products, including food products, producing quality products that meet the demands of their world markets and international standards, etc.

Today, all joint-stock companies in our country, including large watchmaking enterprises producing oil products, are required to prepare financial reports based on international standards, but these results cannot be said to have been fully achieved yet. The reporting formats provided by them are still being compiled according to our national standards. This is an incentive to meet the needs of foreign investors for information on financial and management strategies. Because, today, our national accounting standards, which are used by our enterprises to prepare financial statements, do not fully meet the requirements of international standards. In particular, BHMS No. 4 "Inventories", BHMS No. 2 "Income from Basic Economic Activities" and other national standards BHXS No. 2 (IAS) "Reserves", No. 15 (IFRS) " There is a need to adapt the "receipts under contracts with buyers" to the requirements of international standards, which requires conducting scientific research to eliminate these problems.

The results of the conducted research required a comparison of the financial reporting forms presented in our national accounting standards with the formats presented in the international standards of financial reporting (Table 1):

**Table 1**

**Comparison of financial reporting formats specified in regulatory documents<sup>38</sup>**

According to IFRS	Law "About accounting" <sup>39</sup>	NSA No. 1 "Accounting policy and financial reporting" <sup>40</sup>	
		Forms	Standarts
Statement of financial position	Balance Sheet	Form 1	12.1. Balance Sheet
Statement of profit or loss and other comprehensive income	Statement of Financial Results	Form 2	12.2. Statement of Financial Results
Statement of Cash Flows	Statement of Cash Flows	Form 4	12.4. Statement of Cash Flows
Statement of changes in equity	Statement of changes in equity	Form 5	12.5. Statement of changes in equity
Notes, Summary of Accounting Policies and Other Explanations (Notes, comprising a summary of important accounting policies and other explanatory information)	Notes, calculations and explanations		12.6. Notes, calculations and explanations
Financial statement at the beginning of the period; Statement of Profit and Loss for the past period and other comprehensive income			
Statement of financial position for the previous reporting period (if the entity makes retrospective adjustments to the accounting policies of the first application of IFRSs or reclassifies financial statements)			

<sup>38</sup> Author development based on research.

<sup>39</sup> Law of the Republic of Uzbekistan "On Accounting". April 13, 2016, No. O'RQ-404. <https://lex.uz/acts/2931253>

<sup>40</sup> No. 1 BHMS "Accounting policy and financial reporting" // by AV on 14.08.1998. Registered with number 474. <https://lex.uz/acts/828581>

Based on the information in this table, when comparing the international standards of financial reporting, the Law "On Accounting" and national accounting standards, it can be seen that there are differences between them, and the following conclusions can be made:

**First**, the national accounting standard No. 1 "Accounting policy and financial reporting" includes the components of financial reporting, as well as their forms. However, according to the rules of the standard, classification by "forms" is considered inappropriate, and we believe that this term should not be used in the standards, like the international standards of financial reporting. In international experience, not forms, but reporting formats, are called.

**Secondly**, although our national standard includes "Remarks, calculations and explanations" in the financial report, it does not provide for the disclosure of information on the accounting policy of enterprises, the selected evaluation methods, unlike international standards. However, the accounting policy is one of the main documents for the accounting of enterprises.

**Thirdly**, financial reports according to international standards present information from the current period as well as information from previous reporting periods or at the beginning of the reporting period. Our current national standards do not include these aspects of financial reporting.

According to international standards, the following information on finished products should be covered in the financial reporting formats (Table 2):

**Table 2**

**Information displayed on finished products in financial reporting formats<sup>41</sup>**

<b>Financial reporting formats</b>	<b>Information on finished products</b>
Statement of financial position	Information on finished products, including their types, at the beginning and end of the reporting period
Statement of profit or loss and other comprehensive income	Information on net income from the sale of finished goods and their cost in the current and previous reporting periods
Statement of Cash Flows	Information on the funds received in the accounts of the enterprise as a result of the sale of finished products during the reporting period
Statement of changes in equity	Information on the profit of the enterprise, which occurred during the reporting period, on the main activity, including the sale of finished products
Notes, comprising a summary of significant accounting policies and other explanatory information	Accounting for finished products, methods of evaluation, methods of calculating the cost of finished products, including the methods of transferring general production costs to the cost of products, and other information

The information on finished products listed above in terms of financial reporting formats should be provided by all economic entities in the form of joint-stock companies, including oil-oil industry enterprises.

One of the main tasks defined in our research work is to study the actual situation of reflecting product information in the financial reporting forms of the oil and oil industry enterprises that are the object of this research, to ensure that they are reflected taking into account the level of meeting the needs of the information users and in accordance with the rules set by international standards. analysis. Based on these tasks, it was necessary to carry out research on the financial reporting forms and the processes of presenting information about products, which are currently being presented by the oil industry enterprises.

<sup>41</sup> Author development based on research.

#### IV. Results

In the conceptual framework for the preparation and presentation of financial statements, the elements of accounting for the disclosure of the financial position of economic entities are presented, which include elements such as assets, liabilities, equity, reserves, income and expenses<sup>42</sup>. Accordingly, today, in the current accounting balance, the balance of finished products is reflected in the asset part of the report, in the composition of current assets. In oil industry enterprises, the share of these assets is significant compared to other assets. The share of finished products in relation to other assets can be seen in the table below (Table 3):

**Table 3**  
**Analysis of the composition of assets in the balance sheet of oil industry enterprises<sup>43</sup>**  
(As of January 1, 2022)

Types of assets	“Asaka Yog” joint stock company		“Kattakurgan Yog’ moy” joint stock company		“Turon-Xo’jeli” joint stock company	
	A thousand soums	in %	A thousand soums	in %	A thousand soums	in %
<b>Total assets, of which:</b>	<b>49133360</b>	<b>100</b>	<b>39339612</b>	<b>100</b>	<b>23247474</b>	<b>100</b>
<b>1. Long-term assets</b>	<b>14170963</b>	<b>29</b>	<b>28198017</b>	<b>72</b>	<b>8363098</b>	<b>36</b>
<b>2. Current assets include:</b>	<b>34962397</b>	<b>71</b>	<b>11141595</b>	<b>28</b>	<b>14884376</b>	<b>64</b>
2.1. Inventories, including:	20709898	42	8054507	21	12018613	52
2.1.1. Production stocks	7908816	16	7926579	20	3385986	15
2.1.2. Work in progress	342483	1	-	-	-	-
2.1.3. Finished product	12458599	25	127928	1	8632627	37
2.1.4. Goods	-	-	-	-	-	-
2.2. Debt from buyers and customers	159965	1	171343	1	1074165	5
2.3. Funds	1316	0	333271	1	548517	2

During the research, the following conclusions were drawn from this table, which was developed on the basis of the data of the financial reports of the oil industry enterprises:

**First** of all, the balance currency of oil-oil industry enterprises operating in different regions of the Republic is different, and the composition of assets also makes a different contribution to it.

**Secondly**, in the enterprises of these industries, finished products make a significant contribution to the structure of enterprise assets, including current assets.

Now, let's consider the processes of reflecting these assets in the current financial reporting forms. As we noted above, these assets are reflected in the balance sheet, in the section of current assets, in the "Inventory" section, on line 170. Based on the requirements of national accounting standards, we will consider the reflection of these assets in the balance sheet of the oil industry enterprises using the following table data (Table 4):

<sup>42</sup> Conceptual framework for preparation and presentation of financial statements. It was registered by the Ministry of Justice of the Republic of Uzbekistan on August 14, 1998. No. 475.

<sup>43</sup> Author development based on research.

Table 4

Reflecting items related to finished products in the balance sheet of "East Oil" LLC<sup>44</sup>

(As of January 1, 2022, in thousand soums)

BHMS No. 1 "Accounting policy and financial reporting"	In the current form of the accounting balance sheet	String code	Amount
77.4. Reserves	<b>II. Current assets</b>		
	Inventories, total (code 150+160+170+180)	140	9 908 209
	Production stocks (1000, 1100, 1500, 1600)	150	6 029 508
	Work in progress (2000, 2100, 2300,2700)	160	-
	Finished product (2800)	170	3 878 701
	Goods (difference of 2900 from 2980)	180	-

The following conclusions can be drawn based on the data in the above table:

**First** of all, inventories are included in the national standard of accounting No. 1 "Accounting policy and financial reporting", "77.4. "Reserves" are mandatory elements.

**Secondly**, finished products in enterprises are included in the inventory and are reflected in the first part of the balance sheet, that is, in the second part of assets, that is, in the structure of current assets.

**Thirdly**, although the current accounting balance includes finished products as part of inventories, there is no possibility to provide information on the composition of this asset, in particular, by product types and in a structured and grouped manner. This does not give the opportunity to fully satisfy the needs of information users, and causes a decrease in the level of profitability of financial reporting forms in terms of providing information. Also, these shortcomings of financial reporting forms make it difficult to make effective decisions in the management system. Therefore, in order to prevent these shortcomings, we consider it appropriate to reflect the finished products in the balance sheet of the oil industry enterprises according to their types, that is, the main, ancillary and auxiliary products, and we recommend to reflect these assets in the form of this report in the following form (Table 5):

Table 5

Proposals for reflecting finished products in the balance sheet of "East Oil" LLC<sup>45</sup>

(As of January 1, 2022, in thousand soums)

In the current form of the accounting balance sheet			Recommendations		
Indicator name	String code	Amount	Indicator name	String code	Amount
Finished product (2800)	170	3 878 701	Finished product (2800), including:	170	3 878 701
			Main product (2810)	171	2 135 687
			Companion product (2820)	172	1 741 756
			Auxiliary product (2830)	173	1 258

Our suggestions for reflecting information on finished products in the balance sheet of oil industry enterprises have several features:

<sup>44</sup> Source: compiled by the author based on the data of the company's financial report.

<sup>45</sup> Source: compiled by the author based on the data of the company's financial report.

**First**, the display of oil and fat products produced in enterprises by their types will more fully satisfy the needs of information users for information on oil and fat products.

**Secondly**, the presentation of oil products in the accounting balance according to the types recommended by us helps to make management decisions.

During the research, it was necessary to review the accounting balance sheet of receivables arising from the sale of products in the oil industry enterprises (Table 6):

**Table 6**

**Reflection of receivables arising from the sale of finished products in the balance sheet of "East Oil" LLC<sup>46</sup>**

(As of January 1, 2022, in thousand soums)

BHMS No. 1 "Accounting policy and financial reporting"	In the current form of the accounting balance sheet	String code	Amount
77.5. Reserves	<b>II. Current assets</b>		
	<b>Accounts receivable, total (code 220+240+250+260+270+280+290+300+310)</b>	<b>210</b>	<b>14 879 795</b>
	From: Expired	211	
	Accounts Payable (difference between 4000 and 4900)	220	507 056

The following conclusions were drawn from the table data on the accounting balance sheet of receivables arising from the sale of these finished products:

**First**, according to the national standards of receivables accounting, mandatory elements of the information that must be reflected in the balance sheet "77.5. It belongs to the group of receivables.

**Secondly**, receivables arising from the sale of finished goods by enterprises are reflected in the balance sheet as general receivables arising from all operations of the enterprise, i.e. "Debt of customers and customers". For example, receivables incurred by the enterprise as a result of its operational, investment, financial and other activities with customers are reflected in one of the balance sheets, i.e. "line 220". This does not fully satisfy the needs of information users and reduces the transparency of financial statements.

Therefore, in the course of the study, proposals were developed for reflecting receivables arising from the sale of finished products in financial reporting forms (Table 7):

**Table 7**

**Suggestions for reflecting receivables arising from the sale of finished products in the balance sheet of "East Oil" LLC<sup>47</sup>**

(As of January 1, 2022, in thousand soums)

In the current form of the accounting balance sheet			Recommendations		
Indicator name	String code	Amount	Indicator name	String code	Amount
Debt from buyers and customers	220	507 056	<b>Debt from buyers and customers, including:</b>	<b>220</b>	<b>507 056</b>
			Debts from customers for the main products	221	335 020

<sup>46</sup> Source: compiled by the author based on the data of the company's financial report.

<sup>47</sup> Source: compiled by the author based on the data of the company's financial report.

			Debts from customers on related products	222	159536
			Debts from customers for ancillary products	223	12500
			Debts from customers for other transactions	224	-

Our recommendations for reflecting the receivables arising from the sale of finished products recommended above in the accounting balance of the oil industry enterprises provide the following opportunities:

**First**, in the current balance sheet, receivables arising from the sale of all types of assets to customers, including fixed assets, intangible assets, finished products, semi-finished products, goods, raw materials and other assets, are reflected in one line. This leads to the generalization of the results of operational, investment and other activities and to the reduction of the usefulness of reports in terms of providing information. Therefore, in our research work, in order to eliminate these problems, we divided them into separate groups. Since the main activities of oil-oil products manufacturing enterprises are focused on the sale of manufactured finished products, we reflected them according to the types of finished products, and we recommended to reflect receivables arising as a result of other activities, separately, on "line 224".

**Secondly**, receivables for the sale of oil products were reflected in "line 221", "line 222" and "line 223" in the section of each type of finished products. We believe that this recommendation will serve to more fully meet the needs of external and internal information users for information on receivables.

**Third**, information users compare the state of the company's financial assets on a certain date with the state of previous periods. In addition, information users have the opportunity to compare the information of the company they are interested in with the information of other companies on the same line, regardless of what kind of activity they are engaged in. Ensuring the comparability of information is the basis for making correct decisions by information users. The presentation of receivables in the accounting balance, divided into the groups recommended by us, is considered important not only for the activities of the oil industry enterprises, but also for all types of enterprises operating in our country, and it helps financial and management staff to make clear decisions. Also, we believe that the implementation of a uniform balance sheet form for all economic entities of the Republic and the procedure for calculating accounts receivable indicators in this report, including "Customer and customer debt" in a uniform manner, will ensure comparability of information.

Based on the results of the conducted research, it can be concluded that in the conditions of today's economic globalization, we believe that it is necessary to revise and improve the structural structure of the accounting balance. Because, as we noted above, the structure of the accounting balance sheet used in practice has been almost unchanged for twenty years. This reduces the investment attractiveness of this type of report. Therefore, we think that it is necessary to reflect the results of the changes occurring in the activities of economic entities today, due to the reduction or consolidation of some items of the accounting balance. In particular, today, taking into account the changes taking place as a result of the improvement of the activities of oil-oil industry enterprises, it is desirable to cover the information on finished products more widely in financial reports.

In our opinion, we believe that the classification of items related to finished products in the accounting balance sheet of the oil industry enterprises, as recommended by us, and the introduction of this procedure in the national and international accounting practice, will further increase the possibility of providing financial reporting with information.

## V. Discussion and conclusions

The following scientific conclusions and suggestions were developed based on the results of the research conducted on the improvement of financial reports on finished products in the oil industry enterprises:

1. Financial reporting formats presented in international and national literature were studied and compared. A description of the information displayed on finished products in financial reporting formats was given.



2. During the research, the part of assets in the accounting balance of the oil industry enterprises was analyzed. As a result of the research, it became clear that in the enterprises engaged in the production of oil products, finished products occupy a significant place in the composition of inventory.

3. The balance sheet report prepared and submitted by the oil industry enterprises was studied and recommendations were made on the substances related to finished products. In our opinion, based on the specific characteristics of the oil industry enterprises, we believe that reflecting finished products by their types, as well as receivables arising from the sale of products, in the forms of financial reports by types of finished products, serves to more fully satisfy the needs of information users.

Based on the results of the research, it can be concluded that, taking into account the production characteristics of oil-oil products, the suggestions and recommendations developed by us on their reflection in financial reporting forms serve to a certain extent transparent reflection of oil-oil products in accounting and financial reporting forms in enterprises.

### References

- Law of the Republic of Uzbekistan "On Accounting". April 13, 2016, No. O'RQ-404.
- Decision of the President of the Republic of Uzbekistan "On additional measures for the transition to international standards of financial reporting". February 24, 2020. PQ-4611.
- Order of the Minister of Finance of the Republic of Uzbekistan "On amendments and additions to the order of the Minister of Finance of the Republic of Uzbekistan dated December 27, 2002 No. 140 "On approval of financial reporting forms and rules for filling them". by AV on 12.11.2003. Registered with number 1209-1.
- Conceptual framework for preparation and presentation of financial statements. It was registered by the Ministry of Justice of the Republic of Uzbekistan on August 14, 1998. No. 475.
- No. 1 BHMS "Accounting policy and financial reporting" // by AV on 14.08.1998. Registered with number 474.
- Avlokulov A.Z. Improving the methodology of accounting and auditing of financial results. Doctor of Economics (DSc) Dissertation Abstract. - T.: 2019. p. 71.
- Djumanov S.A. Compilation of financial reporting information based on international standards. Doctor of Philosophy (PhD) Dissertation in Economics. -T.: 2019.
- Dusmurov R.D., Tulaev U.I. Financial reporting: theoretical, methodological and practical aspects.-T.: "Extremum-Press", 2012, -144 p.
- Rakhimov M.Yu. Analysis of the financial status of economic entities. Study guide. - T.: Economy and finance. 2015. -356 p.
- Tashnazarov S.N. Improving the theoretical and methodological foundations of financial reporting in the context of economic modernization. Doctor of Economics (DSc) Dissertation Abstract. - T.: 2019, p. 73.
- Hamdamov B.K. Financial reporting. Study guide. - T.: "ECONOMY-FINANCE", 2008. - 172 p.

# SMALL BUSINESS AND ENTREPRENEURSHIP ACTIVITIES IN DEVELOPMENT INTERNAL TO RESOURCES BASED ON TERRITORIAL INFRASTRUCTURE IMPROVEMENT

Norkuziyev Anvar Rustamovich  
Independent researcher of Jizzakh Polytechnic Institute  
e-mail: [anvar.narkuziyev@bk.ru](mailto:anvar.narkuziyev@bk.ru)

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## ABSTRACT:

Obviously, the state has a significant influence on the infrastructure supporting small and medium-sized businesses, and the state serves as the basis of this influence. Proposed laws, programs, and ordinances are currently being developed to coordinate and govern how the components of infrastructure development agencies operate. However, infrastructure development projects in the regions are managed by legislative bodies, and executive bodies are directly or indirectly involved in the implementation of state policy in the field of SME development, which has the right to consider them as infrastructure institutions.

**Keywords** economic development, SME, infrastructure, resource potential, region, soft infrastructure, hard infrastructure

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## Introduction

Achieving economic development in the regions is closely related to the development of small business and entrepreneurship and the formation of conditions and infrastructure that meet the requirements of the times and continuous improvement. Today, one of the main directions of socio-economic development in our country is the development of small business and entrepreneurship in the regions and the creation of appropriate infrastructure.

Infrastructure is one of the factors that ensure entrepreneurship, thereby the state economy and the well-being of society. Therefore, important measures have been taken in recent years in our country to develop small business and entrepreneurship in the regions and to create the necessary infrastructure for it.

This formulation of the question requires solving a number of methodological and methodological problems, in particular, defining the main concepts for this study. In economic research, the most common category for describing the resource endowment of an area is the category of "resource potential". At present, different approaches are proposed in the interpretation of the concept of "resource potential of the region".

The existence of the structural nature of the economic unit "region" allows defining it as a system consisting of many elements that are related and connected to each other, forming a certain unity under the influence of a basic factor. The development of the territory, ensuring its integrity, forming a network structure, interaction with the external environment is also related to the existence of the system-forming factor, which, in our opinion, is the main infrastructure that activates all other areas. provides an opportunity to create infrastructures and sustainable economic and, therefore, social development.

## Literature review

Entrepreneurship infrastructure concept to understand primarily for infrastructure \_ sure tariff analyze important The term " infrastructure " is from the 20th century the first from half starting from military of technique specialized devices description for used ( Lemer , 1992, Tan and etc. 2000). USA like industry developed the term "infrastructure" in countries the first times international in the press in the 1980s appeared. Since then since the

government in hand has been all assets industry in the sector infrastructure that is called. In general, when people this word when they heard hard<sup>48</sup> infrastructure about to think preferred they see , for example, roads, iron roads, electricity stations, telecommunications, wide striped communications, tunnels, industry parks and others. Tan and others (2000), infrastructures known one of the region features cover receiver separately location as determines. From this except infrastructure economic of growth basis it is corporate the landscape change and in the end access obstacles decrease can, indeed, many scholars have defined business infrastructure as the material requirements for the functioning of a business or society. Infrastructure components undoubtedly make people's daily tasks easier. In a broader sense, infrastructure means, in particular, the main elements or components that support the full range of business activities and help open business prospects in a completely different area (Flora C.B. and Frola J.L., 1993; Macke and Markley, 2006; Audretsch, Heger, & Veit, 2014).

Infrastructures usually consist of buildings that are managed and constructed by a local government or administration, so they fall under the category of public assets. Infrastructure plays a crucial role in the economic prosperity of a country. Both physical and non-physical infrastructure are considered in the idea of entrepreneurial infrastructure (Brenes and Haar, 2012; Macke and Markley, 2006).

Tan et al.'s (2000) definition of entrepreneurial infrastructure is adopted to avoid confusion regarding the term entrepreneurial infrastructure in relation to entrepreneurs. The concept of business infrastructure includes all the facilities and services available in any specific geographic jurisdiction to encourage the development of new enterprises as well as the expansion of existing or small and medium-sized enterprises. In other words, the general idea of industrial infrastructure elements is divided into a category called "entrepreneur".

Business infrastructure main disadvantage is that it is the same definition have not \_ However , his parts or categories between very less similarity there is With that together , his parts or groups between to each other similarity less \_ Brenes and Haar (2012) their innovative in the analyses hard from the infrastructure out coming out five basic soft infrastructure existence , including to business help show services , family of business harmony , state offices by financial support \_ help and information services use opportunity existence shows . According to Samli (2011) , entrepreneurship of infrastructure There are six types : intellectual (education or human capital), physical ( roads , railway roads , airports , cars ways and others), high technological ( telecommunications , internet), and main infrastructure ( water , energy supply giver or electricity energy ). In fact, He and Nee (2004) entrepreneurship for of infrastructure four element offer does: services and technical support, financial help , information and expertise.

Macro level of the area infrastructures separated following groups:

- digging receiver industry infrastructures : oil , gas, mining , coal , rare soil , construction raw materials , wood preparation ;
- energy infrastructures : hydropower (hydroelectric power plant), nuclear power plant (NPP), heat energy (IES) , gas station (GES) , mobile energy, alternative energy;
- work release infrastructures : mechanical engineering, wood again work, chemistry, industry and medicine, petrochemical, metallurgy, construction, automobile industry, shipbuilding, aircraft industry, agro- industry, agriculture farm;
- social infrastructure: medicine institutions, general education, sports, social, cultural, housing and communal services, local authority, tourism and tourism, judiciary;
- communication infrastructure: mail, mobile communication, radiotelephone, general information ( public information means, internet, radio, television);
- innovative infrastructures: academic (RAS), scientific research ( research institutes ) , higher profession education ( universities ) , secondary profession education, higher education ( colleges ) , consulting, technology park, engineering ;

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<sup>48</sup> Many foreign scientists have interpreted infrastructure into soft and hard types.

- financial infrastructures: budget ( treasury, pension, tax ), banking, insurance, shares (enterprises, mutual funds, private pension funds ), stock exchange finance, customs;
- the market infrastructures : retail trade, wholesale trade, commodity exchange, general eating;
- transport infrastructure: automobile, railway road, highway pipe, sea, river (internal water), aviation, space, telecommunications (incl. electricity transmission lines - electric transmission lines).

of territories economic growth possibilities work release to the process attraction to be done possible has been of resources quantity and quality with is determined. Many of scientists studies work release process and work release with resource provide territorial such as localization (region, municipality) problems seeing to exit is directed. In the area small business and entrepreneurship development opportunities determine, relevant of the area resources and infrastructural potential assessment requirement is enough

### Methodology

In this chapter, we conduct an econometric analysis of indicators of socio-economic infrastructure affecting the activity of small and medium-sized business entities. For this, it is necessary to determine the statistical and econometric interaction of the factors representing the socio-economic infrastructure and forming their basis.

The external impact of social infrastructure is significant. Social marginal productivity (SMP) is superior to private marginal productivity for social goods such as education and health. Therefore, private financing of such social infrastructure may be less than required. Therefore, the government should immediately provide funds and other necessary resources to implement such social infrastructure initiatives. Social infrastructure does not have to be managed or controlled by the government, but the government should set policies and monitor how they are implemented.

We have discussed in detail about social infrastructure and its impact on K&B in previous chapters. Now let's talk about the factors representing the social infrastructure and used in our econometric model and their features.

**1- table**

**Analysis for variables description<sup>49</sup>**

No	Variables	Variable description
1	Y	Number of small and medium business enterprises, in units
2	X2	Labor force efficiency , coef.
3	X3	Hospitals together _
4	X4	Number of crimes , in units
5	X5	Number of graduates , in units
6	X6	The share of households supplied with natural gas , in %
7	X7	The share of households supplied with drinking water , in %
8	X8	Electricity production , mln. kw t _
9	X9	to the Internet connected number of enterprises , in units
10	X10	Underground resources that can be mined in the regions amount , ml rd . in sum
11	X11	Freight turnover in the regions , thousand tons
12	X12	The number of passengers transported in the regions , in units
13	X13	Commercial to small and medium businesses investments directed by banks, bln. soum

**2- table**

<sup>49</sup>Statistical analysis software Stata 15 was developed by the author

### General characteristics of the factors used in the model

Variable	Obs	Mean	Std. Dev.	Min	Max
LGBT	168	9.515088	.5591861	8.478661	11.35846
LNATRES	154	4.409674	2.692085	- 3.506558	9.478671
LCRIME	168	8.52485	.5974878	7.13966	10.14812
LFREIGHT	168	10.69085	.9019609	8.619389	12.73803
LPASSENGER	168	8.835506	1.030577	7.302073	16.08554
LGRADUATE	168	8.197838	.7360044	6.761573	10.47858
LELECTR	144	6.00282	3.298795	-4.60517	9.905965
INVEST	168	6.382558	4.838192	.7	27.76657
INTERNET	98	21.9551	7.460274	8	44.5
DENSITY	168	709.3637	1813.672		7699.6
Water	168	75.49762	15.01685	34.8	100
GAS	168	68.65357	20.24168		99.9

Since the sampling was done before the statistical committee examined these indicators, we believe that there is no bias in the methods used to determine the existing small businesses and entrepreneurs in the regions and the impact of infrastructure on their activities.

We create an econometric model using the selected variables. The main goal of the dissertation is how various infrastructural factors affect the growth of small and medium-sized businesses in different regions of Uzbekistan. Therefore, we used the number of K&BT as a dummy variable to determine the effects.

$$Y = \beta_0 + \beta_1 lenergy + \beta_2 lnatres + \beta_3 lcrime + \beta_4 lfreight + \beta_5 lpassen + \beta_6 lgraduate + \beta_7 gas + \beta_8 water + \beta_9 density + \beta_{10} internet + \beta_{11} investment + \beta_{12} laborprod + \beta_{13} hospital + \mu_i + \delta_i \quad (1)$$

The first-difference tool is used in the econometric model of the study because it is easy to correct for serial autocorrelations in the annual report data. We also use fixed effects equations to compare which instrument best describes the model. Proceeding with the analysis without testing the factors covered in the model can lead to autocorrelation and ultimately biased results, so we use a case-first model-testing approach to address this issue. To do this, we measure the log factor of the number of enterprises, the ratio of the independent variables representing the infrastructure in the method of least squares.

**3-table**

### OLS regression of the model

Source	SS	df	MS	Number of obs = 79.00	
				F(13, 65) = 89.93	
<b>Model</b>	21.1010615	13	1.62315858	Prob > F = 0.0000	
<b>Residual</b>	1.17316319	65	.018048664	R-squared = 0.9473	
				Adj R-squared = 0.9368	
<b>Total</b>	22.2742247	78	.285566983	Root MSE = .13435	
<b>LGBT</b>	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]

<b>LENERGY</b>	.0354339	.0066903 5.30	0.000	.0220725	.0487953
<b>LNATRES</b>	.0028459	.0108703 0.26	0.794	-.0188635	.0245553
<b>LCRIME</b>	.1476154	.0535993 2.75	0.008	.0405703	.2546605
<b>LFRIEGHT</b>	.0814909	.0405586 2.01	0.049	.0004899	.162492
<b>LPASSEN</b>	-.0183116	.0229971 -0.80	0.429	-.0642401	.0276168
<b>LGRADUATE</b>	-.0155989	.0327508 -0.48	0.635	-.0810068	.0498091
<b>GAS</b>	.0018741	.0010399 1.80	0.076	-.0002027	.0039509
<b>WATER</b>	-.0094098	.0016416 -5.73	0.000	-.0126884	-.0061312
<b>DENSITY</b>	.000123	.0000168 7.32	0.000	.0000895	.0001566
<b>INTERNET</b>	-.0234114	.0040779 -5.74	0.000	-.0315555	-.0152672
<b>INVEST</b>	-.002742	.0044697 -0.61	0.542	-.0116686	.0061846
<b>LABORPROD</b>	.0072184	.0015743 4.59	0.000	.0040743	.0103625
<b>HOSPITAL</b>	.0103042	.0008342 12.35 p.m	0.000	.0086382	.0119703
<b>_cons</b>	7.564228	.4611533 16.40	0.000	6.643241	8.485215

### There are two types of multicollinearity:

Non-strict multicollinearity, full multicollinearity and exact multicollinearity (also called partial). If there is an exact linear relationship between the variables of the model, or if one independent variable can be written exactly linearly in terms of another independent variable, this is called strict multicollinearity.

For example, imagine that when creating a macroeconomic model, exports, imports, and net exports are considered as variables. When all these three factors are included in the model, it shows that the explanatory variables of the model are expressed linearly through each other, since net exports are equal to the difference between exports and imports.

From the above definition and example, it is clear how to solve the problem of strict multicollinearity. For this, take the second variable. For example, if the model already accounts for imports and exports, adding net exports obviously does not contribute new information, and this third factor can easily be discarded.

In the case of pure multicollinearity, modern econometric software automatically removes one of the linearly dependent variables, making least squares prediction computationally feasible.

When there is a strong correlation between the independent variables, but no clear linear relationship, this is known as partial multicollinearity. Thus, they are "almost" linearly related, but not very strongly linearly dependent on each other. The precision of the coefficient values is low and the standard errors of the coefficient values are significant in the presence of partial multicollinearity. This is because if two independent variables in a model are strongly correlated, they often change at the same time and it is difficult to isolate their effect on the independent variable. Therefore, the decrease in the accuracy of the calculation of individual coefficients is the main negative effect of multicollinearity.

Variance inflation factor, or short  $VIF$ , is a multiplier that increases variance. This indicates an increase in variance in the univariate regression scenario. If the variables are orthogonal, then  $VIF_j = 1$  and  $R_j^2 = 0$ , respectively, and the significance of the variables is non-decreasing from each other. In contrast, if there is a linear relationship  $R_j^2 = 1$  or clear multicollinearity  $VIF_j = +\infty$ , the variance of the coefficients will also be infinite. As we have already mentioned, it is difficult to correctly analyze the regression in this situation.

According to economists, if any of the variables  $VIF_j > 10$  if, multicollinearity exists in the regression equation. This number is also mentioned in Gujarati textbook. Quasi-multicollinearity, according to some critical theory, is not a theoretical issue. Since they are ignorant of econometrics, there are no methods for establishing specific critical values or establishing protocols for evaluating hypotheses about its existence or not.

**VIF test results**

Variables	VIF	1/VIF
LFREIGHT	5.01	0.199541
POPULATION	4.46	0.224167
HOSPITAL	4.17	0.239797
INTERNET	4.08	0.245252
CRIME	4.07	0.245444
LRESOURCE	3.63	0.275386
WATER	3.56	0.280922
LMEH	3.12	0.320391
Graduate	2.45	0.408252
LETTER	2.28	0.439130
LENERGY	2.01	0.497059
GAS	1.99	0.502463
INVEST	1.81	0.552506
Mean VIF	3.28	

It can be seen that this indicator is not higher than 10 in any of the variables used in the model. This means that the variables in our model do not have the problem of multicollinearity and are correctly selected.

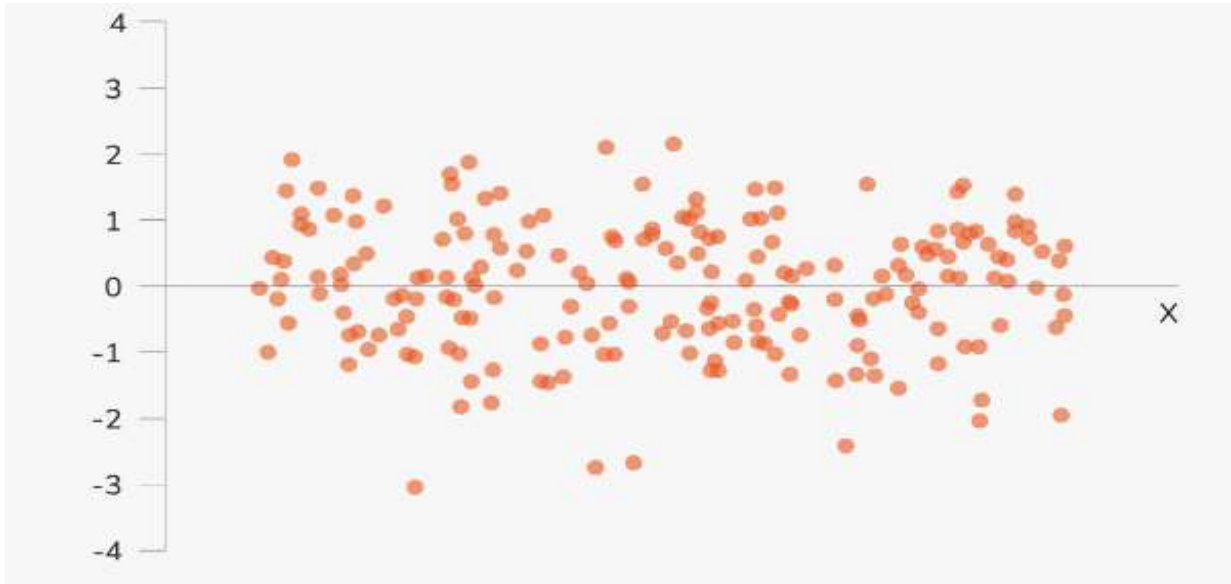
In econometrics, the term "heteroscedasticity" refers to the heterogeneity of observations represented by the non-uniform (non-constant) variance of the random error of a regression model. The opposite of homoscedasticity, which refers to the homogeneity of the data and the consistency of the model's random error variance, is heteroscedasticity. Due to the heteroscedasticity of the random errors, least squares estimates are inefficient.

In this case, the traditional estimate of the covariance matrix of least squares parameter estimation also proves to be unreliable and inaccurate. Thus, statistical conclusions about the accuracy of the obtained estimates may not be sufficient. In this context, testing models for heteroscedasticity is one of the important steps in building econometric models.

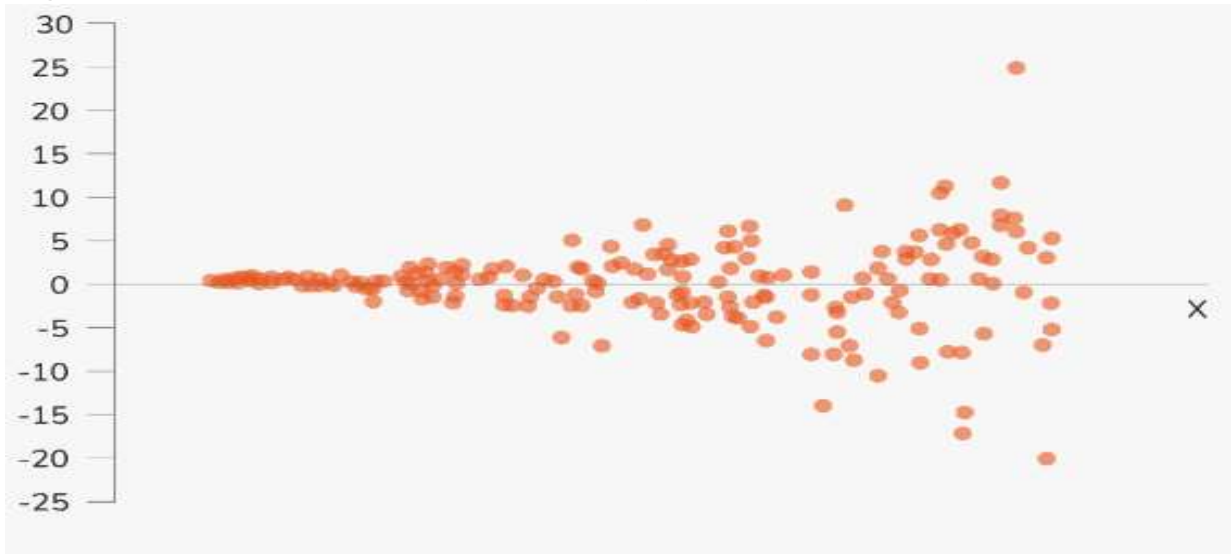
Goldfeld-Quandt, Park, Glaser, White, Brush-Pagan, and Sperman rank correlation tests, among others, can be used to determine the presence of heteroskedasticity in random residuals. If the random residuals are assumed to be normally distributed and the observations are sufficient, the Goldfeld-Quandt test is used.

One way to detect heteroskedasticity using graphical analysis is to create a scatterplot of independent variables on the **Y -axis and one of the regression coefficients on the X -axis**. Analysis of the plot of the regression residuals provides an additional selection. Residuals are plotted against each explanatory variable in ascending order.

If the variance of the residuals near zero is the same (for example, as in Fig.), we can assume that there is no heteroscedasticity associated with this regressor in the data. If a plot of residuals clearly shows that the value of the regressor affects the dispersion of the residuals around zero, then heteroscedasticity is present (eg, as in Fig.-1)



1- fig. Location of points where heteroscedasticity does not exist.



2- fig. Location of points where heteroscedasticity exists.

Appropriate formal statistical tests can be useful in addition to studying the graphs, as it is not always possible to determine with certainty whether heteroscedasticity is present or not. The following list includes the two most popular tests.

Breusch-Pagan test

The absence of heteroscedasticity in the equation is the hypothesis tested in this test.

$$H_0 : \sigma_1^2 = \dots = \sigma_n^2$$

An alternative theory suggests that a set of variables somehow affects how random errors change:

$$H_1 : \sigma_i^2 = \gamma_0 + \gamma_1 z_i^{(1)} + \dots + \gamma_p z_i^{(p)} \quad (2)$$

Here is  $z_i^{(1)}, z_i^{(2)}, \dots, z_i^{(p)}$  a list of variables expected to affect the variation in random error. These



variables are usually taken as the regressors of the original model and their least squares.

We also use the Brush-Pagan and Skyunes-Kurtosis test to determine the presence of heteroskedasticity in our model. The content of the null hypothesis of this test states that there is no heteroscedasticity in the model, while the alternative hypothesis states that there is heteroscedasticity. It can be seen that the r-value of the obtained results is higher than 0.05, which requires us to reject the alternative hypothesis and accept the null hypothesis.

From the obtained test results, we can conclude that our model and all the selected variables are of good quality and do not have any negative influence on each other. Therefore, we can use the selected factors in subsequent models without hesitation.

Source	chi2	df	R
Heteroskedasticity	79.00	78.00	0.4471
Skewness	7.15	13 . 00	0.8945
Kurtosis	2.36	1.00	0.1246
Total	88.50	92.00	0.5838

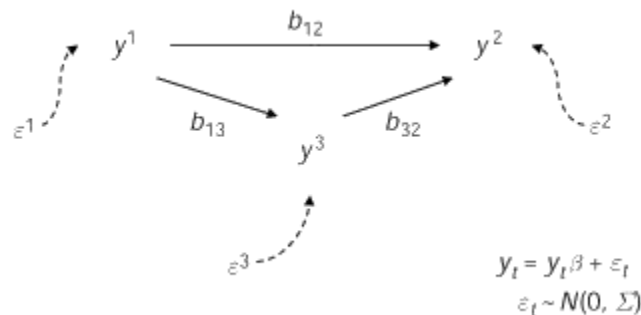
Since we have formed a panel database in this study, we only use econometric models that can effectively analyze this database.

### Results and discussions

Undoubtedly, one of the most widely used approaches in quantitative social research is structural equation modeling (SEM model). The depth of the underlying statistical theory, the ability to answer important substantive problems, and the availability of software specifically designed for systemic equation modeling, as well as the ease of use, can be considered the main reasons for its appeal. Despite the popularity of this method , it can be argued that its "first-generation" use has become entrenched in conventional practice, hindering both meaningful and statistical gains.

Model analysis, often referred to as structural equation modeling (SEM), is a multivariate technique used to evaluate theories about interactions between different variables. Its origins date back to the 1920s, when it was created to measure and analyze unidirectional causal relationships in genetic data.

SEM - A linear model modified in several ways, as shown in Fig.: the coupling matrix, "trimmed" to include only important directions. Self-connections are strictly prohibited. Responses from appropriate geographic areas and possibly experimental or bilinear terms are included in the data matrix Y . The general linear model serves as the basic model:



(3)

$$[y_t^1 \ y_t^2 \ y_t^3] = [y_t^1 \ y_t^2 \ y_t^3] \begin{bmatrix} 0 & b_{12} & b_{13} \\ 0 & 0 & 0 \\ 0 & b_{32} & 0 \end{bmatrix} + \varepsilon_t \quad (4)$$

$$Y = Y\beta + \varepsilon \quad (5)$$

the sparse structure of cuts or connections shown here imposes restrictions on arbitrary variables. Residuals to simplify the model  $\varepsilon$  is considered independent. These are sometimes called innovations, and they are seen as the stochastic transfer of each region from one computation to another.

The independent variables are calculated using the sample covariance system of the data instead of minimizing the sum of squared errors. The reason for this is that, unlike the first one, which shows the goodness of fit from the point of view of each region (we call the cells regions), the covariance reflects the global behavior of the data, that is, the relationship between the variables. In fact, an objective function optimized by parameters is created from the selected and accepted covariance. by rearranging Eq.

$$\begin{aligned} Y(I - \beta) &= \varepsilon \\ Y &= \varepsilon(1 - \beta)^{-1} \\ \Sigma &= \langle Y^T Y \rangle \\ &= (1 - \beta)^{-T} \langle \varepsilon^T \varepsilon \rangle (1 - \beta)^{-1} \end{aligned} \quad (6)$$

This is an example of covariance:

$$S = \frac{1}{n-1} Y^T Y \quad (7)$$

If  $n$  represents the number of samples, the function for maximum likelihood looks like this:

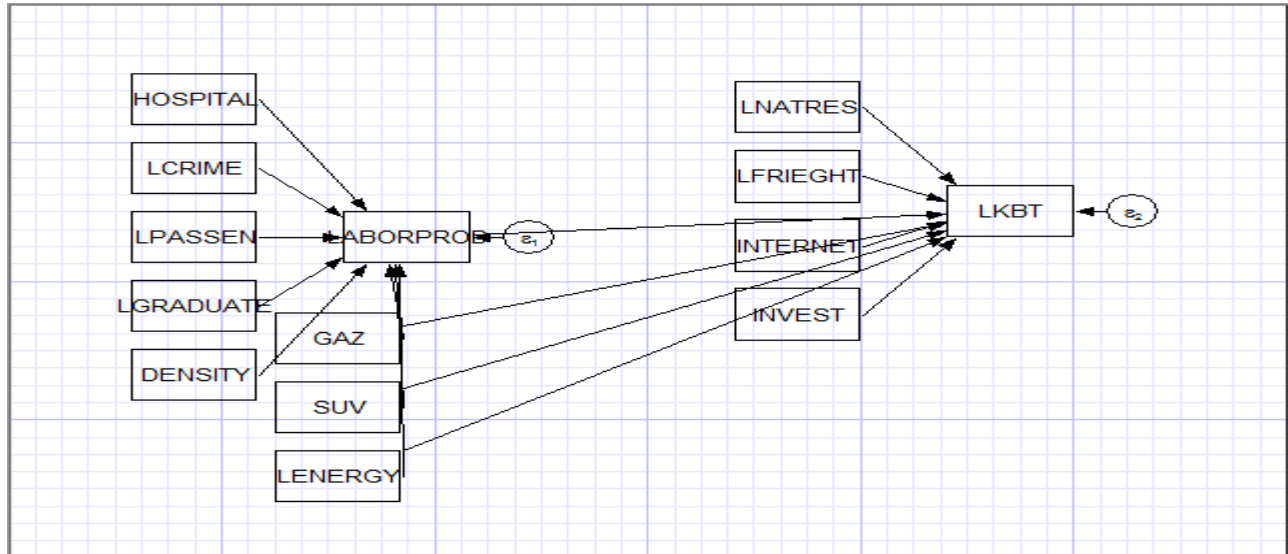
$$F_{ML} = \ln |\Sigma| - tr(S \Sigma^{-1}) - \ln |S| \quad (8)$$

Simply put, it is the sample covariance and the variance predicted by the unknown parameters according to Kullback-Leibler theory. The parameters that minimize this difference are usually estimated using a gradient descent method such as the Newton-Raphson scheme. OLS or ordinary least square method can be used to estimate the initial values (McIntosh and Gonzalez-Lima, 1994).

Based on the peculiarity of the analyzed process, and taking into account that the factors present in the model correspond to the features of the SEM model, it was used.

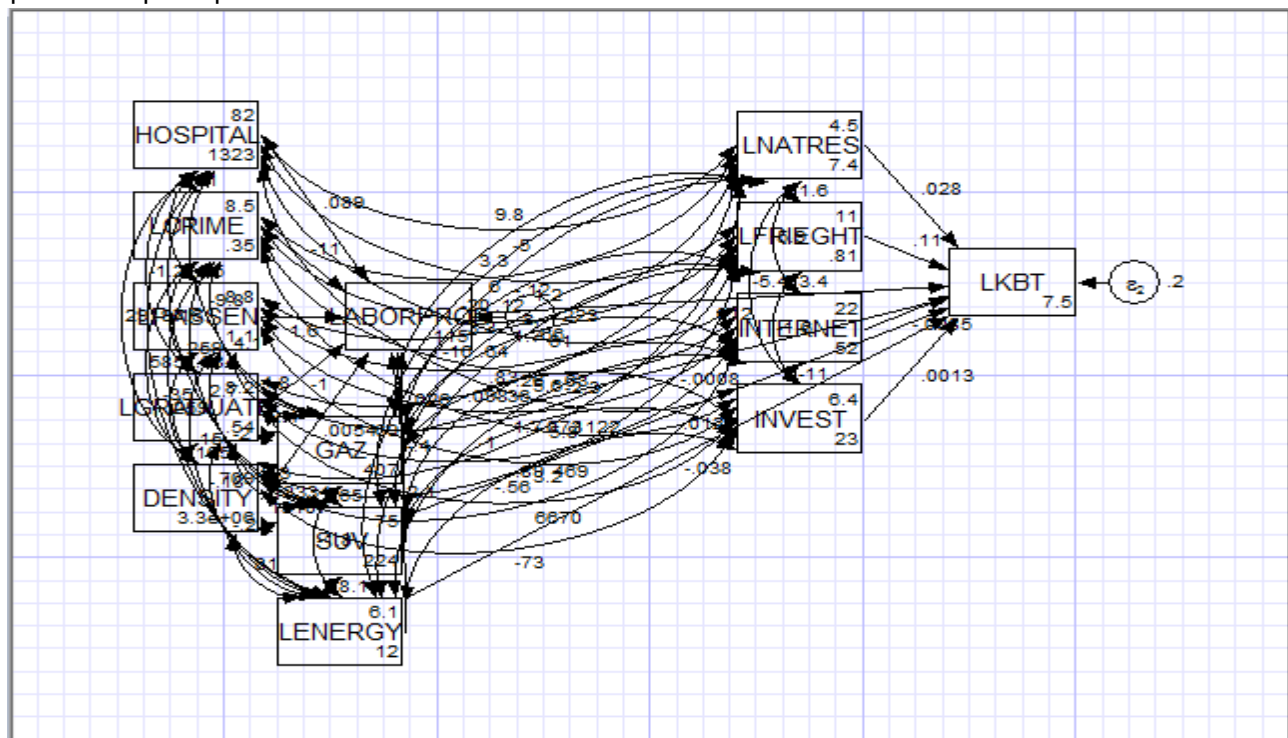
#### STEP 1

The data used for the model is mainly collected for the analysis of the factors affecting the activity of existing enterprises in the regions and the growth of their number, which includes the efficiency of the economically active population in the regions, the level of supply of households with clean drinking water, natural gas and electricity, the part of enterprises connected to the Internet, the volume of freight and passenger transportation in the regions and the volume of investments directed to increase the capital size of enterprises by state banks, statistics on population density, which reflect the available resources and their infrastructure in the regions.



3- fig. A visual representation of the <sup>50</sup>SEM+ SEM-Path +LCA model

Above picture indicates that the model analyzes the relationship between labor efficiency and the infrastructure affecting it, which is one of the most important factors of production, and in the next part, an econometric analysis of the impact of labor efficiency and hard and soft infrastructure on small business and entrepreneurship are presented.



4- fig. A graphical representation of the relationship between the factors of the <sup>51</sup>SEM+ SEM-Path +LCA model

<sup>50</sup>Statistical analysis software Stata 15 was developed by the author

<sup>51</sup>Statistical analysis software Stata 15 was developed by the author

## Stage II

At this stage, the results obtained will be analyzed. As can be seen from the descriptive model in Figure 5, the covered factors are positively related to each other and the expected results are obtained.

**Table-7**

### Results of SEM model

SEM model	OIM						
LABORPROD	<-	coeff .	std. er.	z	P >  z	[95% conf . interval ]	
	HOSPITAL	.0886422	.0575046	1.54	0.123	-.0240648	.2013492
	LCRIME	- 10.88273	3.184607	-3.42	0.001	-17.12445	-4.641017
	LPASSEN	1.645075	1.686748	0.98	0.329	-1.66089	4.951039
	LGRADUATE	1.018472	1.954219	-0.52	0.602	-4.848671	2.811726
	DENSITY	.0053744	.0008675	6.20	0.000	.0036742	.0070746
	GAS	.025896	.0715877	0.36	0.718	-.1662053	.1144132
	WATER	.4048618	.1274835	3.18	0.001	-.6547249	-.1549988
	LENERGY	2.112784	.4751778	4.45	0.000	1.181453	3.044116
	_ cons	114.7989	26.05306	4.41	0.000	63.73584	165,862
LGBT	<-						
	LABORPROD	.0120332	.0025389	4.74	0.000	.0070572	.0170093
	LNATRES	.0283779	.0213218	1.33	0.183	-.0134121	.0701679
	LFREIGHT	.1123281	.0658909	1.70	0.088	-.0168157	.241472
	INTERNET	.0084658	.0081379	1.04	0.298	-.0244157	.0074841
	INVEST	.0012912	.0094761	0.14	0.892	-.0172817	.0198641
	GAS	.0008004	.0021684	0.37	0.712	-.0050503	.0034495
	WATER	.0115599	.0025149	4.60	0.000	.0066309	.0164889
	LENERGY	.0380384	.0131443	2.89	0.004	-.0638007	-.0122761
	_ cons	7.538834	.6146643	12.26	0.000	6.334115	8.743554
<b>LR test of model saturated :</b>			Chi 2(34) = 418.20,			prob > chi2 = 0.0000	

One of the most important resources of small businesses and private enterprises in the regions is the labor force, and the efficiency of the labor force, in turn, depends on the level of satisfaction of the existing infrastructure created for the labor force. Therefore, the impact of infrastructure on labor force productivity was analyzed. The obtained results showed the expected indicators. Factors such as population density, electricity, and drinking water

have a positive and strong impact on labor productivity (the p value of the factors is less than  $p > 0.05$ ).

$$LABORPROD = 114.7989_0 + 0.0886422_1 hospital - 10.88273_2 lcrime + 1.645075_3 lpassen + 1.018472_4 lgraduate + 0.0053744_5 density + 0.025896_6 gas + 0.4048618_7 water + 2.112784_8 lenergy + \mu_i + \delta_i$$

It was found that an increase in the number of crimes in the regions by one unit leads to a decrease in the efficiency of the labor force by a factor of 10 units.

For example, a 1 percent increase in the number of households supplied with electric energy leads to an increase in the number of K&BT by 2. Independent variables such as transport infrastructure, natural gas, number of graduates, and number of hospitals were found to be positively but weakly related to labor force efficiency (the p value of the factors is greater than  $p < 0.05$ ). The increase in the number of crimes in the regions had a negative impact on the involuntary variable.

$$LKBT = 7.53_0 + 0.012_1 laborprod + 0.028_2 lnatres + 0.112_3 lfreight + 0.008_4 internet + 0.001_5 investment + 0.001_6 gas + 0.011_7 water + 0.038_8 lenergy + \mu_i + \delta_i$$

At this stage, the econometric analysis of the impact of the existing infrastructure on the number of K&BT enterprises in the regions was continued. As a result of arbitrary factors, if an increase in labor force efficiency by 1 unit leads to an increase in the number of small businesses and entrepreneurial enterprises by 0.12 units, a 1 percent increase in freight turnover and natural resources production leads to an increase in the number of small businesses and entrepreneurial entities by 0.028 percent and 0.112 percent, respectively. was determined. It was determined that increasing the share of households in the regions with water and gas supply by 1 percent will lead to an increase in the number of small businesses and entrepreneurship entities by 0.011 and 0.001 units.

### Conclusion

Based on the activities of small business and entrepreneurial units, their past and current status in the region, and the macro-economic conditions of the internal resources and infrastructure of the regions, the regions were evaluated according to criteria such as "low", "medium" and "high".

The feasibility of econometric evaluation and forecasting was based on the development trend of small business and entrepreneurship at the regional level and the infrastructures affecting it, divided into categories such as soft and hard.

In order to increase the level of accuracy of econometric and statistical assessment of the impact of infrastructure on the development of small business and entrepreneurship, especially in the conditions of uneven economic internal resources, factors such as economic infrastructure and social infrastructure affecting the process using the panel evaluation method were used together.

The infrastructure that affects the activity of small business and entrepreneurship in the regions, including the number of enterprises connected to the Internet (X9), households with natural gas (X6), the turnover of goods transported in the regions (X11), and the amount of investments directed by commercial banks to small and medium-sized enterprises (X11) ways to develop prospective scenarios until 2030 in conditions of high accuracy of factors such as distribution and  $\alpha, \beta, \gamma$  optimal price range.

### References

- Douglas Zhihua Zeng (2012) "China's Special Economic Zones and Industrial Clusters: Success and Challenges" Lincoln Institute of Land Policy Working Paper, [help@lincolninst.edu](mailto:help@lincolninst.edu).
- Lee, H. (2012). History and Development of Entrepreneurship in China. Entrepreneurship and Economic Growth in China, 13–34. doi: 10.1142/9789814273374\_0002.
- [Rong, K.](#), [Liu, Z.](#) and [Shi, Y.](#) (2011), "Reshaping the business ecosystem in China: case studies and implications", *Journal of Science and Technology Policy in China*, Vol. 2 No. 2, pp. 171-192. <https://doi.org/10.1108/17585521111155228>.

- Kovács , György . (2016). Logistics and production processes today and tomorrow. *Acta logistics* . 3. 1-5. 10.22306/al.v3i4.71.
- Kulish S. M. Resource potential obespecheniya innovatsionnogo sotsialno orientirovannogo razvitiya regiona // *Kazanskiy pedagogicheskiy zurnal*. 2015. No. 3. URL : <http://cyberleninka.ru/article/n/resursnyy-potential-obespecheniya-innovatsionnogo-sotsialno-orientirovannogo-razvitiya-regiona> (data obrashcheniya: 10.12.2017).
- Yakushkina T. A. Rol otsenki resursnogo potentsiala v razvitii regiona // *Vestnik Bryanskogo gosudarstvennogo universiteta*. 2012. No. 3. S. 308–312.
- Lomovtseva O. A. Sovokupnyi resursnyi potential regiona: metodologiya opredeleniya i izmereniya // *Nauchnye vedomosti Belgorodskogo gosudarstvennogo universiteta*. 2012. No. 1. S. 61–67.
- Infrastructure to Economic Development,” A Review of Experience and Policy Implications, Washington, DC: The World Bank, Discussion Paper no. 213, 1993.
- Adikwe , PK (2012). Project finance for Small and Medium Scale Enterprises (SMEs) in Nigeria. *An International Multidisciplinary Journal, Ethiopia*, 6(1), 91-100.
- Osoba , AM (2003). Towards the Development of Small Scale Industries in Nigeria.
- Rasulev A. New opportunities on economic development of Uzbekistan /A. Rasulev , S. Voronin , T. Shomurodov // *Chasopis economy reform.– 2022.– No. 1(45) .– S. 30-38*
- Sadullayevna , KL, & Rashidovna , QG (2021). Analysis of Relationship Between Trade Costs and Uzbekistan 's Bilateral Trade: Theories and Concepts. *International Journal on Economics, Finance and Sustainable Development*, 3(3), 132-140.
- Shomurodov Takhir Boymurad ugli , Kuziyeva Gulnoza Rashidovna "A STUDY ON THE REGIONAL LEVEL OF ECONOMIC GROWTH AND THE PRINCIPLES OF ITS CHANGE" *Asian Journal of Research in Business Economics and Management* ISSN: 2249-7307 Vol. 12, Issue 4, April 2022 SJIF 2022 = 8.529 A peer reviewed journal
- SHOMURODOV, T., & HONGEN, Y. (2020). A gravity model study on trade cost and foreign trade nexus: case of Uzbekistan and its selected partners. *ECLSS Online* 2020c.
- UGLI, STB, LATOFAT, K., SADULLAYEVNA, OOUQ, GULNOZA, Q., & RASHIDOVNA, RBSU (2021). An empirical analysis on financial development and bilateral trade flow nexus. *Journal of Contemporary Issues in Business and Government*| Vol , 27(3), 107.
- Shomurodov Takhir Boymurad ugli \_ (2022). METHODOLOGY FOR DESIGNING GLOBAL VALUE CHAINS AT THE LEVEL OF ECONOMIC ENTITIES. *Conference* , 113–116. Retrieved from <https://conferencea.org/index.php/conferences/article/view/1066>
- Shomurodov Takhir Boymurad ugli \_ (2022). REVIEW OF VALUE CHAIN CONCEPTS. *Conference* , 84–87. Retrieved from <https://conferencea.org/index.php/conferences/article/view/1064>
- Shomurodov Takhir Boymurad ugli \_ (2022). CENTRAL ASIAN COUNTRIES AND GVC: THREATS AND WAYS TO PROMOTE ECONOMIC SECURITY DURING THE PANDEMIC. *Conference* , 88–91. Retrieved from <https://conferencea.org/index.php/conferences/article/view/1065>
- 18. Khushnud , Ziyodilloev , Shomurodov Takhir , and Qingjie Zhou. "Analyzing Characteristics and Trends of Economic Growth in the Sectors of the National Economy of Uzbekistan." 4th International Symposium on Business Corporation and Development in South-East and South Asia under B&R Initiative (ISBCD 2019). Atlantis Press, 2020.
- SHOMURODOV, Tokhir , and Yang HONGEN. "A Gravity model study on trade cost and foreign trade nexus: case of Uzbekistan and its selected partners." *ECLSS Online* 2020c (2020).

# METHODOLOGICAL ASPECTS OF REVENUE ACCOUNTING IN OIL INDUSTRY ENTERPRISES

**Urazov Komil Bakhramovich**  
Samarkand Institute of Economics and Service, Professor of the Department of "Accounting and Auditing in Other Sectors", Doctor of Economics. Uzbekistan,

**Boronov Bobur Farkhodovich**  
Doctoral student of the Samarkand Institute of Economics and Service. Uzbekistan,

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## ABSTRACT:

In the Republic of Uzbekistan, in the conditions of economic globalization, the development of the food production sector in order to improve the living standards of the population and to satisfy their needs for food products is one of the priority tasks of today. A number of reforms for the development of this sector are being implemented in the country. As a result of these changes, the introduction of a new mechanism for managing the country's economy and the use of new management methods require serious changes in the field of accounting and strengthening the influence on the financial and economic activities of enterprises. In particular, today, improving the accounts and reports of enterprises engaged in the production of oil-oil products on the basis of international standards is one of the urgent tasks. This research work is focused on finished products in the enterprises of these industries, including oil and oil products produced in the enterprises of the oil industry and recognized as finished products, and the income from their sale. The description and classification of these assets is important in providing internal information users with useful information and in their decision-making

**Key words:** oil industry enterprises, income, expenses, product cost, fair value, finished product, financial reporting, national accounting standards, international standards of financial reporting.

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## Introduction

Large-scale reforms are being carried out on the territory of the republic to fill the domestic market with food industry products and to rapidly develop the oil industry. In particular, within the framework of the Resolution of the President of the Republic of Uzbekistan dated January 19, 2018 "On measures for the rapid development of the oil industry"<sup>52</sup> a number of tasks were defined in order to ensure the rapid development of the oil industry based on the widespread introduction of modern market mechanisms and to improve the management system of the oil industry.

In our country, the role of oil products in the composition of food products is of particular importance. Currently, not only in our country, but also in the whole world, great attention is being paid to the field of vegetable oil production, and their production volume is also increasing. In the 2020-2021 crop year, this figure in the world reached 209 million tons<sup>53</sup>. It can be seen that the products of this industry are important in the national economy

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<sup>52</sup> Decision of the President of the Republic of Uzbekistan "On measures for rapid development of the oil industry". January 19, 2018. PQ-3484.

<sup>53</sup> <https://marketpublishers.ru/lists/12213/news.html>

of the country, and in this regard, a number of tasks have been set before the government.

The increase in the export volume of oil industry enterprises is the main driver of economic growth. Therefore, in our research work, it was necessary to consider the role of foreign enterprises and oil products in our country in export.

In Russia, today, a lot of attention is paid to the export of vegetable oil, and in 2021, the export volume will increase by 48% to 7.3 billion. amounted to dollars<sup>54</sup>.

Export indicators of oil products are also of particular importance in our country. According to the information provided by the Uzyogmoysanoat association of the Republic of Uzbekistan, oil and oil products were exported in the amount of 24.3 million US dollars in January-May 2022 instead of the forecasted 8.3 million US dollars. This indicator means that the export of products in the country was 292.8% higher than the forecast, or almost 3 times more<sup>55</sup>. During this period, the export of oil products was mainly made in the CIS countries, and the largest amount of the export volume was made by the Republic of Afghanistan.

## II. Literature analysis

It was necessary to study the definitions and descriptions of the economic term "income" in our international and national accounting literature.

Issue 15 (IFRS) "Revenues from contracts with customers" defines the issues of revenue recognition, valuation and reflection in accounts and reports, and the term revenue is defined as follows:

"Income is an increase in economic profit during the reporting period, or a decrease in liabilities resulting in an increase in assets, except for those related to contributions of equity participants"<sup>56</sup>.

In the Regulation of the Russian Federation on "Organizational Income" accounting, it is stated that "Organizational income is recognized as an increase in economic profit as a result of receiving assets (money, other property) and (or) paying liabilities, which leads to an increase in the capital of the organization, (property owners) except for the contributions of the participan<sup>57</sup>.

The conceptual framework for preparation and presentation of financial statements is defined and described as follows: "Revenues are an increase in assets or a decrease in liabilities during the reporting period. Gross income includes income received from the main and non-main activities of the economic entity"<sup>58</sup>.

The national accounting standard No. 2 "Revenues from the main economic activity" currently in force in our republic is one of the main regulatory legal documents that regulate the accounting of income in economic entities. In this standard, issues such as the types of income in enterprises, their recognition and evaluation are given, and the category of income is defined as follows:

"Revenue means income received during the normal activity of an economic entity, including income from product sales (performance of works and services), received interest, dividends, royalties, etc."

**Income from the main economic activity - income that leads to an increase in private capital arising during the period of normal activity of an economic entity, excluding increases related to the contribution of property owners to private capital<sup>59</sup>.**

In the sources of information, the following definitions can be found, "Deferred income is income received (calculated) in the reporting period, but related to the future reporting period"<sup>60</sup>.

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<sup>54</sup> <https://oleoscope.com/news/agrojeksport-rossija-uelichila-postavki-maslozhirovoj-produkcii-za-rubezh-v-denezhnom-vyrazhenii-v-2021-g/>

<sup>55</sup> <https://yogmoy.uz/uz/post/view?slug=243-million-dollar-mikdorida-eg-moj-masulotlari-eksport-kilindi>

<sup>56</sup> IFRS No. 15 "Revenues from contracts with customers"

<sup>57</sup> Polozhenie po bukhgalterskomu uchiyotu "Dokhody organizatsii" PBU 9/99. It was registered by the Ministry of Justice of the Russian Federation on May 31, 1999. [https://base.spininform.ru/show\\_doc.fwx?rgn=6361](https://base.spininform.ru/show_doc.fwx?rgn=6361)

<sup>58</sup> Conceptual framework for preparation and presentation of financial statements. It was registered by the Ministry of Justice of the Republic of Uzbekistan on August 14, 1998. No. 475. <http://lex.uz/docs/828557>.

<sup>59</sup> No. 2 BHMS "Income from main economic activity" // by AV on 26.08.1998. Registered with number 483.

<sup>60</sup> [https://www.audit-it.ru/terms/accounting/dokhody\\_budushchikh\\_periodov.html](https://www.audit-it.ru/terms/accounting/dokhody_budushchikh_periodov.html)



The following definitions of value are given in the national accounting standards of the Republic of Uzbekistan:

Value at current prices is the amount for which an asset can be realized or a liability can be settled.

net realizable value is the current value minus the estimated costs of bringing the inventory to its intended use and sale.

current value - the value of inventory at current market prices on a certain date or an amount sufficient to purchase an asset or fulfill a liability in a transaction between independent, knowledgeable and willing parties<sup>61</sup>.

M.J. Temirkhanova, one of the economists of our country, in her scientific work, "Net income from the sale of tourist products means transfers to tourists (transport from one place to another by means of vehicles), accommodation in hotels, meals, excursions, rest, entertainment, various cultural , the total net income received from participation in events that satisfy educational, spiritual requirements and many other types of such services is understood<sup>62</sup>.

Q.O.Oryshev said, "Taxes and mandatory deductions, dividends will be paid for the reporting period on the income received from finished products (work, services) sold during the reporting period"<sup>63</sup>.

From the definitions and descriptions given above, it can be seen that such issues as income accounting, recognition, and evaluation are considered important and determine the important tasks for accounting in terms of their solution.

### III. Methods.

Products created in enterprises are written off in the following cases specified in the national standard, and their result is reflected in the forms of financial statements:

- \* implementation;
- \* giving to the authorized capital of another organization in the form of a founding share;
- \* returning the share previously included in the authorized capital of the organization to the founder when the founder leaves the group of founders or distributes the assets of the business entity that is being liquidated among its participants;
- \* free giving;
- \* exchange;
- \* liquidation (destruction) due to unusability after the expiration of the storage period, as a result of physical and intellectual obsolescence;
- \* detection of deficiency, loss or damage (breakage, division);
- \* presentation in the form of merchandise debt or return of previously received merchandise debt;
- \* other operations and events.

In enterprises, when products leave through one of these factors and receive income, their cost is also recognized as an expense, and the financial result of the enterprise is determined taking into account indirect taxes related to the exit of products.

According to the Regulation on accounting "Revenues of the organization" (PBU 9/99), the company's income is divided into "income from ordinary activity" and "other income" according to its activity and nature<sup>64</sup>.

In accordance with the Decision of the Cabinet of Ministers of the Republic of Uzbekistan "On approval of the Regulation on the structure of production and sale costs of products (works, services) and the procedure for

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<sup>61</sup> No. 4 BHMS "Inventories" // by AV on 30.06.2020. Registered with number 3259. <https://lex.uz/docs/4890446>

<sup>62</sup> Temirkhanova M.J. Improving the methodological basis of accounting and analysis of tourist products. Doctor of Science (Doctor of Science) thesis abstract. -T.: 2020.

<sup>63</sup> Orishev Q.O. The practice of keeping an account of undistributed profit for the reporting period in oil-oil production enterprises. // The main directions of ensuring the country's economic security. Republican scientific and practical conference. 2019

<sup>64</sup> Polozhenie po bukhgalterskomu uchyotu "Dokhody organizatsii" PBU 9/99. It was registered by the Ministry of Justice of the Russian Federation on May 31, 1999. [https://base.spininform.ru/show\\_doc.fwx?rgn=6361](https://base.spininform.ru/show_doc.fwx?rgn=6361)

forming financial results", the income of enterprises is divided into four groups and classified:<sup>65</sup>

- \* Net income from sales;
- \* Other income from the main activity (operating income);
- \* Income from financial activities;
- \* Contingent income.

Unlike foreign experiences and other guidelines, in our national standard, the income of business entities is divided into three categories:

- \* basic income;
- \* operating income;
- \* income from financial activities<sup>66</sup>.

In our national standard, the gross income of the enterprise is divided into two, that is, income from the main and non-main activities, "Income from the main activity is from the sale of products, works, services, inventories, other assets, as well as awards, interest and dividends, royalties and the main income of the business entity. it can be received in the form of annuity based on the activity<sup>67</sup>.

M.B. Kalonov, one of the economists of our country, believes that it is appropriate to divide the company's income into "Activity-related income" and "Other income and receipts" in accounting based on the sources of formation. proposed to include income from other activities as part of "Activity-related income"<sup>68</sup>.

In the course of the research, the incomes obtained as a result of their main and other activities in oil and oil industry enterprises operating in our Republic were analyzed (Table 1):

**Table 1**  
**The main indicators of oil industry enterprises operating in the Republic of Uzbekistan**<sup>69</sup>

As of 2021

Indicators	"Yog'gar" JSC		"Andijonyog'moy" JSC		"Toshkent yog'-moy kombinati" JSC	
	A thousand soums	in %	A thousand soums	in %	A thousand soums	in %
Net income from the sale of products (goods, work and services)	23992920	81	101080227	99	39569883	97
Other income from the main activity	5639799	19	35610	0	475999	1
Income from financial activities	3096	0	247477	1	642125	2
<b>Total income</b>	<b>29635815</b>	<b>100</b>	<b>101363314</b>	<b>100</b>	<b>40688007</b>	<b>100</b>
<b>Net profit for the reporting period</b>	<b>45348</b>		<b>5561</b>		<b>-20097824</b>	

From the data in the table, it can be concluded that the main part of the income of all oil industry enterprises is made up of net income from the sale of products (goods, work and services), that is, the income received as a result of their main activities. This determines the relevance of the correct organization and reporting of the income

<sup>65</sup> The Decision of the Cabinet of Ministers of the Republic of Uzbekistan "On approval of the Regulation on the structure of costs of production and sale of products (works, services) and the procedure for forming financial results". February 5, 1999. No. 54.

<sup>66</sup> No. 2 BHMS "Income from main economic activity" // by AV on 26.08.1998. Registered with number 483.

<sup>67</sup> Conceptual framework for preparation and presentation of financial statements. It was registered by the Ministry of Justice of the Republic of Uzbekistan on August 14, 1998. No. 475.

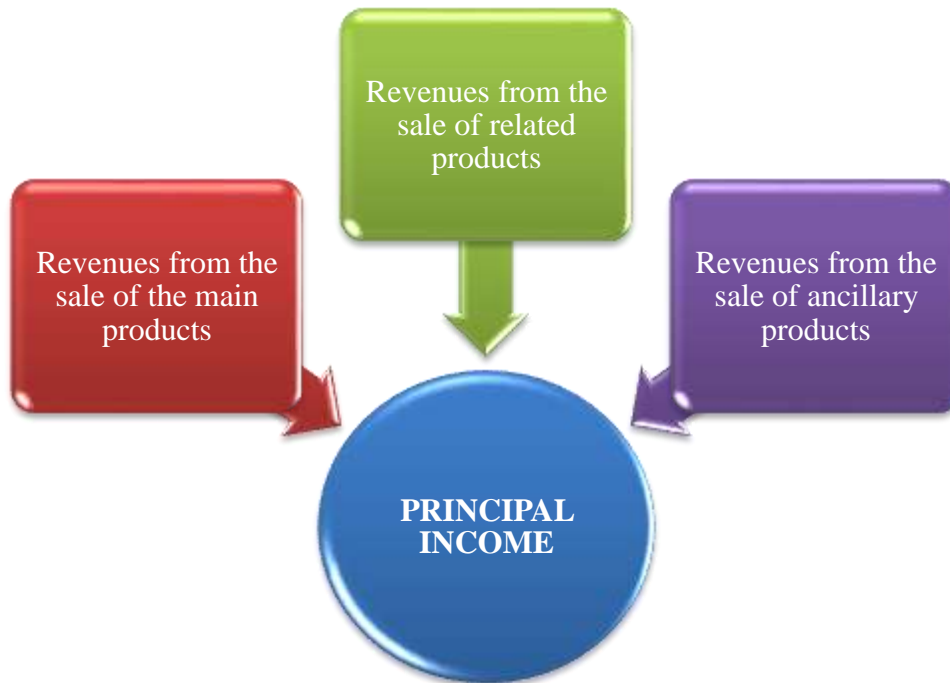
<sup>68</sup> Kalonov M.B. Improving the methodology of accounting and analysis of income and expenses in enterprises (in the case of motor transport enterprises). Doctor of Economics (DSc) Dissertation Abstract. -T.: 2019. Page 28.

<sup>69</sup> Author's development based on the data of financial statements of enterprises.

received as a result of the sale of oil products, which are the main activities of oil industry enterprises.

#### IV. Results

All income from the sale of main, ancillary and auxiliary products in oil-oil products production enterprises is the main income. We have expressed the main income in oil industry enterprises by the following figure (Figure 1):



**Figure 1. Classification of the main income types of oil-oil products production enterprises<sup>70</sup>**

It can be seen from the figure that the income from the sale of all products produced in the enterprise is considered as the main income of the enterprise. The issues of their recognition in the accounting of income in oil-oil products production enterprises are the main purpose of their accounting.

Timely recognition of income from the sale of products in oil industry enterprises is one of the main tasks of accounting. In enterprises, these revenues are recognized only if it is determined that their value and usefulness, i.e., will have a positive effect on the future profitability of the enterprise.

In the conceptual framework for preparation and presentation of financial statements, it is stated that "Revenues and expenses are recognized in accounting and reflected in the financial statements based on their occurrence or occurrence (but not on the basis of receipt or payment of funds)"<sup>71</sup>.

Clause 12 of BHMS No. 2 "Revenues from the main economic activity" provides conditions for recognition of income from the sale of goods in economic entities. These conditions of recognition of income are five, and during the research we compared the conditions of recognition of income presented in the international standards of financial reporting, regulatory legal documents of foreign countries in the form of the following table (Table 2):

<sup>70</sup> Author development based on research.

<sup>71</sup> Conceptual framework for preparation and presentation of financial statements. It was registered by the Ministry of Justice of the Republic of Uzbekistan on August 14, 1998. No. 475.

Table 2

**Comparison of the terms of recognition of incomes provided in international and national standards and legal documents of foreign countries<sup>72</sup>**

IFRS <sup>73</sup>	Regulation on accounting of the RF <sup>74</sup>	National accounting standards <sup>75</sup>
14. (a) When the entity transfers the significant risks and rewards of ownership of the goods to the buyer	12. a) When the organization has the right to receive income arising from a specific contract or duly confirmed	12.1. When an entity transfers substantially all the risks and rewards of ownership of the goods to the buyer
(b) When the business entity can no longer manage and effectively control the goods sold to the extent normally associated with ownership	b) When the amount of income can be determined	12.2. When the entity does not maintain either the level of continuity of management or the effectiveness of control over the goods sold that is normally associated with ownership
(c) When the amount of income can be reliably estimated	b) When there is certainty that the economic benefit of the organization will increase as a result of a specific transaction, when there is certainty that the economic benefit of the organization will increase as a result of a specific transaction, when the organization received an asset in payment or there are cases where there is no uncertainty about receiving an asset	12.3. When the amount of income can be estimated with a high degree of reliability
(d) When there is a possibility of economic gain related to the operation by the business entity	g) When the right of ownership (management, use and disposal) of the product (goods) is transferred from the organization to the buyer or when the work is accepted by the customer (when the service is provided)	12.4. When there is a possibility that the economic entity will receive an economic benefit related to the transaction
(e) When the costs incurred or incurred on the operation can be reliably estimated	d) When the costs associated with this operation or to be incurred can be identified	12.5. When the costs incurred or expected to be incurred in connection with the transaction can be estimated with a high degree of reliability

<sup>72</sup> Author development based on international and national standards and foreign legal documents.

<sup>73</sup> IAS No. 18 "Revenues"

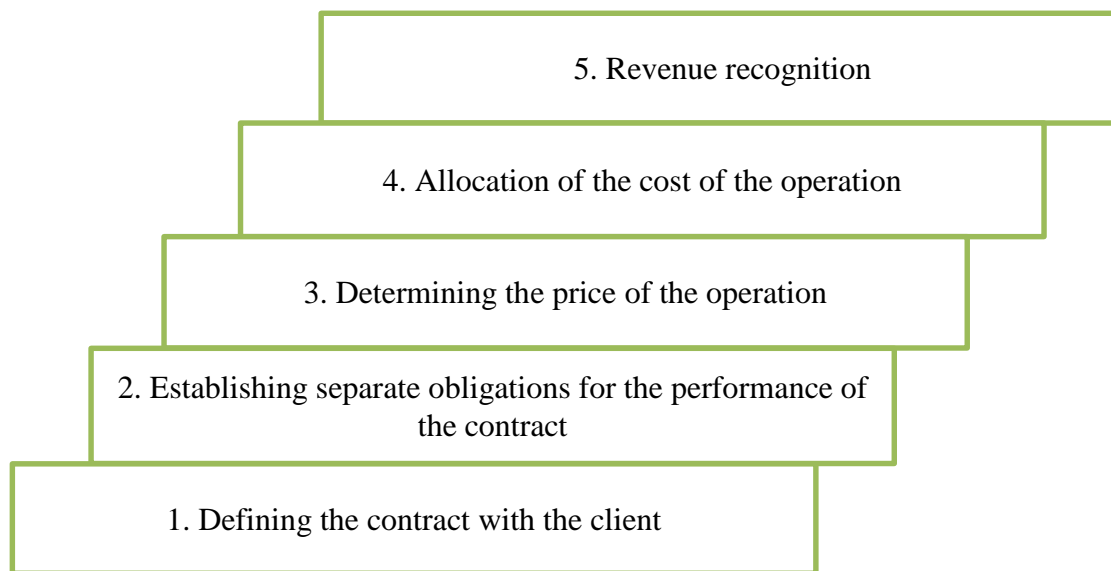
<sup>74</sup> Polozhenie po bukhgalterskomu uchyotu "Dokhody organizatsii" PBU 9/99. It was registered by the Ministry of Justice of the Russian Federation on May 31, 1999. [https://base.spinform.ru/show\\_doc.fwx?rgn=6361](https://base.spinform.ru/show_doc.fwx?rgn=6361)

<sup>75</sup> No. 2 BHMS "Income from main economic activity" // by AV on 26.08.1998. Registered with number 483.

From the information in this table, it can be seen that our current national accounting standard is in line with the conditions for the recognition of income contained in international standards and guidelines of foreign countries.

Although the first column of the table shows the conditions for the recognition of revenues in IAS No. 18 "Revenues", this standard has been canceled today, and from 2018, a new one will replace this and other international standards - No. 15 "Contracts with customers" the international standard of financial reporting was adopted.

In foreign literature, a five-stage model of income recognition based on the 15th IFRS is presented, and these stages of recognition can be seen in the following figure (Figure 2):



**Figure 2. Five-stage revenue recognition model based on IFRS 15<sup>76</sup>**

The conditions for the recognition of income specified in this international standard apply to all contracts, including the activities of oil industry enterprises, except for those specified in separate international standards.

Let's look at examples of recognition and accounting of income from the sale of products in oil-oil products manufacturing enterprises.

The process of selling oil products obtained from the re-production process of technical cotton seed is regulated on the basis of the Decision of the President of the Republic of Uzbekistan "On measures to further improve the management system of the oil and oil sector of the Republic"<sup>77</sup> and measures of sustainable provision of types of raw materials" provides that all legal entities with a state share of less than 50% in the chartered fund will sell cotton and oil products through the commodity exchange. Therefore, the accounting of income from the sale of products in oil-oil enterprises has its own characteristics and differs from other enterprises. This can be seen using the example of an enterprise.

**Example 1.** On August 26, 2022, "East Oil" oil production enterprise sold 2998.8 kg of "Cotton oil 1st grade pressed, refined, deodorized, packaged PET 4.2 kg" product to "Bahodir Kesh Invest" private enterprise. The contract for the product was executed on August 25, 2022, documented by ticket number 5739218, and the payment was made by the enterprise. All invoices issued by the oil company were submitted to the commodity exchange at the end of the day. As a result, on August 29, funds were deposited into the company's account. These processes are reflected in accounting records as follows:

<sup>76</sup> <https://finacademy.net/materials/article/msfo-15-vyruchka-po-dogovorom>

<sup>77</sup> Decision of the President of the Republic of Uzbekistan "On measures to further improve the management system of the oil industry of the Republic". September 7, 2010. PQ-1401.

17.08.2022 y.  
D-t 4010 "Accounts receivable from customers and clients"..... 100000 sum  
K-t 9010 "Income from the sale of finished products"..... 10000000 sum

18.08.2022 y.  
D-t 5110 "Current account"..... 100000 sum  
K-t 4890 "Other receivables"..... 10000000 sum

18.08.2022 y.  
D-t 4890 "Other receivables"..... 100000 sum  
K-t 4010 "Accounts receivable from customers and clients"..... 100000 sum

From this example, it can be seen that although the company received money for the product on August 18, but the revenue from the sale of products is recognized in the accounting of the company on August 17.

No. 2 (IAS) "Inventories" international accounting standard states that "When inventories are sold, the book value of these inventories should be recognized as an expense in the period in which the related income is recognized." Therefore, since this procedure, which is presented in international standards, is also used in our national accounting system, during the period of sale of oil products, their cost is included in the company's expenses.

It can be seen from the practical examples of these oil industry enterprises that the recognition of income from sold products has its own characteristics, and there is a need to improve the issues of their reflection in the accounts. Therefore, in the course of research, we have developed a new format of the chart of accounts for accounting of sales processes in the oil industry enterprises (Table 3):

**Table 3:**

**Recommended accounting systems for accounting of sales processes in oil products manufacturing enterprises<sup>78</sup>**

According to BHMS No. 21 (as applicable)		Recommended	
Account number	Name of accounts	Account number	Name of accounts
4000	Accounts Receivable	4000	Accounts receivable from customers
4010	Accounts receivable from customers and suppliers	4010	Accounts receivable from customers for major products
		4011	Accounts receivable from customers for related products
		4012	Accounts receivable from customers for ancillary products
		4020	Accounts receivable from customers for other transactions
4020	Олинган векселлар	4030	Bills received
9000	Accounts accounting for the income of the main (operational) activity	9000	Accounts accounting for income from the sale of oil products

<sup>78</sup> Author development based on research.

9010	Income from the sale of finished products	9010	Revenues from the sale of the main products
		9011	Revenues from the sale of related products
		9012	Revenues from the sale of ancillary products
<b>9100</b>	<b>Accounts that take into account the cost of sold products (goods, work, services)</b>	<b>9100</b>	<b>Accounts that take into account the cost of oil products sold</b>
9110	Cost of finished goods sold	9110	Cost of main products sold
		9111	Cost of related products sold
		9112	Cost of ancillary products sold

These accounting systems recommended by us for accounting of sales processes in oil and oil production enterprises have the following features:

**First**, the system of accounts 4000-"Accounts receivable" in the current BHMS No. 21 is intended to account for receivables arising as a result of assets sold to customers. Therefore, we recommended naming this system of accounts 4000-"Accounts receivable from customers".

**Secondly**, the accounting system 4010-"Accounts receivable from customers and customers" provides information users with general information on receivables arising from accounts with customers. However, at the same time as the sale of products, other assets, including fixed assets, raw materials, materials, and goods, are sold in enterprises, and all these processes are accounted for according to the current procedure, according to 4010-"Accounts received from customers and customers". As a result, it is not possible to determine the receivables arising from the sale of products from these processes. This does not allow to compile the cash flow statement in direct and indirect ways, which is specified in the international doctrine. Therefore, we believe that it is necessary to reflect this system of accounts in the accounts by dividing them into groups such as 4010-"Accounts received from customers for basic products" and 4020-"Accounts received from customers for other operations".

**Thirdly**, it was proposed to reflect the receivables arising from the sale of oil products in the account according to the types of products sold. That is, we divided the accounts receivable from customers into groups based on the receivables arising from the types of oil and oil products and the income from the sale of the main, ancillary and auxiliary products. Our offer allows you to analyze receivables arising from the sale of finished products by each type of product and by the section of counterparties who buy those products.

We believe that this system of accounts, recommended by us, will serve to correctly reflect the income recognized as a result of the sale of products and the cost of sold products in the accounts of oil-oil products production enterprises, and will make it possible to meet the needs of information users more fully.

#### **V. Discussion and conclusions**

The following conclusions were reached based on the results of the research on improving the methodology of income accounting in the production enterprises operating in the country, in particular, in the oil industry enterprises:

1. Based on the study of the income from the sale of products in oil-oil production enterprises, a classification of the main types of income in oil-oil industry enterprises was developed. According to this classification, the company's income was divided into income from the sale of main products, income from the sale of ancillary products, and income from the sale of auxiliary products. We think that these classification rules serve to transparently reflect information in the oil industry enterprises.

2. In the course of the study, the terms of recognition of incomes given in the international and national standards and regulatory documents of foreign countries were studied and each of them was compared.

3. Product sales processes in oil industry enterprises were studied with the help of practical examples of enterprises, and recommendations were developed for keeping records of sales processes.

We believe that the above proposals and recommendations developed by us will serve to solve the accounting problems of all production enterprises, including more than 500 companies engaged in the production of oil products today, and bring them into line with international standards.

### References

- Decision of the President of the Republic of Uzbekistan "On measures to further improve the management system of the oil industry of the Republic". September 7, 2010. PQ-1401.
- The Decision of the President of the Republic of Uzbekistan "On measures to provide the sectors of the country's economy with products and raw materials that are in high demand". January 17, 2018. PQ-3479.
- Decision of the President of the Republic of Uzbekistan "On measures for rapid development of the oil industry". January 19, 2018. PQ-3484.
- The Decision of the Cabinet of Ministers of the Republic of Uzbekistan "On approval of the Regulation on the structure of costs of production and sale of products (works, services) and the procedure for forming financial results". February 5, 1999. No. 54.
- Polozhenie po bukhgalterskomu uchytu "Dokhody organizatsii" PBU 9/99. It was registered by the Ministry of Justice of the Russian Federation on May 31, 1999. [https://base.spinform.ru/show\\_doc.fwx?rgn=6361](https://base.spinform.ru/show_doc.fwx?rgn=6361)
- IFRS No. 15 "Revenues from contracts with customers".
- IAS No. 18 "Revenues"
- Conceptual framework for preparation and presentation of financial statements. It was registered by the Ministry of Justice of the Republic of Uzbekistan on August 14, 1998. No. 475.
- No. 2 BHMS "Income from main economic activity" // by AV on 26.08.1998. Registered with number 483.
- No. 4 BHMS "Inventories" // by AV on 30.06.2020. Registered with number 3259. <https://lex.uz/docs/4890446>
- Kalonov M.B. Improving the methodology of accounting and analysis of income and expenses in enterprises (in the case of motor transport enterprises). Doctor of Economics (DSc) Dissertation Abstract. -T.: 2019. Page 28.
- Orishev Q.O. The practice of keeping an account of undistributed profit for the reporting period in oil production enterprises. // The main directions of ensuring the country's economic security. Republican scientific and practical conference. 2019
- Temirkhanova M.J. Improving the methodological basis of accounting and analysis of tourist products. Doctor of Science (Doctor of Science) thesis abstract. -T.: 2020.
- <https://marketpublishers.ru/lists/12213/news.html>
- <https://oleoscope.com/news/agrojekspport-rossija-velichila-postavki-maslozhirovoj-produkcii-za-rubezh-v-denezhnom-vyrazhenii-v-2021-g/>
- <https://yogmoy.uz/uz/post/view?slug=243-million-dollar-mikdorida-eg-moj-masulotlari-eksport-kilindi>
- [https://www.audit-it.ru/terms/accounting/dokhody\\_budushchikh\\_periodov.html](https://www.audit-it.ru/terms/accounting/dokhody_budushchikh_periodov.html)
- <https://finacademy.net/materials/article/msfo-15-vyruchka-po-dogovoram>



# ANALYSIS OF THE POPULATION'S NEED FOR HALAL FOOD IN RESTAURANTS (RESULTS OF RESEARCH CONDUCTED IN THE CITY OF BUKHARA)

Sharifova Shahloxon Shavkatovna  
PhD student of Bukhara State University

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## ABSTRACT:

**Introduction.** Halal food is not only a religious value, but today it has reached the level of food quality indicator. The increase in the Muslim population in the world again and again raises the issue of halal food to the governments of countries that profess this religion and the majority of the population of which is not Muslim. The introduction of Muslim-friendly service in halal restaurants, which is the main need of Muslim tourists and Muslim residents, is considered relevant today. The main goal of the study covered in this article is the level of the population's need for the introduction of halal food in the restaurants of our country, where the majority of the population professes Islam and pays great attention to the development of pilgrimage tourism, which is the concept of halal in the minds of consumers, and halal is getting information about knowledge of the level of knowledge about restaurants. A survey was used to obtain feedback from consumers. Based on the results of the survey, directions and recommendations for the further development of the restaurant industry in Bukhara were given.

**Methodology.** Taking into account the ease of understanding the content of the study by the respondents and saving time compared to the answers, for the sake of clarity of reflection of the results, 7 questionnaires with multiple choice answers were compiled and final conclusions were presented.

**Research results and analysis.** The questionnaire questions were sent from social networks via the Telegram messenger. The survey was conducted online for 10 days through a social network. Those interested in the results of the survey provided links to additional Telegram groups. On the basis of the questionnaire, we collected the necessary information for our study and, based on them, presented conclusions and suggestions.

**Summary.** While most people have a craving for halal food, they don't have the skills to determine its halal level. In the process of eating in restaurants, people are content with information from service personnel about the presence of pork and derivatives in the product. However, one of the main and basic requirements for a halal restaurant is the presence of a halal certificate.

**Key words:** halal food, halal certificate, halal restaurant services, Muslim-friendly comfort, quality of service.

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## Introduction

The food industry, like any other industry, responds to the demands and needs of consumers. People all over the world are now more aware of food, health and nutrition. They are interested in eating healthy foods that are low in calories, cholesterol, fat and sodium. Many people are in favor of growing food organically, that is, without synthetic pesticides and other unnatural chemicals. Today, many countries (USA, Canada, European countries, Asian and Central Asian countries) in whose society ethnic and religious diversity is welcomed, have Chinese, Japanese, Italians, Indians, Mexicans, Seventh-day Adventists (belonging to the Protestant movement), products are being adapted nutrition to make foods suitable for various groups such as vegetarians, Jews and Muslims.

The main goal of the Decree of the President of the Republic of Uzbekistan dated February 9, 2021 "On

measures to develop domestic and pilgrimage tourism in the Republic of Uzbekistan” No. PF-6165: “Tourist products and diversification of services, increasing their competitiveness, creating an acceptable and comfortable environment for domestic and international pilgrimage tourism, ... wide promotion of tourism products, as well as strengthening the image of our country as a safe destination for travel and recreation. The decree is focused on meeting the needs of the pilgrimage tourism segment. The need of this layer for halal food is considered primary. Not only Muslim tourists coming from abroad, but also a large part of the population living in our country, the main issue is the purity of food. Since 2017, Uzbekistan has been implementing the "Halal" standard for food products. However, in our country, like in Malaysia and Indonesia, it is not common to see the "Halal" certificate in restaurants, in other words, this certificate is not widely popular in our country. In our opinion, one of the main reasons for this is that, despite the fact that the concept of halal nutrition has been scientifically researched in developed and rapidly developing countries, there is not enough scientific research and practical promotion of halal nutrition in our country.

There is currently limited research on halal food in Uzbekistan, including a lack of consumer awareness of the importance of halal certification and the relationship between halal products and food safety. Therefore, studies aimed at studying halal food services for consumers, as well as the level of importance of halal certification and the willingness of consumers to pay extra for halal products, remain relevant.

Research objectives and questions. The main purpose of this study is to study the importance of the quality of halal food and consumers' willingness to pay extra for halal restaurant services.

Nowadays, consumers around the world tend to rely on a halal label or certificate, but in our country, despite the fact that the majority of the Muslim population is halal, only the meat of animals not prohibited by religion is allowed, except for pork, it is considered halal. As proof of our opinion, we see that in market stalls, restaurants and other catering establishments, having a halal certificate before eating, preparing food in accordance with the principles of halal cooking, and providing services are often overlooked.

**Methodology.** To achieve the research objectives, the following research questions were formulated:

1. What is your attitude to the principle of Halal?
  - a) halal product is beneficial for health;
  - b) halal product is a religious value;
  - d) halal product is a national value;
  - e) I consider all products to be halal.
2. Do you have the knowledge and skills to determine the integrity of food products?
  - a) Yes;
  - b) No;
  - d) Not very well.
3. Do you pay attention to the Halality of products when you eat?
  - a) Yes;
  - b) No;
  - d) Not so much.
- a) 4. Which attributes do you focus on when choosing halal products?
  1. Slaughter method;
  2. Place of purchase;
  3. The opinion of acquaintances;
  4. Halal certificate.
  5. In your opinion, should food be more expensive if it is halal?
    - a) Yes;
    - b) No;
    - d) Not so much.
  6. Are you ready to pay extra (for example, more than 100 thousand soums) for a halal product?
    - a) Yes;
    - b) No;
  7. Do you know about Halal restaurants in Uzbekistan?
    - a) Yes;
    - b) No.

**Survey participants and data collection.** Attention was paid to potential restaurant service consumers living in Bukhara as an object of the survey. The team of Bukhara State University, i.e., 193 volunteers, consisting of teaching staff, their family members and students, took part in this survey.

The questionnaire questions were sent from social networks via the Telegram messenger. Despite the foreign focus, Telegram is currently the most interesting messenger in our region. This is not just a private messaging tool, but a whole communication platform with content and bots. Almost all state and non-state organizations of our country communicate through their official and unofficial Telegram groups. In addition, conducting research on the basis of tools of the Google platform is also widely popular among the intelligentsia of the population. In order to make our survey simple and to attract the widest possible audience, we tried to use the online survey panel of the Telegram social network. The survey was conducted online for 10 days through the social network. Those interested in the results of the survey provided links to the survey to additional Telegram groups.

Survey reminders were sent 3 times to groups with a total of 547 members. Participation of the participants in the survey was voluntary and anonymous, and the sense of belonging to the results of the survey and a responsible approach to the survey were emphasized to the potential participants as an introduction to the survey. Anonymous responses were also received verbally from managers of 5 restaurants. As a result, the response rate was 35.2%, which is considered a low enough result. Cole (2005), low response rates for online surveys are mainly observed in small businesses. (William, 2003) A low response rate is also noted in the hospitality and related industries (Cho et al. 2006; Moncarz & Kay, 2005). Some reports argue that response representativeness is more important than response speed (Sax et al., 2003). Thus, in general, in Uzbekistan, especially in the city of Bukhara, research on the introduction of halal services in restaurants has not been studied enough to date, and given that the respondents are not interested in the survey, we are sure that the figure of 35% is good.

**Analysis and results.** 56% of the survey participants were women, 44% were men. It is noted that their age is 20-30 years (51%), 31-45 years (40%), 46 years and older (9%). The level of education corresponds to 7% secondary specialized, 91% higher and 2% have qualification certificates at advanced training courses of various non-medical organizations. When asked about monthly income, 36% of respondents answered that 3 million hryvnia. up to soums, 44% up to 5 million soums and 20% up to 7 million soums and fixed excess income.

An entrepreneur who does not know his target audience is like a blindfolded traveler in an unknown direction. If he finally gets to the right place, he will stumble and fall several times. Or the chosen path may be completely wrong. In the same way, a business leader operates blindly and usually makes one mistake after another. Of course, the scenario is not always pessimistic: decisions made intuitively sometimes turn out to be correct. However, it should be recognized that it is much safer to act deliberately, relying on objective information about the market and target audience, and not on luck. Then your actions will be correct, and their consequences can be predicted. It can be noted here that the portfolio of the segment of the population interested in halal food is as follows: most of them are young and middle-aged, with higher education, and their monthly income is about 450-500 dollars.

Islam is the second largest and fastest growing religion in the world, and today more than 1.9 billion people living on the earth believe in this religion. The Muslim population will reach 2.2 billion by 2030. (the Pew Research Center's Forum on Religion & Public Life). Islam is not just a religion of rituals and customs, it is a way of life. The life of a Muslim is governed by laws and morals. In Islam, food is the worship of God (faith), just like other forms of worship. Foods that comply with Muslim dietary rules and standards are called halal (legal or permitted). Muslims are commanded to eat good quality halal food. How consumers understand the word halal reflects important information for halal restaurant managers and owners in the future about how they should behave and what aspects they need to focus on. We decided to clarify this issue through question 1 of our questionnaire.

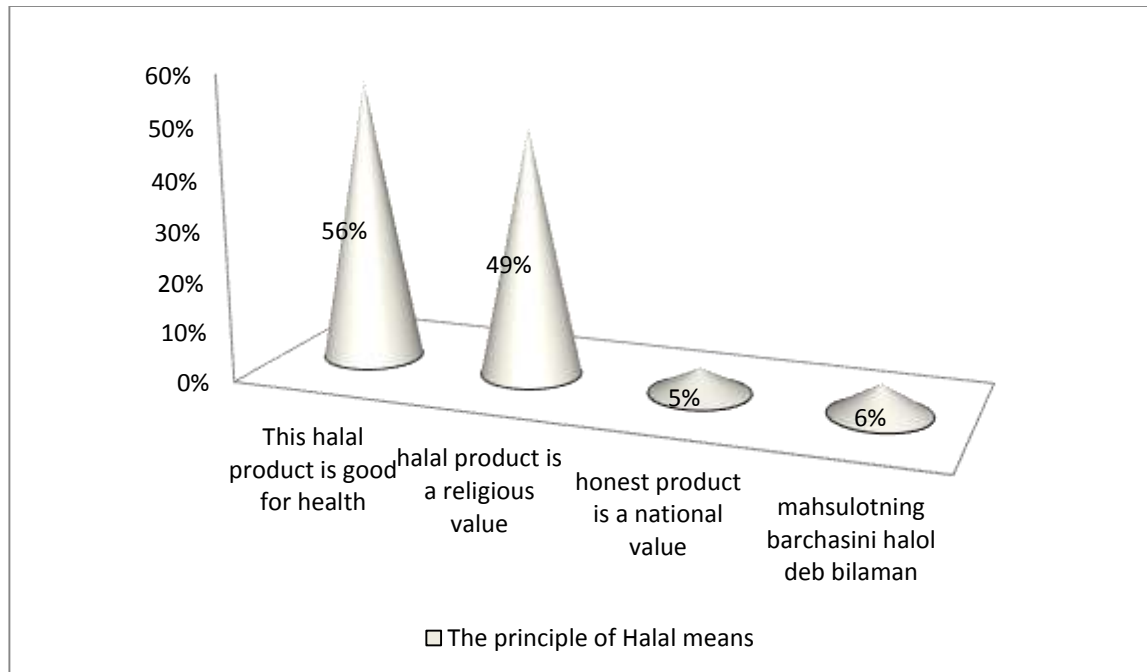


Diagram 1. What is your attitude to the principle of Halal?

Source: author`s development

It can be clearly seen from the diagram that people consider halal food to be food free of various chemical and artificial additives, prepared and presented according to sanitary and hygienic requirements, and consider it useful for health. The concept that halal food is harmless for health has already been formed in the minds of consumers in the research conducted in the field all over the world.<sup>79</sup> Attaching the word halal to religious values is also a common situation. The basis of this can be explained by the fact that this word comes from the Arabic language and the existence of several issues related to the category of halal from the Islamic religion (halal treatment, halal trade, halal food, halal wealth, etc.).

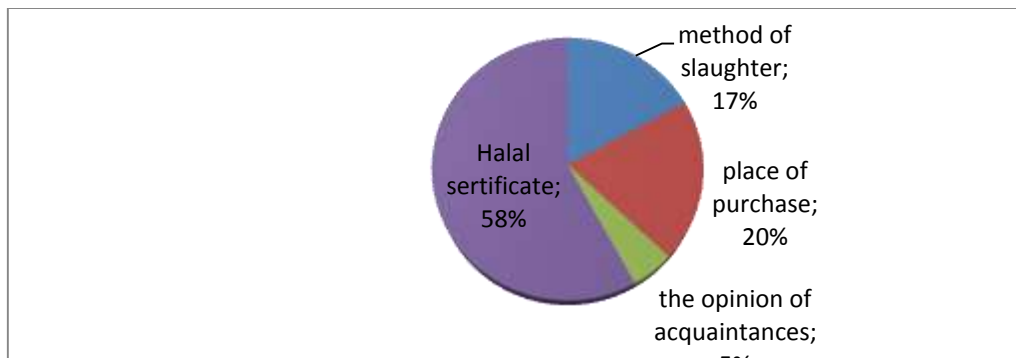
52% of the respondents answered "yes", 12% "no", and 36% "not very good" to the question about the ability to determine the integrity of food products. In international experience, there are several methods for determining the integrity of a product. These are: halal certificate, based on laboratory devices and experts' opinions that allow determining whether a product is halal from its composition, based on QR codes of mobile devices and products, based on intuitive and personal views (information determined through personal interviews). Although the majority of people feel the need for halal food, they do not have the skills to determine its halal level. In the process of eating in restaurants, people are satisfied with information from the service employee about the presence of pork and its derivatives in the product. However, one of the main and basic requirements of a halal restaurant is to have a halal certificate.

"When you eat, do you pay attention to the halal quality of the product?" 83% of the respondents answered "yes, of course", 3% "no", and 14% "I don't think about it". Please answer this question positively. It shows that we were able to choose the target audience correctly. Our conclusion from this point is that the majority of the population wants to eat halal products and it indicates an increase in the demand for halal restaurant services.

The meaning of the concept of halal or haram products is mentioned in the Holy Qur'an, it is emphasized in the Sunnah practices that have reached us through the hadiths, and these Islamic rules are strengthened by the Sharia fatwa (ruling). Today's modern science clearly proves that "halal food" is not just a religious phrase, and

<sup>79</sup> Mohd Hafiz Zulkar, et el. Conceptual Framework on Halal Food Supply Chain Integrity Enhancement. Procedia - Social and Behavioral Sciences. Volume 121, 19 March 2014, Pages 58-67

once again emphasizes the existence of the foundations of this ruling aimed at human health, mental and physical perfection. The purpose of our next question was to determine the main characteristics of halal products.



2-Diagram. What attributes do you focus on when choosing halal products?

Source: author`s development

Halal certificate is the main means of using the restaurant's services (58%). Therefore, the majority of consumers consider the existence of a halal certificate in restaurants as a basic requirement and recognize it as the main evidence of the product's halal quality. Nevertheless, in the process of an official interview conducted on the phone with the official of the Uzstandart Agency, it was mentioned that not a single restaurant in our republic has received the halal certificate provided by the UzSTD Agency until September 2021. During the anonymous interview with restaurant managers, it became known that the presentation of the halal certificate by the meat and meat products suppliers of the restaurant is sufficient for hanging the "Halal" label on the counter of the restaurant building. It will be the reason. It can be concluded from the above diagram that characteristics such as the method of slaughtering animals and the place of purchase of the product contribute significantly to the recognition of food as halal.

In order to determine the willingness of consumers to pay extra for a halal product, we asked the following question: "Do you think that food should be more expensive if it is halal?" We witnessed that 46% of the respondents gave a positive answer and 56% gave a negative answer to the question. It is known that more than half of the respondents consider the difference between the prices of halal products and non-halal products in restaurants inappropriate. In the researches conducted in Muslim countries, studies were conducted that showed people's willingness to pay more than usual for halal products.

The slightly negative difference in our research can be explained as follows:

- Due to the fact that the majority of our population is Muslim, it is considered as a value that the main food products come from a halal source;
- Due to the fact that it is relatively inconvenient to raise pigs in our region, non-halal products due to the fact that feeding and breeding this creature, which is considered the basis of many non-halal products, is more expensive than raising and caring for sheep and cows. the opinion that it does not justify itself in the industry;
- It is explained that the traditional composition of our main national dishes is free of non-halal products as a national value;
- Due to the fact that the majority of our population is Muslim, the food industry and service industries are also believed to be conducted based on Muslim moral norms;
- Due to the fact that people are sure that they can determine whether the products are halal based on their personal experience, they do not consider the labels proving the halal of the product to be important, etc.

46% of positive comments indicate that the existence of a halal certificate for restaurants will increase its image among Muslim consumers. And to entrepreneurs operating in the field, the halal certificate has once again proven itself as the main element for long-term profitable activity in the market.

70% of the respondents were willing to pay an additional 100,000 soums (average \$10) for a halal product. 30% of responses indicate that they are not ready to pay extra for a halal product. That is, most people eat in a restaurant if there are special signs proving that it is halal (for example, a halal certificate, a halal inscription, words indicating that it is free from pork and alcohol products, writings, etc.). they are ready to pay extra. This serves as an incentive for the restaurant administration to obtain a halal certificate. The existence of a halal certificate in restaurants serves as a sign of honesty, harmlessness and cleanliness for local residents and foreign tourists. Despite the fact that the majority of the population of our country is Muslim, most of the food products in our markets do not have a halal certificate. Some products have a halal certificate label provided by the organization responsible for halal certification issues of the Republic of Kazakhstan. Based on the halal standards, which have been in use since 2018, the leading food production enterprises of our country are now obtaining halal certificates from the LLC "Uzbek-Turkish Test Center" JV. LLC "Crafers" and "Tokhtanyoz ota" FX are among them. It should be noted that 6,581 food producers in the UAE and 120 in the Kyrgyz Republic have obtained the halal certificate. In accordance with the Law on "Provision of Halal Products" adopted in Indonesia in 2014, all products in the country must meet the requirements of halal standards and be marked with a halal label.

Judging from the following answers, 44% of people in Uzbekistan have information about halal restaurants, and 56% said that they do not have such information. Based on the above norms of behavior that have been formed as a national and religious value, as well as the fact that the halal certificate has not been introduced in Uzbekistan for a long time and the majority of the population is not aware of it, it is difficult for restaurants to provide halal services to the general public and halal requires the introduction of marketing practices to stimulate the demand for the product. As such marketing practices, we believe that it is appropriate to use levers that promote sales, such as "halal product-safe product", "halal-health guarantee", "halal-ecological food", which are widely used in practice in the international food market. For this, it is necessary to form a view of the halal category not only as a religious but also as a rational concept.

**Conclusion.** In the wide implementation of the "Halal" certificate, first of all, we consider it appropriate to scientifically research the category of "Halal" and focus the attention of the masses of consumers on it as a synonym of the concept of "useful" on a global scale instead of looking at it only as a religious concept.

1/3 of the participants in the study admitted that they have low ability to distinguish halal products from their alternatives. Ways to improve these skills were found in countries where the majority of the population is Muslim (Malaysia, Indonesia, Saudi Arabia, etc.), studying these experiences and putting them into practice in accordance with the conditions of Uzbekistan will give positive results. The presentation of the product through the principles of halal is based on the desire expressed by the majority of participants in our research, which indicates the importance of scientific and practical research in this regard and the size of the market for Muslim food suppliers in our country.

In conclusion to the above, we found it necessary to rate halal "eating" as "one of the primary needs necessary for human life and activity, and the main factor underlying his physical and mental maturity." There is a need of the population to introduce the halal certificate in restaurants and to popularize it widely. Due to the national mentality and other reasons, we believe that interest in the existence of the certificate or increasing interest in its existence is one of the aspects that should be focused on in future research.

More than half of the respondents believe that the difference between the prices of halal products and non-halal products in restaurants is inappropriate. In the studies conducted in Muslim countries, it was noted that people are willing to pay more than usual for halal products. We considered it permissible to cite national, religious, cultural values and consumer's ability to pay as the main reasons for this.

Due to the fact that the product is halal, it should be noted that consumers tend to make additional purchases in restaurants or additional costs for product reliability. Additional purchases of customers will be an additional source of income for service providers.

It is necessary to popularize the types of national and foreign halal certificates, their mutual differences, the

essence of the content, the sphere of influence and concepts such as halal in restaurants to the general public of consumers, and thereby expand the worldview of halal products and services in the minds of consumers, we believe.

In order to encourage the production of products based on the halal standard in Uzbekistan, we believe that it is necessary to increase the number of halal certification laboratories, to strengthen the trust in the minds of consumers, and to spread more light on the activities of these laboratories and inform the public more about them. By obtaining a halal certificate in restaurants, it would be appropriate to provide services to a wider segment.

#### References:

- Decree of the President of the Republic of Uzbekistan on MEASURES FOR FURTHER DEVELOPMENT OF DOMESTIC AND TOURIST TOURISM IN THE REPUBLIC OF UZBEKISTAN, No. PF-6165 dated 09.02.2021 <https://lex.uz/docs/-5283956>
- Ahmed W. et al. Consumer behaviour towards willingness to pay for Halal products: An assessment of demand for Halal certification in a Muslim country //British Food Journal. – 2018. <https://www.researchgate.net/publication/328391456>
- Battour, M., Ismail, M., & Battor, M.. Toward a Halal tourism market. Tourism Analysis. 2010. <https://www.researchgate.net/publication/233666848>
- Cho, S., Erdem, E., & Johanson, M.M. (2006). Hospitality graduate education: A view from three different stakeholder perspectives. Journal of Hospitality and Tourism Education, 18(4), 45-55.
- Cole. S. T. (2005). Comparing mail and web-based survey distribution methods: Results of 16 of 28 surveys to leisure travel retailers. Journal of Travel Research, 43, 422-30
- Ibrahim, S., & Othman, M. (2014). Developing and validating halal service quality instrument for Malaysian food service establishments: A conceptual paper. Procedia - Social and Behavioral Sciences, 130, 400–408. doi:10.1016/j.sbspro.2014.04.047.
- Maimaiti, M., Zhao, X., Jia, M., Ru, Y., Zhu, S. (2018). How we eat determines what we become: Opportunities and challenges brought by food delivery industry in a changing world in China. European Journal of Clinical Nutrition, 72, 1282–1286.
- Moncarz, E., & Kay, C. (2005). The formal education and lodging management success relationship. Journal of Hospitality and Tourism Education, 17(2), 36-45.
- Mohd Hafiz Zulkar, et el. Conceptual Framework on Halal Food Supply Chain Integrity Enhancement. Procedia - Social and Behavioral Sciences. Volume 121, 19 March 2014, Pages 58-67.
- Moncarz, E. & Kay, C. (2005). The formal education and lodging management success relationship. Journal of Hospitality and Tourism Education, 17(2), 36-45.
- Nassir Shaari, Jamal Abdul, Muhammad Khaliq, and Fahdlina Aleefah. "Halal restaurant: what makes Muslim in Kuching confident?" Journal of Economic Development, Management, IT, Finance & Marketing 6.1 (2014).
- Navruz-Zoda, Bakhtiyor and Navruz-Zoda, Zebiniso (2016) "The Destination Marketing Development of Religious Tourism inUzbekistan," International Journal of Religious Tourism and Pilgrimage: Vol. 4: Iss. 7, Article 3.doi:10.21427/D7G01XAvailable at: <https://arrow.dit.ie/ijrtp/vol4/iss7/3>.
- Pedro Liberato et el. Global and Recent Trends in Halal Tourism. <https://www.researchgate.net/publication/343294397> [Global and Recent Trends in Halal Tourism](https://www.researchgate.net/publication/343294397)
- Vloreen Nity Mathew, Ardiana Mazwa Raudah Binti Amir Abdullah, and Siti Nurazizah Binti Mohamad Ismail. "Acceptance on Halal Food among Non-Muslim Consumers" Procedia - Social and Behavioral Sciences, vol. 121, 2014. doi:10.1016/j.sbspro.2014.01.1127

- Zannierah Syed Marzuki, Sharifah, Colin Michael Hall, and Paul William Ballantine. "Restaurant manager and halal certification in Malaysia." Journal of Foodservice Business Research 15.2 (2012): 195-214.
- <https://www.outsidethebox.ms/18324/>
- <https://www.kp.ru/guide/provedenie-oprosov.html>
- <https://www.crescentrating.com/>



# HOW DID THE SYSTEM OF HIGHER EDUCATION DEVELOP IN UZBEKISTAN?

Mukumova Nargis Nuriddinovna - independent applicant  
International University of Tourism and Cultural heritage "Silk Road"  
nargismuk85@gmail.com

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## ABSTRACT:

This article is devoted to reforms in the system of higher education during the years of independence to the present day. Higher education is the cornerstone of a country's sustainable development. The article highlights the achievements and prospects in the system of higher education in Uzbekistan. The role of higher education in raising the socio-economic level of the country is described. The paper studies topical issues of improving the activities of higher educational institutions. An attempt was made to study the current state of higher education and the most important strategic tasks facing it, which directly affect the methods, content, and also the creation of an intellectual environment for future bachelors and masters. The article proposes a number of proposals for improving the education system and developing human capital in the new prevailing conditions in the country.

**Key words:** higher education, reforms, Uzbek model of education, modernization of the system, concept of higher education, foreign experience, access, quality, science, technology, development.

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## Introduction

In our time, education plays a key role in a person's life, since with its help people can achieve incredible heights, build their own career, be in demand and professional specialists in their field of activity. Education should develop in a person the ability to believe in himself, help him achieve all his goals, and also have a confident and realistic outlook, moving forward.

Continuous education is something that a person must learn throughout his life, which means that with the help of education we can expand our horizons, namely: to study the traditions, culture of different countries of the world, attend exhibitions and seminars, read scientific and journalistic and classical literature. All of the above is for us an inexhaustible source of knowledge in a completely unfamiliar area for a person, he discovers new things, changes his point of view, looks at the world and many things differently.

Education helps a person to reveal his potential, to learn something new, to be literate and moral. If every day a person raises the bar, achieves new heights, improves himself, looks for answers to questions of interest, then this will provide him with a comfortable, bright, eventful life.

Modern society lives and develops in a rapidly changing world. The reality is that constant development has become a necessary condition for human existence. The main mechanism of such development is the system of higher education, the well-being of the population of the state, its economic stability and foreign policy status depend on how much higher education meets the current needs of the time.

The modern society of Uzbekistan lives and develops in a rapidly changing world, the reality is that the constant improvement of economic sectors and the social sector has become a necessary condition for the country's progress. The Republic of Uzbekistan is confidently and dynamically moving towards achieving its main goal - joining the ranks of developed democratic states. The main mechanism of such aspiration is the system of higher education, built on the processes of systematization, creative processing and use of the experience of

previous generations. In the conditions of a new stage of development, higher education must meet the current needs of society. Under the new conditions, higher education is one of the priorities of the state. In the context of improving all spheres of socio-economic life, the formation of civil society institutions in the country, an important factor is the further development of higher educational institutions, which provide an innovative breakthrough in all areas of activity through the training of qualified personnel.

In our country, from the first years of independence, the issue of developing the system of education and upbringing has been raised to the level of state policy. "Today, in the field of education and upbringing, in the life of our children, a new time is coming. Filling it with a new, even deeper meaning and content, achieving national progress depends only on ourselves, on the unity and cohesion of our people, on our tireless, hard work," emphasized the President of the country Sh.M. Mirziyoyev. [1]

### **Literature review.**

The transition of the national economy to market relations has increased the attention of scientists - economists to the market of services, including educational ones. Evidence of this is the numerous publications of scientists related to this issue. The revealed variety of approaches to the correlation of the phenomena "educational activity" and "educational services" requires an appeal to the essence of the phenomenon itself in the provision of services.

The issues of the need to attract talented youth to universities, the development of scientific, educational work in the departments and the strengthening of ties with production, including with representatives of the private sector, issues of international cooperation in the field of training competitive personnel, issues of the need to improve personnel training in the new conditions are considered in the works Academician of the Academy of Sciences of Uzbekistan Abdurakhmanov K.Kh., Zokirova N.K. , Khakimova N.Kh., Ruziyeva R.Kh., Shermukhamedova A.T.

The theoretical understanding of the issues of improving the work of higher education as an important factor in the sustainable development of the country is devoted to the works of the following authors: Dzhaparova R, Lukashenko M, Morozova, A.V., Patrukhin A.P., Sattarov S.A., Odilov T., Rakhimova D.N., Baratov R.U., Ramatov Zh.S., Vokhidova N.Kh., Khalikova Z.M. and many other scientists.

An analysis of the literature showed that there is no consensus on what is considered an educational service. The multifaceted application of the conceptual category "educational service" has led to the creation of a number of ideas.

R. Dzhaparova argues that an educational service is an activity transfer of systemic knowledge and the inculcation of practical skills tested by experience for a certain type of occupation through direct communication with the student. [8]

According to M. Lukashenko, an educational service is a set of expedient activities that satisfy the subject's need for education, and intermediate educational products in the form of a thing that accompany such activities. [9]

According to A. V. Morozov, educational service is a process of formation of various human abilities for work, i.e. investing in human capital, which takes the form of a complex good. [10]

A.P. Pankrukhin speaks of an educational service as a complex of such services that are directly related to the implementation of the main goals of education, the implementation of its mission. [11]

Thus, most judgments speak of an educational service as:

1. the process of creating human capital (a set of knowledge, skills that contribute to the realization of cognitive interests, personal development);
2. transfer of knowledge to individuals, the formation of knowledge growth.

It can be assumed that these two interpretations most holistically reflect the essence of the analyzed concept and are a kind of "skeleton" of the definition of "educational service".

## Methodology.

At present, large-scale reforms are being carried out in Uzbekistan, which radically changed the structure, essence and content of the education system, and covered all its levels, directions and components. In the shortest possible time, a legal framework for transformations was created, the priorities of which are the growth of investments and investments in human capital.

The basis for the transformations was laid by the Law "On Education" and a document of historical importance - the National Program for Personnel Training, approved in 1997. The adoption of the National Program for the Training of Personnel contributed to the gradual integration of the educational system of the country into the world educational process.

Creating its own National model of education, Uzbekistan was based on the already justified experience of countries with elite education, including the provisions of the Bologna process, of which Uzbekistan is not officially a participant. The main feature of the National Model is the continuity of education. That is, a person has the possibility of obtaining knowledge, professional skills and specialties throughout his life. [2]

According to the National Personnel Training Program, the following stages are distinguished:

The first stage (1997-2001) is the creation of legal, personnel, scientific, methodological, financial and material conditions for its reform and development on the basis of maintaining the positive potential of the existing personnel training system.

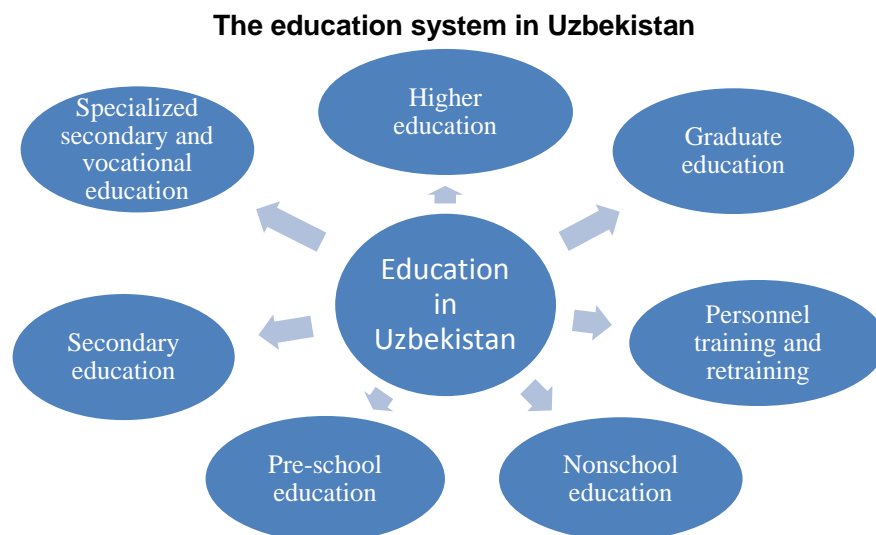
The second stage (2001-2005) is the full-scale implementation of the National Program, its adjustment considering the accumulated experience of implementation, the development of the labor market and real socio-economic conditions.

A complete transition is being made to compulsory general secondary and secondary specialized, vocational education, as well as to differentiated education, based on the abilities and capabilities of students. The mechanisms of formation of the market of educational services are fully involved.

The third stage (2005 and subsequent years) is the improvement and further development of the personnel training system based on the analysis and generalization of accumulated experience, in accordance with the prospects for the country's socio-economic development.

Schematically, the education system in Uzbekistan can be represented as (Figure 1)

Figure 1



Source: compiled by the author

The training of personnel with higher education is carried out in higher educational organizations (universities, academies, institutes, higher schools). Higher education in our country is carried out in two ways.

The first is state grants, when students study at the expense of the state. Winners of international and republican Olympiads, international competitions in general education subjects have the right to enroll in universities without tests.

The second is study on a contract basis. Applicants who successfully passed the test, but did not fall into the group of students on a budgetary basis, i.e. at public expense, it is possible to study under a contract by concluding an agreement with the administration of the university. The university guarantees a high level of quality of training, the applicant undertakes to comply with the requirements of the state educational standard, the charter of the university, pay a fee for his education within a certain period, or enterprises, organizations, firms, and other institutions can transfer it to the account of the university.

Higher education has two levels - bachelor's and master's degrees.

A bachelor's degree is a basic higher education that provides in-depth knowledge, skills and abilities in one of the areas of higher education, with a duration of study of at least three years.

Master's degree is a higher education in a specific specialty on the basis of the corresponding bachelor's degree with a duration of study of at least one year.

The list of specialties of the magistracy and the corresponding areas of undergraduate education is established by the authorized body of state administration in the field of education. Citizens have the right to receive a second and subsequent higher education on a contractual basis. [2]

In particular, close attention is paid to the development of higher education in the country in the conditions of the formation of the economy. This is evidenced by the adoption of a number of government documents adopted over the past 3 years, which contribute to raising the level of the higher education system:

1. Decree of the President of the Republic of Uzbekistan "On measures for the further development of the higher education system" No. PP-2909 dated April 20, 2017 [3]

2. Decree of the President of the Republic of Uzbekistan "On additional measures to improve the quality of education in higher educational institutions and ensure their active participation in the country's large-scale reforms" No. PP-3775 of 06/05/2018. [4]

3. In the Decree of the President of the country "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" dated February 7, 2017, a number of tasks were identified for the development of the social sphere, in particular, the sphere of education and science. The document provides for strengthening the material and technical base of educational institutions, building new ones, reconstructing and overhauling existing ones, equipping them with modern educational and laboratory equipment, computers and teaching aids.

A program was developed to radically improve the system of higher education in 2017-2021, work was carried out to further improve curricula, gradually increase the independence of higher education institutions by expanding their powers to use additional sources of funding and provide paid services. [5]

4. In addition, the President of the Republic of Uzbekistan Sh.M. Mirziyoyev issued a Decree "On approval of the concept for the development of the higher education system of the Republic of Uzbekistan until 2030", which identifies key areas for the comprehensive reform of higher education in the country.

The government is determined to ensure the implementation of measures to ensure that by 2030 at least 10 Uzbek universities enter the first 1,000 positions of the list of higher educational institutions in the ranking of internationally recognized organizations (Quacquarelli Symonds World University Rankings, Times Higher Education or Academic Ranking of World Universities). [6]

## **Results.**

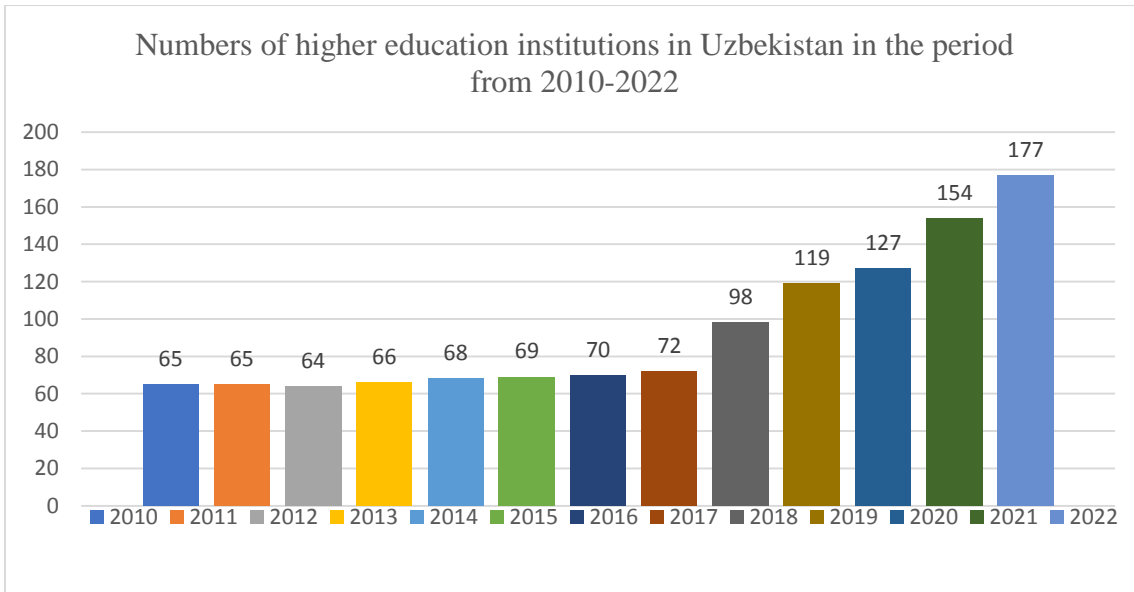
In 2022, the population of Uzbekistan exceeded 35.3 million people. 29.9% of the population is aged 15 and under, and 33.5% is under the age of 18. The vast majority of the population are young people, in connection

with this there is a high demand for higher education.

Currently, there are only 177 higher educational institutions in the republic, including 34 universities, 48 institutes, 3 academies, 27 branches, 1 conservatory, 31 branches of foreign universities, 33 non-state higher educational institutions. The dynamics of growth in the number of higher education institutions for the period from 2010-2022 is shown in the figure (table 1):

**Table 1**

**Number of higher educational institutions in Uzbekistan in the period from 2010-2022**



*Source: Statistics Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan*

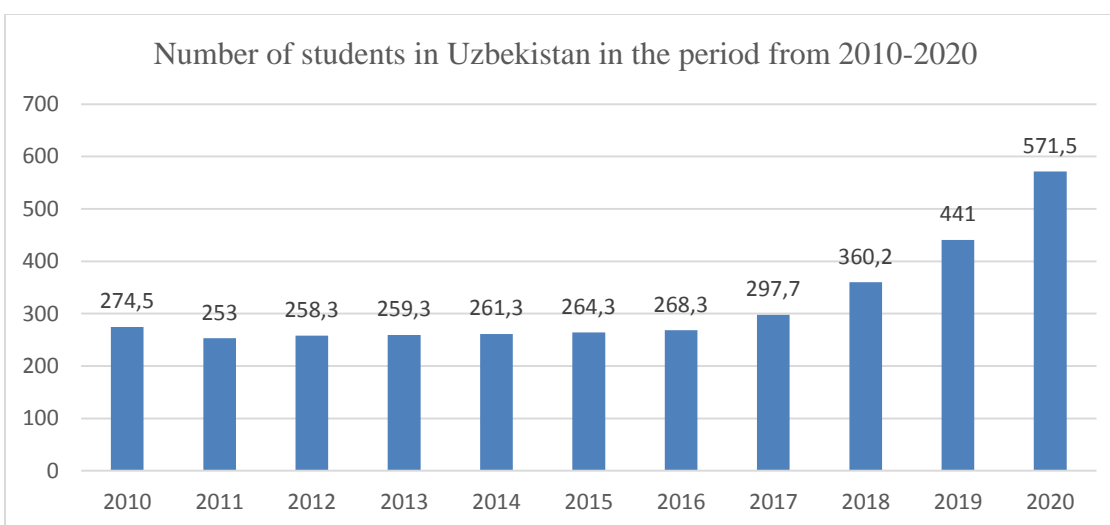
Between 2008 and 2020 the average cost of education per student has increased by more than 2.5 times, but is still significantly inferior to similar indicators in other developed countries.

If until 2018 about 9.5% of graduates of secondary educational institutions were admitted to universities, this academic year, due to the admission of more than 146 thousand students for the first year, the level of enrollment in higher education reached 20%. Next year, this figure is planned to be increased to 25%, by 2030 - up to 30%.

The total number of students studying in higher education institutions in the period from 2010-2020 is shown in the figure (table 2)

Table 2

### Number of students in Uzbekistan in the period from 2010-2020



Source: Statistics Ministry of Higher and Secondary Specialized Education of the Republic of Uzbekistan

In Central Asia, in terms of the number of universities, Uzbekistan has the second indicator, after Kazakhstan, and among the post-Soviet countries - after Russia, Ukraine and the same Kazakhstan - the fourth. If we consider such a factor as the country's population, it turns out that Uzbekistan has the lowest number of universities per capita among the countries of the post-Soviet space. The average number of people per higher educational institution is 5 times higher than in developed countries, which negatively affects the accessibility of education. For comparison: enrollment in higher education in the Republic of Korea is 95%, in China - 39%, in Russia - 79%, in Kazakhstan - 46%.

Today, all over the world in the field of higher education, there is a phenomenon of massification, when the number of students at universities is growing at a rapid pace, and education covers a wide segment of the population. In more developed countries, massification has already reached its limits.

In this regard, a number of governmental and interdepartmental agreements were signed, which are the basis for direct interuniversity cooperation with foreign partners.

Currently, the universities of Uzbekistan are actively involved in the educational and scientific and technical projects of the European Union Tempus and Erasmus Mundus, the British Council, the German Academic Exchange Service, the Goethe Institute, the German Technical Center, the Korean and Japanese International Cooperation Agencies, the French and Egyptian Cultural Center, Malaysian and Indian technical cooperation programs, and other development programs of the UN, UNESCO, ETF, ADB.

Reforms in the field of higher education in Uzbekistan are being implemented in cooperation with many international organizations, including Erasmus + (European Union program), JICA (Japan International Cooperation Agency), KOICA (Korea International Cooperation Agency). As a result of the joint programs being implemented, hundreds of teachers and students of Uzbekistan have the opportunity to get acquainted with the best international experience in the education system, acquire new knowledge and skills, improve their skills in the world's leading universities.

In September 2018, the El-Yurt Umidi Foundation was established in Uzbekistan, aimed at establishing close cooperation with compatriots with great scientific potential, scientists, specialists and talented youth living and conducting their professional activities abroad. The Fund is also intended to provide Uzbekistan with highly qualified and competitive specialists in the world labor market, necessary for the comprehensive and accelerated

development of our country. [7]

On March 23, 2019, as part of the Science 2020 agreement, the Ministry of Higher and Secondary Specialized Education and Elsevier signed a strategic agreement to create a platform of peer-reviewed scientific journals of universities in Uzbekistan based on Digital Commons (Bepress). As part of this project, Elsevier will create a unique platform by bringing together 41 scientific journals using a double-blind peer review configuration.

The platform, used by the world's leading universities, will improve the quality of Uzbekistan's scientific journals, create a repository (digital archive) of Uzbek science, and go down in history as the first electronic resource developed in accordance with Scopus international standards.

The result of two years of cooperation between the Ministry of Higher and Secondary Special Education and leading international organizations, such as Times Higher Education and QS, in order to increase the international prestige of higher educational institutions of the republic", in 2020 the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers was included in the rating for the first time in history of the best universities in Eastern Europe and Central Asia in 2020, which was compiled by the British company Quacquarelli Symonds. The university was in the ranking range of 301-350 in the QS ranking, having received positive marks on the indicators: academic reputation, reputation among employers and scientific potential. [12]

It should be noted that along with the positive moments at the stages of development of the higher education system of Uzbekistan, the analysis also revealed a number of existing problems that negatively affect the level and quality of training of highly qualified bachelors and masters:

1. The system of higher education in Uzbekistan is slowly adapting to the changing needs of the country's economy. While admission quotas are adjusted to the needs of the labor market with increased quotas for engineering, construction and manufacturing training programs, there are still inconsistencies. These discrepancies mean that many graduates are unable to find jobs in their specialty, and those who do find jobs often lack the combination of practical skills required by employers.

2. The government recognizes that many technical universities lack both teaching and research laboratories. A serious problem is the discrepancy between the education system and the needs of the economy. There is insufficient connection between universities and private business. According to a World Bank study, 35% of companies in Uzbekistan face difficulties in finding qualified specialists with higher education. The deficit reaches almost 50% at industrial enterprises. The main reason for the difficulty, according to employers, is the "insufficient number of qualified specialists" in the labor market. [13]

3. There is an insufficient level of scientific potential of teachers working in higher education in the republic. At the end of 2017, more than 50 percent of all teachers in Uzbek universities did not have a degree (candidates and doctors of science). In Uzbekistan, in the structure of the teaching staff, the share of doctors of science (PhD, ScD) is only 37.9%, the remaining 62.1% are teachers who do not have academic degrees.

4. Moreover, teaching staff with scientific degrees is concentrated in Tashkent, where 3524 university staff have scientific qualifications. This represents 14 percent of the total number of university teachers at the national level. Next comes the Samarkand region - only 873 employees (3.5% of the total number of university teachers). At the end of the list are Surkhandarya and Syrdarya regions with 132 and 90 employees with a scientific degree, respectively (0.5% and 0.3%). [14]

5. The trend of recent years is the aging of scientific and pedagogical personnel with academic degrees and titles, while reducing the influx of young people. Teachers of pre-retirement and retirement age account for 31.3% of the total number of highly qualified specialists.

6. Starting in December 2019, an outbreak of coronavirus infection swept the whole world, and in March 2020, WHO announced that the outbreak had become a pandemic. The COVID-19 pandemic affected most countries of the world and almost all spheres of public life, and the education system was no exception. One of the ways to contain coronavirus infection is still social exclusion; its measures required the partial or complete closure of educational institutions and their associated infrastructure.

The pandemic revealed the weakest place in the education system, based on the concept of “direct education”, in which teachers and students must be present in the same place at the same time. The only possible solution to this problem for most universities was the transition to distance learning. However, this solution led to another problem: the digital divide between universities, teachers and students. It turned out that a significant part of our universities do not have the necessary technical and educational base for going online.

### **Conclusion.**

To improve the system of higher education and develop human capital, a number of measures are proposed, in particular:

1. Increasing the coverage of higher education by increasing the number of universities, including branches of foreign and local universities and non-state universities.

In particular, the creation of private universities in our country is one of the prerequisites for the development of education. Here we need free competition, market orientation, global trends. Approximately 33% of all students in the world study in private educational institutions. The advantages of private universities can be the provision of in-demand specialties and the possibility of cooperation with real companies in the labor market in Uzbekistan. For students, an important factor in investing in a degree is employment opportunities after graduation, which will accelerate the return on investment made in training. The university itself is working out options for interacting with companies, this increases its rating and reputation in the market. As a chain of process, the university cannot fail to invest in a quality teaching staff, including perhaps by inviting professors from abroad who have proven themselves in their field.

2. Increasing the independence of universities in determining curricula, distributing financial resources, providing universities with the opportunity to independently determine quotas for student admission.

3. Fundamental improvement in the quality of education through the introduction of modern educational programs and the use of information technology, both in terms of expanding access, and in terms of using new teaching methods.

In the era of the development of information technology, a person does not need to have a university degree to gain knowledge; one can remotely access the materials of almost all courses in the world. For example, one of the most popular platforms, Coursera, has partnership agreements with more than 150 leading universities in the world, offering its students online courses from the world's leading universities. For many students, this is a very convenient and affordable mechanism for obtaining education, which is what makes them popular and in demand. In our country, about 600-700 thousand applicants do not enter universities every year, it is possible to develop a mechanism by which young people could gain knowledge and skills using popular resources.

4. The relevance of education can be improved by deepening the links of universities with industry, improving the learning environment through the provision of laboratories and library resources, and changing curricula and programs in a way that uses resources more efficiently, and effectively tracking graduates in the labor market.

Feedback from industry, students and civil society can be used to improve course offerings. The maximum approach of the business community to universities and students, as they are a source of demand for potential personnel among graduates, establishing a dialogue will help both parties.

5. Strengthening the relationship of universities and research institutes with foreign partners, participation in international internship programs for students and scientists, expanding the program of funds and scholarships for teaching students in foreign universities.

6. In our opinion, in order to improve the quality of the activities of domestic universities on the world stage, a mechanism should be proposed to increase the competitiveness of universities, in particular through the introduction of changes in the methodology for determining university rankings, since the high positions of the university at the global level represent a serious contribution to the formation of the image countries, and as the market of educational services globalizes, they ensure the growth of the level of human capital in the region,



attracting investments.

Getting into the world or national ranking in the leading places, the university dramatically increases its attractiveness not only for applicants, but also for employers, investors and the state, which can provide it with additional subsidies.

Global rankings have become a "phenomenon of the XXI century" in the world system of higher education, a response to the needs of the market, considering the possibility of obtaining education not only in their own country, but also abroad.

Thus, constant investments in the so-called "human capital" and education are the key to the formation of a developed democratic state, a constant engine of progress and an indispensable condition for the modernization orientation of the nationwide development.

As the President noted, "... the achievement of the noble goals facing the people of Uzbekistan, the future of the country, its prosperity and well-being, what place it will take in the world community in the 21st century - all this depends, first of all, on the new generation, on what our children will grow up to be." [1]

### Literature.

- Festive congratulations to teachers and mentors of Uzbekistan dated 09.28.2019 //Int.<https://uza.uz/ru/politics/prazdnichnoe-pozdravlenie-uchitelyam-i-nastavnikam-uzbekista-28-09-2019>
- National program for personnel training. National Legislation Database. No. 463-I of 29.08.1997 // Int.: <https://www.lex.uz/acts/19769>
- Decree of the President of the Republic of Uzbekistan "On measures for the further development of the higher education system." No. PP-2909 dated April 20, 2017. Int.: <https://lex.uz/docs/3171587>
- Decree of the President of the Republic of Uzbekistan "On additional measures to improve the quality of education in higher educational institutions and ensure their active participation in the large-scale reforms being implemented in the country" No. PP-3775 of 05.06.2018. Int.: <https://lex.uz/docs/3765584>
- Decree of the President of the country "On the Action Strategy for the Further Development of the Republic of Uzbekistan" dated February 7, 2017 dated February 7, 2017 No. UP-4947. Int.: <https://lex.uz/docs/3107042>
- Decree of the President of the Republic of Uzbekistan on approval of the concept for the development of the higher education system of the Republic of Uzbekistan until 2030 No. UP-5847 8.10.2019. // Int.: <https://lex.uz/ru/docs/4545887>
- Decree of the President of the Republic of Uzbekistan "On the organization of the activities of the El-Yurt Umidi Foundation for the training of specialists abroad and dialogue with compatriots under the Cabinet of Ministers of the Republic of Uzbekistan" dated September 25, 2018 No. UP-5545 // Int.: <http://www.lex.uz/ru/docs/3920035>
- Dzhabarova R. - Marketing of professional education services. // Marketing. - 2005. - No. 4. - P. 55–65
- Lukashenko M. - Marketing and PR in an educational institution // Higher education in Russia, 2002. - No. 4. - S.32-40
- Morozov A. V. Creative pedagogy and psychology. – M.: INFRA-M, 2004.-560 p.
- Pankrukhin A. P. Marketing of educational services in higher and additional education. Tutorial. M.: Interpraks, 1995. -240 p.
- TIAME entered the ranking of the best universities in Eastern Europe and Central Asia // Int.: <https://www.gazeta.uz/ru/2019/10/15/university/>
- Problems of education and solutions - in the draft strategy of innovative development // Int.: <https://www.gazeta.uz/education-strategy/>
- 14.Uzbekistan Education Sector Analysis Final Report. The World Bank. 2018

# PROSPECTS OF EFFECTIVE DEVELOPMENT OF ACTIVE TOURISM IN THE REGIONS

Husanov Umidjon Bahodirovich  
“Silk Road” International University of Tourism and Cultural Heritage  
08.00.17- Intern-researcher specializing in tourism and hotel activities

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## ABSTRACT:

The article describes a comprehensive approach to the development of tourism on the basis of clustering, the formation of modern tourism infrastructure, expanding the scope of work on the full and effective use of existing potential in the regions. At the same time, it focuses on increasing the interest of tourists, creating convenience through the "concentration center" and the creative approach of the local population in this regard.

**Keywords:** innovative approach, attractiveness, integrated approach, potential, efficiency, infrastructure, “concentration center”, creative approach, perspective.

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## Introduction

Tourism is a key driver of economic growth in both established and developing nations. It brings in foreign exchange and investments, spurs the expansion of allied sectors, helps with population employment issues, and enhances a nation's standing in the international community. In comparison to other industries, the tourist sector allows for the assurance of substantial amounts of foreign exchange with far lower costs.

Increasing the quality of tourism services, ensuring the competitiveness of national tourist enterprises and firms, developing the demand of foreigners for national tourism products, and analyzing the indicators determining its prospects, along with the current state of the development of the tourism sector and the study of the economic and organizational factors of its formation, all point to the necessity of excellent scientific research that fosters a competitive environment for national tourism enterprises and firms. In Uzbekistan, the national privatization and shift to a market economy system necessitated reforms to the tourism sector's infrastructure, which included the tourist services sector. However, there are still many issues in this area, even "obstacles," that prevent further advancement. The fact that tourist services are not being offered at a level that meets demand is one of the issues slowing down the development of our nation's tourism system. Thus, the tourism sector's ability to grow in regions with abundant visitor resources is constrained. In turn, this creates a special framework for fully using social and natural resources. It specifically benefits the growth and preservation of socioeconomic and aesthetic demands, cultural values, the management of relationships with the environment, the preservation of biological diversity, and the overall improvement of the standard of living. As a result, one of the most crucial concerns of the day in our nation is the growth of tourism in its entirety, the creation of cutting-edge tourist infrastructure, and the effective and full utilization of regional potential.

## Literature review.

Experts frequently address the issues surrounding the growth of the tourism infrastructure from both a theoretical and practical standpoint. These studies are being undertaken by scientists, like I.T. Balabanov, M.B. Birzhakov, V.A. Kvartalnov, M.A. Zhukova, and economists like our countrymen N.T. Tukhiev, M.K. Pardaev, G.H. Qudratov,

Q.Mirzaev, O.Hamidov, M.Alimova, and T.T. Tashmurotov. One of the key components of total economic development, according to experts in the field, is how the economic foundations for the emergence and growth of tourism-related services are organized in light of the current financial changes. However, the majority of the issues that arise as a result of the multifaceted and extremely complex nature of the process of developing the conceptual underpinnings of the development of the tourism sector and its implementation in practice still need to be studied theoretically and methodologically. This condition served as the foundation for deciding the objectives and tasks of the study project. When we look at the tourist industry from the perspective of its functions, it becomes evident that the traditional tourism trinity of "tourism + accommodation + entertainment" encompasses practically all of the social and economic purposes. According to this, "tourism is a complex socio-economic system composed of numerous, interconnected, and mutually demanding sub-systems." The several definitions of tourism that are used in daily life, demonstrating its adaptability, can support the aforementioned assertion. The need to develop theoretical and methodological approaches for its study has been prompted by the emergence of practical tourism activity. The first definitions of the term "tourism" emerged as a result of the growth and popularization of the industry in order to scientifically track the number of travelers. The analysis and synthesis techniques, abstract-logical analysis, selective observation, statistical, and economic analysis were all used in the writing of the article.

**Results** Future state policy in the tourism industry will focus on driving the industry's complex, rapid development of regions and their infrastructure, addressing urgent socioeconomic issues, creating more jobs, ensuring regional diversification and development, raising incomes and living standards for the populace, and enhancing the country's investment appeal and reputation. The visa policy, the guidelines for staying in Uzbekistan, the simplification of the process for conducting business transactions, the growth of tourism-related infrastructure, and initiatives to promote the potential of tourism are all viewed as important factors in the expected doubling of foreign tourist arrivals in 2018: the adoption of a visa-free policy in nine more nations, an increase in the number of nations whose residents have implemented a streamlined process for obtaining entry visas from 12 to 50, and the implementation of a system for issuing and submitting electronic entry visas. It is vital to try some innovative projects, keeping in mind the distinctiveness of the way of life of the people who live in the various parts of our nation. For instance, if the idea of a tourism cluster were to be given more attention, it would be essential to build a small town of five or six homes close to the "cluster center" and position excellent and exemplary families in all directions. The major objective is to connect foreign visitors with locals so that they can learn about our national values and take in this unique history during a few days of hospitality. The natural beauty, customs, and traditions of the locations can be best described by the locals, who are a difficult find as an expert. True, this idea calls for specialized funding and measures rather than straightforward chores that can be completed on their own. Attracting both domestic and foreign investors is crucial for the financing of tourism. Prospects for the growth of the tourism industry are crucial in raising the amount of available financial opportunities. In addition to traditional tourism, this decree calls for the application of ecotourism, agrotourism, educational tourism, ethnotourism, culinary tourism, sports tourism, medical tourism, and health tourism to social production activities. The implementation of national and regional programs for the comprehensive growth of social tourism for kids, teenagers, young adults, families, and the elderly is particularly relevant. Our national mentality is currently linked to universal ideals, as evidenced by the distinctive rituals, celebrations, and traditions of the countries and peoples living in Uzbekistan and coexisting with nature. Regional variations of these qualities help to expand already available opportunities. This industry is continually being developed in the Republic of Karakalpakstan, especially in light of the influence of tourism on the economy of the nation and the significance of enhancing population well-being. In other words, the methodical work being done to create tourist infrastructures while effectively utilizing the vast historical, rich archaeological, educational, and ecological potential of the Karakalpak area is paying off. On the area of Karakalpakstan, there are 131 archaeological, 25 architectural, 89 monumental (including 39 significant artifacts), 284 architectural materials, and cultural heritage objects that have been registered. According to the established programs, extensive protection, beautification, restoration, repair, and reconstruction work is being done on them.

**Discussion** A plan of precise actions has been designed to drastically increase their number, quickly grow the service sector, and offer more amenities for tourists. Currently, more than 30 tourist companies are successfully working in this area. Particularly, the Ministry of Culture's primary scientific production division for the preservation and utilization of cultural heritage objects in the Beruniy district and Kungirotdistrict's archaeological cultural heritage objects, "Kizil Qala" and "Fil Qala," The "Mizdakhon" complex's "Father Davut" tomb, which is an architectural mausoleum named "Nazlumkhan Suluv," is undergoing rehabilitation and improvement work. A contemporary, top-notch hotel with 40 rooms in the city of Nukus, a hotel with 25 rooms in the Tortkol district, a branch of the Ustyurt bon Voyage hotel with 20 rooms at the "Davut ota" point of the Kungirotdistrict, and the district of Kegayli The historical cultural complex "lyshan Qala," the tourist complex "Aqsha Kol," the archaeological items "Ayoz Qala," and other projects are undergoing construction and maintenance at these locations. In general, the development of road transport and engineering-communication networks in the direction of tourism, service provision, and logistics, the introduction of international standards and norms, and the creation of tourism infrastructures that meet world standards in all regions of the republic In order to inventory items and bring historical, cultural, and archaeological monuments into compliance with international tourism standards, significant steps are being performed. Currently, the "Nukus International Airport," the train and bus stations, the I.V. Savisky and Berdak museums, and the "Nukus International Airport" For the Karakalpak State Musical Theater, "Istiqlal" and "Amir Temur" entertainment centers, new road signs with writing in Russian, English, Uzbek, and Karakalpak languages have been put. Within the following few days, the UNESCO representative office and the website "Visit Karakalpakstan" will launch. Ayoz Castle, the I.V. Savisky Museum created by the Turkish firm "GG Turizm Sanat Yapim" in the Moynaq district's historical cultural landmarks, and the creative team of the Russian international television and radio company "Mir" in accordance with the concept "Tayni vremeni." The salt lake known as "Barsa-Kelmes" was used for filming. The Moynaq and Arolboyi wildlife, customs, and traditions of the local people were filmed by "Moya planeta," "National Geographic," "Animal planet," and "Viasat Explore" TV channel producers who then prepared episodes. More people are becoming interested in the subject due to the prestige of international music festivals honoring the works of the classical poets of the Karakalpak people, Berdak and Ajjinyoz, the international eco-festival with the theme "Revival of the Island and Pearl," and the gastronomic festivals dubbed "99 types of fish dishes of the island," among others. Aym Tur Society, Ayaz Yurt Enterprise, Jahongashta LLC, Mavlyuda Kaldirgoch Society, and Lower Amudarya Biosphere Reserve developed new tourist itineraries and presented them to foreign tour operators. The aforementioned factors indicate that a well chosen strategic course is crucial for showcasing our republic's internal and exterior potential, economic might, and intellectual prowess, as well as our aptitude for our line of work. This route paves the way for a bright future, solidifies our place in the global community, and elevates the journey to the fulfillment of our lofty objectives. The international economy is currently becoming more and more dependent on tourism, which is very profitable and affects a nation's financial, cultural, and intellectual standing. In particular, it accounts for 70-90 percent of the GDP and budget revenues of some "dwarf" nations as well as 70-90 percent of the budget of developed nations in Europe, China, and East Asia. This factor greatly improves the level of living, the quality of life, and the availability of jobs for the population. This factor has an impact on how efficiently tourist flow routes are organized and how supply and demand balances are normalized. For instance, the many forms of tourism are arranged in a logical and proportionate way in nations with mature tourism industries. Analysis of statistical data demonstrates the necessity of minimizing distinctions between domestic and foreign tourists.

### **Conclusion**

Our nation's tourist sector is rapidly becoming more market-responsive. It is crucial to arrange the current circumstances in our republic in accordance with the demands of global trends and international tourism. In this regard, it is feasible to achieve the desired outcomes by carefully examining the distinctive characteristics of our nation and compiling diverse criteria and viewpoints. To achieve a balance between supply and demand in this

market, it is important to pay respect to the World Tourism Organization's suggestions and requirements. For instance, reevaluating the domestic tourism market's price point and "pocketing" the offers and descriptions made to foreign travel agencies will raise their interest. In turn, this enables us to raise the quality of our service offerings to par with global standards. The distinctive traditions and values of our national lifestyle are thus well preserved in areas involved in the cultivation, preparation, storage, processing, transportation, and sale of food products, especially given the fact that the majority of the population of our country resides in rural areas. In order to improve the local population's social activities and foster a modern way of life, it is crucial to construct tourism infrastructure and service facilities. This employment has several positive effects, including the development of national production types, the periodic nature of social work in the village, and—most significantly—the development of cutting-edge modern service delivery techniques.

## REFERENCES

- Decision of the President of the Republic of Uzbekistan dated August 16, 2017 No. PQ-3217 "On measures and activities for the development of the tourism sector in 2018-2019". [www.lex.uz](http://www.lex.uz)
- Azizkulov B.Kh., Siddikov A.A. Assessment of the features of investment in the development of agrotourism based on a cluster approach. *Journal of innovations in economy*. 2021. Vol. 4, Issue 1. (40-48) pp. DOI 10.26739/2181-9491-2021-1-6.
- Tashmatov, Sh. U. (2021). THE IMPORTANCE OF TOURISM IN THE SOCIO-ECONOMIC DEVELOPMENT OF THE COUNTRY. *Oriental renaissance: Innovative, educational, natural and social sciences*, 1(4), 1128-1132.
- Tursunov F.U., Azizkulov B.Kh. Priorities of tourism and ways to increase their attractiveness. *Journal of innovations in economy*. 2021. Vol. 4. Issue 5. pp: 4-10.
- Tokhliyev I.S., Gudratov G'.Kh., Pardayev M.Q. *Tourism planning. Textbook*. - T.: Economy-finance, 2010. - 157 p.
- Akhtamova M. E., Urazov S. Sh. NEGOSUDARSTVENNIE SPOSOBI PRIMENENIYA OPITA RAZVITIX STRAN DLYA POVISHENIYA EFFEKTIVNOSTI OBRAZOVATELNIX USLUG V UZBEKISTANE //Archivarius. – 2021. – T. 7. – No. 4 (58). - S. 37-40.

# INVESTMENTS IN HUMAN CAPITAL AND ACCOUNTING

Ochilov Olmos Ikrom ugli,  
Doctoral student of Tashkent Institute of Finance, Ph.D.

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## ABSTRACT:

*The article examines the economic content of human capital and investments in it and its interpretation as an object of accounting. Suggestions were made for the recognition, classification and reflection of investments in human capital as an object of accounting and an element of financial reporting in business entities, and the author's definitions of the concept of investment in human capital and human capital were given. Based on the literature review, the types of investments in human capital were researched, and proposals were made regarding their classification according to their duration and composition. Also, a system of accounts has been developed to account for investments in human capital.*

**Keywords:** *accounting, accounting object, human capital, investments in human capital, economic benefit, recognition, human capital investments classification, element of financial statement.*

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## Introduction

World experience shows that any country can not develop without human capital. Every result achieved, the main factor of success and achievements is human capital. In particular, the World Bank's report on "The Changing Wealth of Nations 2018" describes human capital as a "driver of development." Indeed, the development of a country is directly related to the amount of investment in human capital. The President of the Republic of Uzbekistan stressed the importance of these issues for the rapid development of the country: "In developed countries, great attention is paid to investing in the full cycle of education, ie investing in the upbringing of children from 3 to 22 years. Because this investment will bring 15-17 times more benefits to society. In our case, this figure is just four times. Therefore, we must pay more attention to human capital and mobilize all our resources in this direction" [2].

As a positive result of the ongoing large-scale reforms in the country for the further development of human capital, Uzbekistan is ranked 2nd among the CIS countries in the Human Capital Index published in 2020 [21].

The development of human capital depends on the amount of investment directed to it. In this regard, the investment of business entities in human capital is of particular importance. Indeed, investments in human capital in this area are considered as a guarantee of economic growth and competitiveness of business entities.

The level of knowledge of human capital may become obsolete over the years as a result of the development of machinery and technology, and the need to acquire new knowledge and skills may arise. But it should be borne in mind that human capital can also increase its profitability due to years of experience. Therefore, in our opinion, it is advisable to choose the right expenditure on human capital as an object of accounting and its proper accounting.

## II. Literature review

Recently, in world practice, special attention is paid to the socio-economic significance of investments in human capital. According to the World Bank and the United Nations Development Program, the world's national wealth includes 36% of natural resources and production capital, and 64% of human capital [8].

Problems of human capital valuation and accounting emerged in the early 1960s with the formation of the

theory of "human capital" by Nobel laureates T. Schultz and G. Becker [8]. As a result of the formation of this theory, human capital began to be recognized as an object of accounting. In particular, E. Flamholtz was one of the first to consider human capital as a resource of the enterprise and as an asset of the company from the point of view of accounting. He singled out three criteria for recognizing human capital as an asset: future economic gain, ownership or control by an entity, and monetary representation [11].

Jac Fitz-enz recognizes human capital as an asset of the company and considers it a strong financial support, a valuable and productive resource [17].

L.A. Tchaikovskaya and Yu.O. Bystrova made a scientific study of the calculation and evaluation of investments in human capital and defined human capital as follows: "Human capital is the sum of assets and liabilities associated with highly qualified personnel [18]".

Theoretical issues of human capital are also being studied by scientists of the republic. In particular, scientists of our country SSGulyamov [9], K.Kh.Abdurahmanov [3], A.V.Vakhabov [6], B.Kh.Umurzakov [15], A.A.Artikov, N.K. Zokirova, O.A.Abdurahmanov [5], Sh.G.Akramova [4] and others have studied various aspects of human capital.

Although human capital is being studied in depth by representatives of various sectors of the economy, in our country, human capital and investments in it as an object of accounting remain insufficiently studied. Only M.E. Pulatov conducted a partial study in this regard, he studied the issues of accounting and auditing of intellectual capital, studied human capital as an integral part of intellectual capital and recognized the need to take it into account [13].

### **III. Methods**

Research methods such as scientific abstraction, monographic observation, comparison, induction and deduction were used in the research to recognize and develop the classification of investments in human capital as a new object of accounting in business entities.

### **IV. Analysis and results**

It should be noted that the recognition, valuation, analytical and synthetic accounting of human capital or intellectual capital as an object of accounting and the disclosure of information about them in the financial statements is a separate research topic. Therefore, our chosen research topic, based on its goals and objectives, is to study the issues of recognition and maintenance of investments in human capital as an object of accounting.

We would like to focus on the aspects that reveal the content of investments in human capital as an object of accounting, with a detailed study of research on accounting.

When it comes to investing in human capital, first of all, it is closely related to the concept of human capital. After all, the question arises as to which object the investments are directed. Before observing whether or not human capital investments are the object of accounting, we need to clarify whether they are the object of investment in human capital itself.

In accordance with Article 5 of the Law of the Republic of Uzbekistan "On Investments and Investment Activities", investments are divided into capital, financial and social types according to the intended object. Investments in the development of human potential, skills and production experience, as well as other forms of intangible assets include social investment [1]. This means that it is possible to invest in human capital and it can be an object of investment.

The purpose of our research is to reveal the description and classification of investments in human capital as an object of accounting. To do this, we need to explain the essence of the concept of investment in human capital on the basis of reviews of scientific literature in the field (Table 1).

Table No.1

Literature review of the content and structure of investments in human capital<sup>80</sup>

No	The content and structure of investments in human capital	Note
1.	Investment in human capital is an expense incurred in order to increase future labor productivity and contribute to the future income growth of both the individual capital carrier and society as a whole [12].	There are two main aspects to the definition: investment in human capital should increase labor productivity and increase income in the future.
2.	Investments in human capital include: the cost of finding qualified professionals, salaries, benefits and other payments, funds to improve skills, special and technical knowledge and skills, as well as health and insurance costs [7].	In this definition, investments in human capital include the costs of staffing, salaries, training and social protection.
3.	Investing in human capital consists of any effort to improve a person's professional skills and production capacity, as well as his or her labor productivity. Expenditures that serve to increase human productivity can be considered as an investment, as current expenditures are made on the basis of calculations that will be multiplied many times by future significant inflows of income. Thus, all types of expenditures that can be assessed in monetary or other forms that contribute to the future growth of employee productivity and income are considered as investments in human capital [10].	According to the author, the purpose of investing in human capital is to increase labor productivity and it can be done in any form, ie in financial and non-financial forms.
4.	From the enterprise's point of view, investment in human capital means the cost of search, selection and training of personnel, as well as retraining [8].	This definition narrowly describes the content of investment in human capital, the purpose of which is not disclosed.
5.	In the future, the costs that will increase labor productivity and increase the income of both the individual, the enterprise and the state are investments in human capital [16].	From this definition, the costs that increase the income of the enterprise in exchange for increasing labor productivity are recognized as an investment in human capital.
6.	Investments in human capital include the initial cost of expenses incurred by an individual or enterprise to obtain future profits (e.g., profit growth or high productivity) (tuition and fees, lost profits during the school year, wages and productivity during the training period) [19].	In this definition, investments in human capital are disclosed in the interests of both the individual and the enterprise. Like the above definitions, the purpose of human capital is given as profit growth or high productivity.
7.	Investment in human capital is a set of voluntary measures, ways and decisions used to increase labor productivity [14].	In this definition, the purpose of investing in human capital is the same as in the above definitions, but the form of implementation depends on management decisions.

<sup>80</sup> Made by author.



The following conclusions can be drawn about investments in human capital by analyzing the scientists and literature that have conducted research on human capital and investments in it:

First, investments in human capital can be divided into four groups according to the source of realization. These are: the individual himself or his family, the organization or enterprise in which he works, and the state. Investments in human capital will be made in these four areas. From the point of view of accounting regulation and theory, investments in human capital are taken into account by business entities (meso level) and the state (macro level).

Second, the goal of businesses in investing in human capital is to benefit the economy in the future. We have tried to systematize these economic benefits as follows (Figure 1).



**Figure 1. Economic benefits from investments in human capital**<sup>81</sup>

Third, investments in human capital can be made in the form of assets or expenses of any kind. This will be the basis for accounting for investments in human capital in the form of accounting items such as assets, expenses and liabilities.

Based on the above ideas and scientific conclusions, investments in human capital are considered the object of accounting, and we have tried to describe them as follows: ***Investments in human capital are any investments of business entities in human capital for gaining future economic and social benefits.*** There are two important aspects to consider in the definition. The first is the purpose of investing in human capital. In this

<sup>81</sup> Author's development based on research

regard, we have touched on the above and tried to explain its content. The second aspect goes back to the concept of human capital. It is possible to invest in the concept of human capital with a deep understanding of its essence. It should be noted that the theory of human capital is currently the subject of interdisciplinary research, which gives rise to many interpretations based on the nature of each science (Table 2).

**Table No.2**

**Approaches to the interpretation of human capital in modern interdisciplinary research**

<b>Sphere of science</b>	<b>Interpretation of human capital</b>
Economics	A pool of knowledge, skills, and competencies that everyone has and can use for production or consumption purposes
Sociology	A set of knowledge, skills and competencies acquired by a person and serving as a basis for the implementation of his lifestyle
Economic psychology	The number and quality of people who are compatible with their medical, mental, intellectual, cultural, professional performance to compete
Social hygiene	The abilities accumulated by the society restore and develop in the generations socio-biological features, health, way of life and way of life, knowledge, creative work and other similar qualities
Psychology	Self-development is an individually assimilated socio-cultural and psychophysiological system with a complex structure in terms of economic resources. A set of useful knowledge, skills, health and education of the subject, as well as bioenergetic and psychophysiological resources, as well as personal-professional and mastered creative potential

Having thoroughly studied the definitions and approaches to the essence of this concept from the formation of the theory of human capital to the current stage of development, we found it expedient to give the following definition of human capital: *Human capital is a set of physical, mental and entrepreneurial abilities (potentials) that bring economic and social benefits to a person, his family, workplace and society.*

From this it can be concluded that investments in human capital made by business entities should be aimed at developing human physical, mental (intellectual) and entrepreneurial skills. In classifying investments in human capital, we believe that their classification by type, form, composition of human capital, maturity ensures that the information reflected in the financial statements is consistent in content and form. The approaches expressed by economists on the classification of investments in human capital are different, some of which we will list below (Table 3).

The classifications presented in this table have been developed taking into account the different aspects of human capital investment and the aspects that require financing in different areas. We need to classify investments in human capital on the basis of the object and subject of research, ie the degree to which they are applied in business entities and reflected in the accounting records. In this regard, we consider it expedient to approach them based on their timing and description as an object of accounting.

Table No.3

## Types of human capital investments [10]

No	Author	The structure of investments in human capital
1.	G. Becker	1) education costs; 2) costs for health and medical services; 3) costs associated with the mobility of labor resources; 4) expenses for raising children; 5) the cost of searching for information on prices, income and wages
2.	G. Kendrick	1) material investments - costs associated with the physical formation and development of man 2) intangible - costs associated with general education, special training, medical services and labor movement
3.	C. McConnell and S. Brue	1) education costs, including general and special education and retraining costs 2) Health expenditures, including treatment and prevention, medical care, diet, improvement of living conditions 3) labor mobilization costs in order to relocate from low-productivity areas to high-productivity areas and provide correspondingly high wages
4.	A. I. Dobrynin	1) Expenditures reflected in the national account: education, health, incentives, migration, ecology and healthy lifestyle, information retrieval, scientific development and intellectual development, production preparation. 2) not reflected in the national account: lost income and free time

Investments in human capital are grouped by maturity as follows.

1. **Short-term investments reflected as expenses for the reporting period.** Examples of this are expenses incurred by employees during the reporting period in addition to basic and additional work (expenses related to staff development, such as short-term training, health care, psychological incentives).

2. **Short-term investments that are reflected as future expenses.** These include investments in human capital (annual training, health insurance, social security and other expenses), which are accounted for in accordance with the principle of conformity of accounting to income and expenses.

3. **Depreciable long-term investments.** This includes the costs incurred and recognized as an asset to hire an employee after more than 12 months, increase labor productivity and production efficiency, and obtain the employee's right to work in the enterprise for a longer period of time.

Depending on the form, it is advisable to divide investments in human capital into investments in education, health and other purposes.

In general, investments are classified in the accounting records of the business entity according to the term and the object of investment and are accounted for on this basis. The financial statements also disclose investment information in these two respects. From the point of view of management accounting, a system of formation of accounting information on the basis of classification of investments taking into account various aspects based on management objectives can be established.

Based on the description and classification of investments in human capital as an object of accounting, we have proposed a system of accounting records for their accounting (Table 4). Long-term investments in human capital must be reflected in the accounting records, provided that the employee and his work in the employer for a specified period of time and other conditions are legally agreed.

Table No.4

## Proposals for a system of accounts that takes into account investments in human capital

Synthetic accounts	Analytical accounts
<b>Accounts for long-term investments in human capital</b>	Investments in training made to ensure the right of employees to work
	Investments in health care made to ensure the right of employees to work
	Investments in improving living conditions made to ensure the right of employees to work
	Other investments made to secure the right of employees to work
	Long-term loans and guarantee payments related to preferential terms for employees
	Costs associated with employee life insurance
	Other long-term investments in human capital
<b>Accounts for short-term investments in human capital</b>	Investments in education
	Investments in health care
	Investments in improving living conditions
	Other current investments in human capital
<b>Current expenditures on human capital</b>	Tuition costs
	Health care costs
	Costs of improving living conditions
	Costs associated with motivation
	Costs associated with staff mobilization
	Other current expenses

The account of short-term investments in human capital reflects investments in human capital, which are made on current expenses by distribution during the year in accordance with the principle of compatibility of income and expenses. In this case, the employment contract with the employee must specify the conditions under which the employee will work at the enterprise during the period when these costs are incurred. The proposed system of accounts serves to reveal most aspects of the timing and form of investment in human capital by the business entity.

Since the formation of the theory of human capital and the beginning of research on its recognition and reflection as an object of accounting, scientists have not been able to reach a consensus on this issue. Therefore, even in international financial reporting standards, human capital is not recognized as an element of financial reporting. The main reason for this is the lack of mechanisms for the assessment of human capital, its market and the recognition of property rights to it, as well as the transfer to third parties.

The idea put forward by us is that the recognition of investments in human capital as an object of accounting meets all the requirements for the recognition of assets in international and national standards. In particular, the investment in human capital is the result of the economic operation of the enterprise, which is valued in money and in the future brings income to the enterprise. It is also possible to sell an investment in human capital to another person, ie if the employee refuses to work after the investment in human capital within the terms and conditions specified in the mutual agreement, he will have to return the investment at a pre-determined interest rate. Therefore, it can be concluded that investments in human capital can be a separate object of accounting. The order of accounting based on their classification is aimed at forming a wide range of information flows for investment

management purposes.

The following results were obtained from the study aimed at disclosing the description and classification of investments in human capital as an object of accounting

1. Human capital is a multifaceted concept that is the subject of separate research in several disciplines. Therefore, the concept of human capital was defined based on the content of economic sciences.

2. The interpretation of investments in human capital as an object of accounting has been disclosed. Investments in human capital are considered as assets of the business entity and are defined on the basis of their meso-level nature.

3. An in-depth study of the types and forms of investments in human capital, the procedure of classification in accounting, and on this basis the organization of analytical and synthetic accounting has been developed.

## V. Discussion and conclusion

The results of global economic development show that the role of human capital in ensuring sustainable economic growth and maintaining business in economic entities at all levels is invaluable. Therefore, one of the modern directions of investment flow is human capital.

Recognition of investments in human capital in business entities as an object of accounting and a separate element of financial reporting has been disclosed.

In order to accurately reflect investments in human capital in accounting, it is necessary to clearly define the economic benefits to be derived from them and to organize the account on this basis.

Based on the content and structure of investments in human capital, it was proposed to classify them in terms of accounting. On the basis of this classification, a system of accounts has been developed that takes into account investments in human capital in business entities.

## REFERENCES

- Law of the Republic of Uzbekistan "On investments and investment activities", December 25, 2019, No. LRU-598. <https://www.lex.uz/docs/4664142>
- Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis. — T.: "Халқ сўзи", December 29, 2018, №271-272.
- Abduraxmonov K.X. In Uzbekistan, the human factor and interests –the highest values. - T.: «Gafur Gulom Publishing House» 2017. - 346 p.
- Akramova Sh.G. Development of human capital in the conditions of formation of innovative economy in Uzbekistan. Abstract of the dissertation for the degree of Doctor of Philosophy (PhD) in Economics. — T.: "ACADEMY PUBLISHING CENTER" SUE, 2019. 56 p.
- Artikov A.A., Zokirova N.K., Abdurakhmanov O.A. Human capital in the conditions of reform and modernization of the economy. - T.: Science and Technology, 2008. - 156 p.
- Vaxabov A.V. Methodological bases of assessment of investment efficiency of human capital // Assessment and forecasting of the need for highly educated personnel in the sectors of the national economy. Collection of scientific articles. –T.: Lesson Press. 2017. 5-12 b.
- Голованова Е.Н. Инвестиции в человеческий капитал предприятия и подходы к оценке их эффективности. Transport Business in Russia, 2018. С.5-7
- Goshunova A.V. Accounting for investments in human capital in professional sports organizations. Diss. Candidate of Economics, Kazan, 2014, 3-p.
- Gulyamov S.S. Effectiveness of investing in human intellectual capital. Scientific electronic journal "Statistical Bulletin of Uzbekistan" of the State Statistics Committee. 2019, no. one.
- Zhigalova V.N. Investments in human capital. Textbook.—Tomsk, 2018.—49 p.

- Kulikov A.A. Human resources as an accounting category. Siberian Financial School. 2007.-№1, pp. 64-67. (65).
- Muravieva K.N. Investments in human capital. Management consulting, 2013, No. 1, P. 93-98
- Po'latov M.E. Improving the methodology of accounting and auditing of intellectual capital. Abstract of the dissertation for the degree of Doctor of Economics (DSc).-T .: "ACADEMY PUBLISHING CENTER" SUE, 2017. 66 p.
- Rustamova D.D. Investments in human capital and their characteristics. Economics and Finance, 2014, No. 7, P.33-36
- Umurzakov B.Kh. The main criteria for assessing the development of human potential and their characteristics // Population of Uzbekistan: state, problems and prospects. Monograph, ed. Acad. R.A. Ubaydullayeva. - T., 2012. - S. 183-192.
- Filatova E.V. Investments in human capital in small businesses. Abstract of diss. Candidate of Economics, Moscow, 2010. –p.10
- Fitzenz Ya. Return on investment in personnel: measuring the economic value of personnel. M. Vershina, 2006.-298p. (5 pp.)
- Chaikovskaya L.A., Bystrova Yu.O. Intellectual capital in financial reporting. International accounting. 2011, No. 4 (154).-p.10-19. Josef Drábek, Silvia Lorincová and Jana Javorčíková. *Investing in Human Capital as a Key Factor for the Development of Enterprises*. <https://www.intechopen.com/books/issues-of-human-resource-management/investing-in-human-capital-as-a-key-factor-for-the-development-of-enterprises>
- Lange, Glenn-Marie, Quentin Wodon, and Kevin Carey, eds. 2018. *The Changing Wealth of Nations 2018: Building a Sustainable Future*. Washington, DC: World Bank. doi:10.1596/978-1-4648-1046-6.
- "World Bank. 2020. *The Human Capital Index 2020 Update : Human Capital in the Time of COVID-19*. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/34432> License: CC BY 3.0 IGO.

# The Importance of Digital Transformation Processes in the Country's economic development: The Case of Uzbekistan

RuzievAbdumalikArtigalevich  
Graduate School of Business and Entrepreneurship, Uzbekistan  
aoruziyev@gmail.com

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## ABSTRACT:

The ultimate goal of the present work was to analyze the theoretical and analytical aspects of digital transformation, the main features of the current stage of digitalization of the economy, the elements of the main indicators of digital transformation, the factors leading to digital transformation and the economic consequences of these processes.

**Keywords:** Digital Economy, Digital Transformation, Digital Technologies, Digitalization, Digital Integrity.

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## Introduction

As a result of the development of technological innovations in the global community, the number of companies involved in digital transformation processes has been growing over the past decade. Digital transformation processes, along with the use of new technologies, fully cover changes in key business elements, such as strategy, business model, business process, organizational structure and organizational culture (Kaneet al., 2016). The effective implementation of this process will lead to revolutionary changes in economic and social industries through the application of new business models and the development of digital products and services, while providing opportunities for optimizing business processes and improving the overall efficiency of the organization (Lucas et al., 2013).

Currently, the countries of the world are in the process of strategic reorganization of economic systems in order to introduce new advanced digital technologies, improve business processes, leading to increased revenues and reduced costs. Digital technologies have appeared as a new vital center of modern economies, and leading countries have positioned themselves strategically on this issue. On the international stage, countries seek to leverage their core competencies and advantages while filling important gaps to maximize the benefits of the digital economy (Henriksen A.L. et al., 2018).

As in the global economy, the process of digital transformation is constantly evolving at the level of individual countries and companies. As international corporations are rapidly moving towards digital transformation to introduce new technologies into their business models in order to maintain a leading position in the global economy, studying this process is a very relevant issue today.

Digital transformation today is an undeniable process that provides a direct competitive advantage that can have both positive and negative impacts on productivity as well as efficiency. World practice shows that the countries that were the first to join the process of global digital transformation achieve high results in economic and social development, and this trend will increase in the near future.

While digital transformation has a significant impact on the structure of socio-economic systems, providing unprecedented opportunities to increase efficiency and improve the quality of the customer experience,

digitalization processes require a rethinking of traditional business practices and methods.

Digital transformation provides a solution to systemic problems in networks, the reorganization of labor and the automation of repetitive tasks. As a result of the introduction of digital technologies, effective coordination within and between organizations will be established and unnecessary costs will be reduced.

## **2. Analysis of the literature on the subject**

Since similar concepts such as «digital transformation», «digital maturity» and «digitalization» have recently entered the study of world economic and social activity, there is still no generally accepted definition of these concepts in the scientific literature, international manuals on statistical measurements or in documents of individual countries. In particular, scientifically based conclusions and guidelines for managing abrupt changes in the activities of companies in the digital economy are not sufficiently completed (Valdez-de-Leon, 2016; Matt et al., 2015).

Early interpretations that define the essence of the term «digital economy» considered Internet technologies as its dominant content element, while paying attention to the interaction of people through network technologies (Tapscott, 1996), to emerging information flows [LANE, 1999] and areas critically dependent on digital technologies. technologies (Kling and Lamb, 2000). In later periods, the attention of researchers began to attract the transformation processes taking place in various sectors of the economy under the influence of the introduction of information technologies (Brynjolfsson and Kahin, 2000), as well as the structural components of the «digital economy» (Mesenbourg, 2001; Dahlman et al. 2016). Digital transformation is not only a separate digital transformation, but also a qualitative, revolutionary change that involves a fundamental change in the structure of the economy, transferring the creation of value added centers to the sphere of building digital resources and end-to-end digital processes (World Bank Group 2018).

Digital transformation is a set of economic and social benefits arising from digitalization, the use of digital technologies and data to change existing activities or create new ones (OECD, 2019a) and the use of innovative developments based on information and telecommunication technologies to solve various problems in this process (ITU, 2018). Digital transformation can also be viewed as a process of reorienting digital products and services to have a radical impact on traditional sectors of the economy (UNCTAD, 2019).

Digital transformation is a continuous process of creating, planning, designing and deploying public and private sector services based on the agreement of the parties, a radical change in their use and the multimodal introduction of digital technologies that are personalizing, paperless, cashless, not requiring simultaneous physical participation (ITU, 2019). As a result of the introduction of digital technologies in all spheres of human life, in connection with the processes of digital transformation, there will be significant changes in all sectors of the economy and society (European Commission, 2019), models of production, distribution, exchange and consumption, as well as public administration mechanisms (Lapidus, 2019).

Digital transformation, on the other hand, can be defined as “a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies” (Vial, 2019), which is an organizational change that is generated by the widespread use of digital technologies (Hanelt et al., 2021).

## **3. Methodology**

To solve the problems posed in the study, the dialectical method of scientific knowledge was used, as well as general scientific and special research methods: complex analysis and synthesis, comparison, formal and dialectical logic, and a systematic approach. The scientific works of international organizations and foreign scientists on digital transformation, digitalization and the introduction of digital technologies in various fields of activity are analyzed and compared. Methods for assessing the impact of digital transformation processes on the sectors of the economy and production were used:

1. Systematization of the directions of interpretation of the concept of digital transformation.



2. Analysis of the system and methods of indicators in assessing the effectiveness of digital transformation processes.

3. Conduct research and develop recommendations for improving the specifics of digital transformation processes and methods for assessing the impact on socio-economic development.

#### **4. Results and Discussion**

*Existing contradictions in the concept of «digital transformation».* The existing contradictions in the concept of «digital transformation» are exacerbated by the improvement of digital technologies due to the fact that this process is relatively new, insufficiently studied and describes dynamic characteristics. Many researchers interpret digital transformation as a process of transformation (reform) of previously established economic and social institutions in connection with the introduction of digital technologies. However, the fact is that digital technology itself is so unpredictable and in general is developing so rapidly that it is practically very difficult, and in many cases almost impossible, to predict the consequences of its scaling. This level of uncertainty will further increase if an attempt is made to predict the processes of digital transformation or to extend the planning period to tactical and strategic ones. In itself, the concept of «digital transformation» does not include strict guidelines that have a well-defined direction and lead from a certain initial state to a certain final state, but rather determines the direction of development of these landmarks.

Despite these features, the analysis of the theoretical and analytical aspects of the term under consideration is carried out in parallel in the academic and business environments. In the scientific literature, various analytical reports and periodicals, the topic of digital transformation is considered from different positions, and the authors try to predict its effects and long-term consequences by analyzing the content of digital transformation. Most research focuses on a few basic questions: what is digital transformation and what are its limits, what elements should be the main indicators of digital transformation, what factors lead to digital transformation, what is the purpose of digital transformation and what are its consequences.

In the practice of leading countries, digital transformation involves the introduction of the industry principle of supporting new technologies. At the same time, programs and projects can be built not only on the principle of introducing a group of promising technologies in industries where its use is very relevant, on the contrary, to ensure the digital transformation of a particular industry through the rapid implementation of many technologically heterogeneous solutions that are in demand in a particular sector of the economy or in the social sphere. An example of the first approach is the artificial intelligence (AI) development program in Singapore, which involves the implementation of five sectoral projects: these are intelligent planning of cargo transportation, free provision of public services, early diagnosis and prediction of chronic diseases, personalization of educational trajectories and automation of migration procedures (Smart Nations, 2019).

In connection with the need to combat the COVID-19 pandemic in the healthcare sector, many programs were implemented in 2020, including the implementation of a \$ 200 million program to support telemedicine services in the United States, 55.2 million in the European Union to support innovative projects (EUROPEAN COMMISSION, 2021a), to fight the pandemic million euros The German Ministry of Health has allocated 3 billion euros for the introduction of high-tech solutions (Gesetzentwurf der Fraktionen der CDU/CSU und SPD 2020), remote patient care, medical robotics, and information security, as an example of the second approach. Digital transformation spans a wide range of industries and organizations, from the most digitally advanced (such as financial services) to the conservative real sector. Examples of progress include a set of measures aimed at supporting fintech companies and removing regulatory barriers to crypto assets in the European Union (European Union, 2020a). In the second case, projects for the digital transformation of agriculture, as an example of a network in industry, one can cite the Agro 4.0 program for the introduction of 4.0 technologies in farms and agro-industrial enterprises in Brazil, the UK program for 170 million euros to optimize production processes and supply (Made Smarter, 2020).

Taking into account modern realities and trends, Uzbekistan has also begun efforts to transition to a digital economy. Back in 2018, the country set a course for the development of the digital economy. Priority directions for the development of the “blockchain” technology were identified. The National Agency for Project Management under the President of the Republic of Uzbekistan (the Agency) was designated as the authorized body for the development of the digital economy and licensing activities in the field of crypto-assets circulation.

Later, the Digital Trust Fund for Supporting the Development of the Digital Economy was created at this Agency in order to attract and consolidate investor funds for the implementation of projects in the field of digital economy development on the terms of public-private partnership, including those related to the introduction of blockchain technologies, the implementation of promising projects in this area and support for innovative start-up projects.

In 2017, a new version of the Single Portal of Interactive Public Services (Single Portal, SPIPS - my.gov.uz) was launched, which is a single electronic platform for citizens and entrepreneurs to access public services and the information they need (currently in 18 areas: housing and communal services, real estate, transport, etc.). Among the latest important decisions on the introduction of digital technologies in the work of state bodies, one can note the Decree of the President of October 31, 2019 “On measures to introduce the interdepartmental hardware and software complex “Unified National Labor System” (IHSC “UNLS”).

The Decree of the President of January 8, 2019 “On additional measures to ensure further development of the economy and improve the efficiency of economic policy” provided, in particular, for the preparation by December 1, 2019 of the Strategy for the Development of the National Digital Economy “Digital Uzbekistan-2030. In November 2019 by the Prime Minister of the country with the aim of training 1 million young digital professionals.

In accordance with the draft Concept for the Development of the System “Electronic Government in 2019-2025” it is envisaged, in particular, to increase the share of public services provided in electronic format from the current 37% to 80% and improve the position in the e-Government Development Index from 81st to 50th place by 2025.

On January 24, 2020, in his next address to the new composition of the Parliament, the President of the Republic of Uzbekistan Sh. Mirziyoyev declared 2020 the Year of Science, Education and the Development of the Digital Economy.

On October 5, 2020, the President of the Republic of Uzbekistan signed the Decree “On approval of the Strategy “Digital Uzbekistan – 2030” and measures for its effective implementation”. Also, the Draft Decree of the President of the Republic of Uzbekistan “On the strategy for the development of artificial intelligence in the Republic of Uzbekistan in 2021-2022” has already been developed and posted on the website “Discussions of draft regulatory legal acts of the Republic of Uzbekistan”. The above legal acts create the legal basis for the transition to the digital economy. The adoption of the above acts indicates that Uzbekistan is developing taking into account the requirements of modern times and is making every effort to take its rightful place in the global economy.

It is also important to take measures to further improve the legislation to the requirements and conditions of the digital economy. At the initial stage of legal regulation of the digitalization process, an analysis and assessment of existing legislative norms is carried out for their relevance to the regulatory models used. When choosing a methodology for legal regulation of the digital economy, developed countries prefer not to create a single comprehensive legal document, but to amend existing laws. This approach is typical for Great Britain, France.

The purpose of the adoption of the Strategy is a successful transition to the digital economy, taking into account modern realities. Today, the share of the digital economy in GDP in Uzbekistan is 2.2%. In accordance with the draft Concept for the Development of the Electronic Government System of the Republic of Uzbekistan, by 2025 it is planned to increase the share of ICT services in GDP to 5.0%, and by 2030 to 10%. For comparison, it can be noted that the average optimal indicator is 7-8%, for example, in the UK it is 12.4%, South Korea - 8%, China - 6.9%, India - 5.6%. Regarding the CIS countries - in Russia - 2.8%, Kazakhstan - 3.9%.

In Uzbekistan, the Strategy “Digital Uzbekistan-2030” defines the most important sectors of the economy and

government policy measures aimed at digitalization of the social sphere, and the implementation of digital transformation until 2030 is one of the national goals of economic development (Decree of the President of the Republic of Uzbekistan 2020). At the same time, these targets will be achieved on the basis of indicators for improving the digital infrastructure and e-government, the development of the digital economy and the national digital technology market, education and training in the field of information technology (Table 1).

Table 1. Target indicators of the Strategy «Digital Uzbekistan-2030»

№	Indicator name	Unit of measurement	Status for 2021	Goals by year			Growth rate in 2030 compared to 2021	Difference compared to 2021
				2022	2025	2030		
1	The length of the fiber-optic communication line network in the republic	thousand km	41	70	120	250	83,6	209
2	The level of high-speed Internet coverage of the regions of the republic	%	67	74	85	100	33,0	33
3	The level of high-speed Internet provision of social facilities	%	45	100	100	100	55,0	55
4	Level of provision of households with broadband Internet access	%	67	74	85	100	33,0	33
5	The level of provision of settlements with a network of broadband mobile communications	%	78	100	100	100	22,0	22
6	The e-government development efficiency index in the international rating of the e-government	points (0-1)	0,66	0,70	0,75	0,86	0,20	0,2

	development index							
7	The share of e-government services provided through the Unified Interactive Portal of Public Services in relation to public services provided by public service centers	%	34	60	70	90	62,2	56
8	The share of e-government services available through mobile devices compared to e-government services on the Unified Interactive Public Services Portal	%	5	30	42	60	91,7	55
9	Share of transactional services provided through the Unified Interactive Portal of Public Services	%	25	45	60	75	66,7	50
10	The share of large businesses that have implemented an enterprise resource management system (ERP)	%	20	40	65	100	80,0	80
11	Number of users of online banking services (legal entities and individuals)	million units	10	15	17	20	50,0	10
12	The number of start-up projects included in the programs of incubation and acceleration of techno-parks of	piece	50	250	700	2300	97,8	2250

	software products and information technologies							
13	The number of quotas for admission to higher and secondary specialized educational institutions for training personnel in the field of information technology	thousand	7	12	15	20	65,0	13

**4.1 Discussion**

Features of the current stage of digitalization of the economy. Although digital transformation is described in different ways based on different approaches, it should be noted that in the past few decades, the bulk of economic and social industries have gone through basically the same stages. Without going into deep analysis, the following stages can be distinguished - the widespread introduction of computers for solving practical production problems in 1950-1960, the early stages of industrial automation in 1970-1980, the emergence of small computers in 1980-1990 and the development of the Internet in 2000-2010 yy. All these processes have led to a dramatic change in the form and functioning of economic and social industries and at the same time have played a significant role in the emergence of a number of new sectors, in particular the information and telecommunications technology sector.

Due to the risks associated with the security of personal information that is widely distributed in a global society, including digital privacy, and given the uncertainty of the digital transformation outcomes mentioned above (what will a digitally saturated world be like?), the assessment and the analysis of statistical data on the transformation and analysis of the processes of socio-economic activity is a very relevant and important factor.

Such an assessment should be to come to a conclusion about the degree of involvement of citizens and organizations in the processes of digital transformation, forming in this process models of behavior and business models, new inter-industry value chains, methods and scales of using advanced digital technologies (including quantum, artificial and other advanced digital technologies). technologies) in the economic and social sphere, including should be based on indicators such as the development of new services and digital distribution on online platforms that require a significant digital transformation in relation to the population with business and nature, development, the data industry and the development of new practical attention, their completion of activities within the framework of economic relations. Currently, in the world practice, most of the investments in information and communication technologies (ICT) are carried out in new generation technologies, which have an overall positive trend (Figure 1)

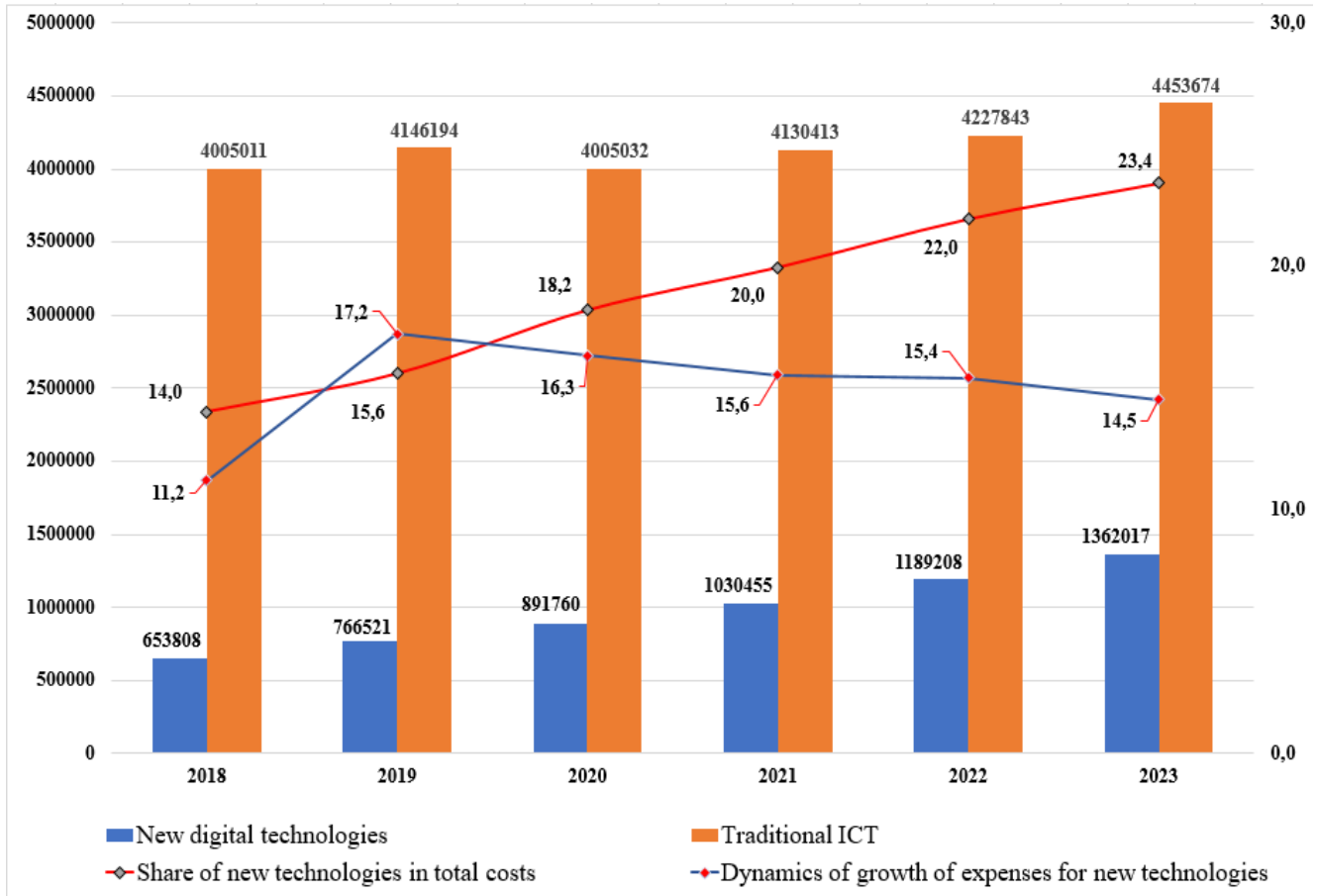


Figure 1. Trends in traditional and new ICT spending around the world

At the same time, for the effective implementation of digital transformation processes, it is necessary to pay attention to the specifics of the current stage of digitalization of the economy. A new round of technological development. Increasing progress in the development of advanced technological areas, including artificial intelligence, robotics, blockchain, virtual and augmented reality technologies, and the like, is a factor accelerating the transition to the next stage of digital transformation. These technologies provide consumers with a unique opportunity to make management decisions and forecasts based on data with a high level of accuracy, significantly reduce costs and provide a new high-quality “consumer experience”.

Unprecedented growth in demand for digital technologies. In recent years, the number of users who prefer the benefits of using digital technologies in various fields of activity has increased. This is mainly due to the fact that the use of products and services is simplified, does not require excessive effort and is intuitive to use, and does not require users to spend a lot of time and resources to acquire the necessary skills.

Reducing the life cycle of technologies. A sharp increase in demand has led to a reduction in the terms and conditions for the «exit of advanced technologies from laboratories». An example of this is the rapid development of quantum technologies. The development of such technologies will undoubtedly provide a new level of speed and reliability of data transmission in the future (3-5 years).

A vivid example of this is the dynamic development of systems based on the «digital twin» of the Internet of things, wireless communication technologies, sensors and other technologies that include elements of artificial intelligence. According to various studies, the size of the global digital twin market has been estimated at US\$3.1 billion in 2020 and is expected to reach US\$48.2 billion by 2026 with an annual growth rate of 58% between 2020

and 2026 (Markets and Markets, 2020).

The pandemic has created new conditions for digital transformation processes. The spread of Covid-19, along with its negative aspects, has caused quantitative and qualitative changes in global technological relations. Now, changing requirements have become the main driver of the prospect of digitalization. The 2020 pandemic, along with the emergence of new applications of digital technologies (CovidTech), has created a need to reassess their importance in human life: regardless of location, the essential daily needs of a person have become the focus of remote service providers in providing personalized services.

Increasing technological and social risks. Digital transformation brings not only positive effects, but also a number of risks. One of the most urgent and acute problems in this area is cybersecurity. Today, many processes are performed in a completely digital environment or have digital twins. The transition to remote operations has led to the need for further expansion of cybersecurity measures.

Loss of work due to the digitalization of industries is the second risk that the population is correspondingly worried about. According to OECD calculations, as a result of the introduction of new technologies, about 32% of existing jobs may undergo transformational processes (OECD, 2019b). First of all, this applies to areas where repetitive processes predominate (industry, construction, etc.) (European Centre for the Development of Vocational Training, Cedefop 2018; European Commission 2019). In addition, the risk of algorithmic discrimination, including institutional "insufficiency" in the labor market, can cause certain problems, so the number of existing risks should be significantly reduced through the development and implementation of new regulations.

For a high-quality digital transformation of the country, a comprehensive strategy is needed, which will take into account the creation of an institutional framework that supports the active introduction of IT technologies in business, raising awareness of business entities about services provided in various sectors of the economy and developing digital literacy development tools. The development strategy approved in Uzbekistan until 2030 sets itself precisely these goals. Among the priorities is to increase the volume of services provided by 2.5 times. This includes the development of e-government, public services for the population, education, healthcare, and medicine.

The "Digital Uzbekistan-2030" strategy provides for the approval of two programs: the digitalization of regions and industries, as well as "road maps" for their implementation. Undoubtedly, this will ensure the most complete coverage and effective implementation of the document, which includes such priority areas as the development of digital infrastructure, e-government, the national digital technology market, education and advanced training in the field.

As part of the ongoing reforms, as well as the Development Strategy of New Uzbekistan for 2022-2026, special attention is paid to the digitalization of the main areas of activity and building a true information society in the country.

While maintaining a stable growth rate, by 2030 it is planned to reach a GDP per capita of \$4,000 and enter the category of "states with an upper middle income." In this regard, the development of the digital economy has been identified as the main driver, with an increase in its share by at least 2.5 times by the end of 2026. At the same time, it is planned to increase the production of software products by five times, their exports by ten times (up to \$500 million), as well as to bring the level of digitalization of production and operational processes in the real sector of the economy (financial and banking) up to 70 percent. In addition, special attention is paid to the digitalization of urban planning and construction in accordance with the Smart City concept.

Uzbekistan began to prioritize the development of information and communication technologies and digitalization in the early 2000s. For example, the country adopted the Comprehensive Program for the Development of the National Information and Communication System of the Republic of Uzbekistan for the period 2013-2020, the Action Strategy for five priority areas of development of the Republic of Uzbekistan in 2017-2021, the Strategy "Digital Uzbekistan-2030".

In addition, with the launch of the Single Portal of Interactive Public Services, there has been progress in this area, as well as in the introduction of new technologies in the public sector. The country's digital infrastructure has

improved significantly, and a significant amount of resources have been invested, which has laid a solid foundation for ICT development. As a result, according to the State Committee of the Republic of Uzbekistan on Statistics, in the field of information and communications for 2017-2021, gross value added more than doubled.

In addition, with the creation of IT parks in Uzbekistan, the export volume of the industry increased 50 times and reached \$46 million. The number of park residents increased from 147 to 500, more than 300 new companies were opened and 8.5 thousand highly paid jobs were created. Currently, over 11 thousand young people work in IT parks.

While the risk of a pandemic is still high in the world and the increase in the incidence still dominates the development of the global economy, we must pay special attention to the development of small and medium-sized businesses. It is this sector that the crisis has had the greatest impact on. In particular, the traditional supply chains of small and medium-sized enterprises have been disrupted, and difficulties have arisen in their relationships with specific partners. And here it is important to pay attention to the creation of new jobs specifically in terms of the digitalization of the private sector. To do this, it is necessary to implement programs for the development of digital skills and digital business. In Uzbekistan, this program began to be implemented in 2020.

One of the most important areas of digital development in Uzbekistan is the education of IT specialists, which are required in almost all sectors of the economy. The first and important condition is the creation of an integrated system of continuous training of IT personnel within the framework of school, secondary specialized and higher education.

It is important to note that more than 60 percent of the population of Uzbekistan is youth. Therefore, one of the main tasks is to involve it in participating in modern digitalization processes, providing young men and women with jobs by supporting the creation of software products and the provision of outsourcing IT services.

To achieve this goal, it is important, first of all, to solve the following tasks:

- provide a legal framework for the transition to the digital economy, for example, by adopting a Strategy and a roadmap;
- create the institutional framework, i.e. mechanisms for implementing the Strategy, in the form of appropriate structures and procedures for coordinating, executing, monitoring, controlling and evaluating the measures taken;
- ensure the mobilization of resources to finance the measures envisaged in the Strategy, and it is important to strengthen cooperation with international and foreign partners;
- take measures to educate and train highly qualified personnel for the digital economy, as well as to educate and prepare the population for the conditions of the digital economy.

Thus, the adoption of the Strategy "Digital Uzbekistan-2030" and the "Roadmap" for its implementation in 2020-2022, first of all, creates a legal framework for the transition to the digital economy. In addition, of course, it is necessary to take measures to further improve the legislation, i.e. introduction of amendments and additions or development of new regulatory legal acts, taking into account the requirements of the digital economy.

The Strategy defines the main areas and directions of digitalization, as well as the main mechanisms for its implementation, and the Roadmap defines specific measures, deadlines and performers for the implementation of this Strategy.

The strategy provides for the approval of two programs:

- on digitalization of regions;
- digitalization of industries.

That is, two approaches to digitalization are provided - territorial and sectoral. This approach will ensure the most complete coverage and effective implementation of the Strategy.

The Roadmap provides for measures in the following areas:

- a) in the field of e-government development;
- b) in the development of the digital industry;
- c) in the field of development of digital education;



d) in the field of digital infrastructure development.

That is, digital processing processes cover the areas of management, production, education and creating conditions for the transition to digital communications.

The strategy should cause an acceleration in the pace of development of the economy of the Republic and an increase in the quality of life of the population, as well as the creation of conditions for the transition of the economy to a fundamentally new trajectory - a digital meeting of the future. Digital transformation produces technological changes in the country and increases the economic efficiency of the economy, the standard of living of citizens and the efficiency of the state.

The implementation of the Strategy will ensure the provision of high-quality digital services to the population; reduction of corruption; increasing the level of involvement of citizens in the processes of government decision-making; modernization of the system of higher and secondary (school) education to ensure the competitiveness and demand for citizens not only within the country, but also in the regional and global labor markets.

This Strategy will contribute to the implementation of all state strategic documents and development programs, first of all, it will be important for achieving global and national sustainable development goals, as well as the Action Strategy of Uzbekistan for 2017-2021. Successful implementation of the Strategy will contribute not only to the transition to a digital economy, taking into account modern realities, but also to improve the position of Uzbekistan in the relevant world indices and ratings (such as the ICT development index, telecommunications infrastructure index, Internet speed, e-Government Development Index, Global Cybersecurity Index) and strengthening the country's image in the international arena. The implementation of the Strategy should contribute to Uzbekistan taking its rightful place in the global economy thanks to technology and innovation.

## **5. Conclusion**

The measures being developed for the development of digital technologies and their implementation are the main issues on the agenda of the policy pursued in the Republic of Uzbekistan and fully comply with global requirements in this area in world practice. High-tech priorities include artificial intelligence, new manufacturing technologies, robotics and sensors, the Internet of Things, fifth-generation mobile communication networks (digital services), new Internet communication technologies, virtual and augmented reality technologies, distributed registry technologies, quantum communications, quantum sensors, quantum computing and more than ten digital technologies, the development of which is actively supported by leading countries.

1. The concept of "digital transformation" can be interpreted in different ways and in a wide range. This concept is formed as a generalization of various events and manifestations, and the exact meaning largely depends on the direction in which this concept is used. For example, the digital transformation of an enterprise covers production, management and auxiliary processes and has a direct impact on it, provides new ways for counterparties to interact in the economy, and brings new forms of communication to society to solve a wide range of issues. At the same time, it can be concluded that it is expedient to implement digital transformation processes that differ sharply from each other, when interpreted based on the specifics of the economic sector.

2. In order to further improve the processes of digital transformation in Uzbekistan, it is necessary to pay serious attention to promising technological areas that are currently actively developing in developed countries, such as geoinformation and navigation technologies (spatial data), photonic technologies, cloud technologies (Cloud computing), fog technologies (Fog computing), edgecomputing technologies (Edge Computing), cyberbiological systems (as well as neurotechnologies), authentication and identification technologies (including biometric technologies), supercomputing and grid technologies.

3. Taking into account the above considerations, it can be concluded that digital transformation is a process of qualitative changes that lead to significant socio-economic effects in business processes or methods of economic activity (business models) as a result of the introduction of digital technologies.

4. In general, it is necessary to regularly update the priorities based on the assessment of professional predictive research and big data analysis. Further, as a phenomenon covering all spheres of life, it is necessary to further improve the methods for a comprehensive quantitative assessment of the results of digital transformation, and for this it is necessary to create a scientifically based methodology for determining the effectiveness of the use of information and digital technologies.

5. When determining the scale of measuring the effects of digital transformation, it is necessary to consider the process of digital transformation through the prism of the introduction and use of advanced digital technologies such as the Internet of things, artificial intelligence, blockchain, cloud and others. Particular attention should be paid to available information (in particular, big data), as well as digital competencies, the existing composition of which is changing, and the impact of economic transformations on society will be assessed by indicators that characterize well-being and the quality of consumption.

6. Based on the evidence-based approach, which has been widely used recently in decision-making, it is necessary to approach the quantitative assessment of digital transformation processes from a certain point of view: structure (organizational, managerial and operational processes); data and data management; innovative activity (development and implementation of new digital technologies, information technology management); quality of products and services; environment (enterprise resources, regulation); infrastructure and data security; financing (costs, return on investment); ethical directions (attitude to new digital technologies).

Each of these aspects can ultimately be characterized by specific indicators and metrics. Some of these aspects have been used in the statistical system for many years (generally accepted definitions and approaches have been developed for their measurement based on the methodological recommendations of leading international organizations), the rest are formed according to the situation (their measurements are not fully standardized). At the same time, none of these dimensions alone can fully reflect the phenomenon of digital transformation.

7. In our opinion, the main feature of digital transformation, which distinguishes it from similar concepts, in particular, digitalization (although difficult to implement in many cases), lies in the qualitative changes in business processes and activity models. These are, first of all, platforms created within the framework of digital technologies, and important socio-economic effects from their implementation. Digital transformation is not only the introduction of digital technologies, but also the transformation of many horizontal and vertical business processes, the optimization of operational processes, the transformation of certain models and forms of interaction between participants in the value chain. The introduction of new technological solutions requires additional investments in improving organizational practices, developing employee competencies, and improving the culture of working with information and digital solutions.

## References

- Strategy «Digital Uzbekistan-2030» (2020). Decree of the President of the Republic of Uzbekistan dated October 5, No. UP-6079 «On approval of the Strategy «Digital Uzbekistan-2030» and measures for its effective implementation».
- Hanelt, A.; Bohnsack, R.; MarzD.; Antunes Marante C. (2021). A systematic review of the literature on digital transformation: insights and implications for strategy and organizational change. *Journal of Management Studies*, 58(5), 1159-1197. <https://doi.org/10.1111/joms.12639>
- Henriksen A.L.; Rauen C.V.; Cavalcanti D.B.; De Carvalho L.L.B.; Brito M.T.S. (2018). Wimmer M., Menezes P.G., Conceição S.B.. Brazilian digital transformation strategy E-Digital. Brasília,. <https://www.gov.br/mcti/pt-br/centrais-de-conteudo/comunicados-mcti/estrategia-digital-brasileira/digitalstrategy.pdf>
- Brynjolfsson E., Kahin B. (2000). *Understanding the Digital Economy* / E. Brynjolfsson, B. Kahin (eds).

Cambridge, MA: MIT Press. 1–10.

- Valdez-De-Leon O.(2016). Digital maturity model for telecommunications service. *Technology Innovation Management Review*, journal, vol. 6, no. 8, p. 19-32, August.
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*. <https://doi.org/10.1016/j.jsis.2019.01.003>.
- Gesetzentwurf der Fraktionen der CDU/CSU und SPD (2020). Entwurf eines Gesetzes für ein Zukunftsprogramm Krankenhäuser (Krankenhauszukunftsgesetz - KHZG). [https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3/Gesetze\\_und\\_Verordnungen/GuV/ K/KHZG-BT\\_bf.pdf](https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3/Gesetze_und_Verordnungen/GuV/ K/KHZG-BT_bf.pdf) Downloads
- Dahlman C.;Mealy S.;Wermelinger M.(2016). *Harnessing the Digital Economy for Developing Countries*. Paris: OECD. DOI: <https://doi.org/10.1787/18151949>. URL: <https://www.oecd-ilibrary.org/docserver/4adffb24-en.pdf?expires=1580053414&id=id&acname=guest&checksum=FA36B38F96D728B7AA777B9FDD5DE587>
- European Centre for the Development of Vocational Training, Cedefop 2018. *Automation Risk in the EU Labour Market: A Skillneeds Approach*. [https://www.cedefop.europa.eu/files/automation\\_risk\\_in\\_the\\_eu\\_labour\\_market.pdf](https://www.cedefop.europa.eu/files/automation_risk_in_the_eu_labour_market.pdf)
- European Commission (2019). *Digital Transformation in Transport, Construction, Energy, Government and Public Administration*. <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/digital-transformation-transport-construction-energy-government-and-public-administration>.
- European Commission (2020). *Shaping the Digital Transformation in Europe*. <https://op.europa.eu/sv/publication-detail/-/publication/917c520ffd56-11ea-b44f-01aa75ed71a1>
- European Commission (2021a). *Digital Health Technologies Addressing the Pandemic*. <https://ec.europa.eu/digital-single-market/en/digital-health-technologies-addressing-pandemic>
- ITU (2018). *Accelerating Digital Transformation: Good Practices for Developing, Driving and Accelerating ICT Centric Innovation Ecosystems in Europe*. <https://www.itu.int/myitu/-/media/Publications/2018-Publications/BDT-2018/Accelerating-Digital-Transformation.pdf>.
- ITU (2019). *Digital Transformation and the Role of Enterprise Architecture*. [https://www.itu.int/pub/D-STR-DIG\\_TRANSF-2019](https://www.itu.int/pub/D-STR-DIG_TRANSF-2019).
- Kane G.C.; Palmer D.; Phillips A. N.; Kiron D.; Buckley N.(2016). *Aligning the Organization for Its Digital Future*. MIT Sloan Management Review and Deloitte University Press. <https://www.inovaconsulting.com.br/wp-content/uploads/2018/06/Deloitte-Aligning-the-Organization-for-Its-Digital-Future.pdf>
- Kling R.;Lamb R. (2000). *IT and Organizational Change in Digital Economies*. *Understanding the Digital Economy*/E.Brynjolfsson, B. Kahin (eds). Cambridge, MA: MIT Press. p. 295–324.
- Lucas H. C.;Agarwal R.;Clemons E. K.;Sawy O. A.;Weber B.W. (2013). *Impactful Research on Transformational Information Technology: An Opportunity to Inform New Audiences*. *Management Information Systems Quarterly*, journal, vol.37, no. 2, p. 371-382, <https://www.semanticscholar.org/paper/Impactful-Research-on-Transformational-Information-Lucas-Agarwal/bd11d4aef6826b2209f14608af6cf5101110af76>
- Lapidus L.V. (2019). *Analysis of methods for assessing the level of digitalization in the context of the priority tasks for Russian regions, 2019*.[https://digital.msu.ru/wp-content/uploads/%D0%94%D0%BE%D0%BA%D0%BB%D0%B0%D0%B4\\_%D0%9B%D0%B0%D0%BF%D0%B8%D0%B4%D1%83%D1%81\\_23\\_04.pdf](https://digital.msu.ru/wp-content/uploads/%D0%94%D0%BE%D0%BA%D0%BB%D0%B0%D0%B4_%D0%9B%D0%B0%D0%BF%D0%B8%D0%B4%D1%83%D1%81_23_04.pdf).
- Lane N. (1999). *Advancing the Digital Economy into the 21st Century // Information Systems Frontiers*. Vol. 1. № 3. pp. 317–320. URL: <https://www.elibrary.ru/item.asp?id=5052743>

- Made Smarter (2020). Manufacturing Made Smarter Challenge. [https:// www.madesmarter.uk/support/harnessing-the-uk-s-innovative-capability/#:~:text=The%20Manufacturing%20Made%20Smarter%20challenge,digital%20technology%20within%20UK%20manufacturing.&text=New%20innovations%20will%20connect%20UK,productivity%20and%20become%20environmentally%20sustainable](https://www.madesmarter.uk/support/harnessing-the-uk-s-innovative-capability/#:~:text=The%20Manufacturing%20Made%20Smarter%20challenge,digital%20technology%20within%20UK%20manufacturing.&text=New%20innovations%20will%20connect%20UK,productivity%20and%20become%20environmentally%20sustainable)
- Markets and Markets (2020). Digital Twin Market by Technology, Type (Product, Process, and System), Application (Predictive Maintenance, and Others), Industry (Aerospace & Defense, Automotive & Transportation, Healthcare, and Others), and Geography-Global Forecast to 2026.
- Matt C., Hess T.;Benlian A. (2015). Digital Transformation Strategies.September 2015, Business & Information Systems Engineering. vol. 57, no. 5, pp. 339-343, August. <https://www.semanticscholar.org/paper/Digital-Transformation-Strategies-Matt-Hess/721740d91cf716a179ec716ea241c48c8796f7f1>.
- Mesenbourg T.L. Measuring the Digital Economy. U.S. Bureau of the Census. 2001. URL: <https://www.census.gov/content/dam/Census/library/workingpapers/2001/econ/umdigital.pdf>
- OECD 2019a. Science and Technology: Vectors of Digital Transformation. [https://www.oecd-ilibrary.org.proxylibrary.hse.ru/science-and-technology/vectors-of-digital-transformation\\_5ade2bba-en](https://www.oecd-ilibrary.org.proxylibrary.hse.ru/science-and-technology/vectors-of-digital-transformation_5ade2bba-en)
- OECD 2019b. OECD Employment Outlook 2019: The Future of Work. <https://doi.org/10.1787/9ee00155-en>
- Smart Nations (2019). Singapore. National Artificial Intelligence Strategy. [https://www.smartnation.gov.sg/docs/default-source/default-document-library/national-ai-strategy.pdf?sfvrsn=2c3bd8e9\\_4#:~:text=The%20National%20AI%20Strategy%20is%20a%20living%20document%20to%20place,to%20our%20citizens%20and%20businesses](https://www.smartnation.gov.sg/docs/default-source/default-document-library/national-ai-strategy.pdf?sfvrsn=2c3bd8e9_4#:~:text=The%20National%20AI%20Strategy%20is%20a%20living%20document%20to%20place,to%20our%20citizens%20and%20businesses)
- Tapscott D. 1996. The Digital Economy: Promise and Peril in the Age of Networked Intelligence. New York: McGraw-Hill. 342 p.
- UNCTAD (2019). Value Creation and Capture: Implications for Developing Countries: digital economy rep. [https://unctad.org/system/files/official-document/der2019\\_en.pdf](https://unctad.org/system/files/official-document/der2019_en.pdf)
- World Bank Group (2018). The EAEU 2025 Digital Agenda: Prospects and Recommendations. <http://documents1.worldbank.org/curated/en/850581522435806724/pdf/EAEU-Overview-Full-ENG-Final.pdf>

# ANALYSIS OF INSTAGRAM ACTIVITY OF LEADING TOURISM DESTINATIONS

Khalimova Nigina Jafarbekovna  
Phd researcher of Bukhara state university, Uzbekistan  
[n.j.khalimova@gmail.com](mailto:n.j.khalimova@gmail.com)  
[n.j.khalimova@buxdu.uz](mailto:n.j.khalimova@buxdu.uz)

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## ABSTRACT:

Nowadays, in any sphere of business it's highly necessary to work in scope with digital technologies and Internet in order to get high results and stay competitive. The thesis reveals top 10 countries with the highest tourist flow before the pandemic time and their Instagram page analysis with which we can learn the most applying foreign experience to boost the usage of social media in tourism.

**Keywords.** Social media, social networking sites, international tourist flow, Instagram, social media content, Instagram stories.

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## Introduction

Currently, the rise of social media with various platforms has experienced a giant leap. The high demands of information accessed quickly by the community through social media becomes a certain concern for many touristic destinations to use social media as a tool in promoting and building tourism brands. Social media is also seen as having potential benefit to increase tourism sector and strengthen destinations' branding quickly and precisely. Social media is a concept that has recently entered and developing in the international tourism market and which has no limit to the analysis of its usage indicators. In this case, in order to achieve the most effective result, it is necessary to take the countries that were in high positions in international tourism market before the pandemic.

**Research methods.** In this study, analysis, synthesis, comparative analysis and modeling methods were used to determine the real definition of social media today, to research leading foreign destinations.

**Results.** According to the indicators related to 2019, the highest number of international tourists flow in the world was related to France, with 90 million tourists. According to the world population review and UNWTO websites, the following 10 countries were the leaders in terms of international tourist visits:

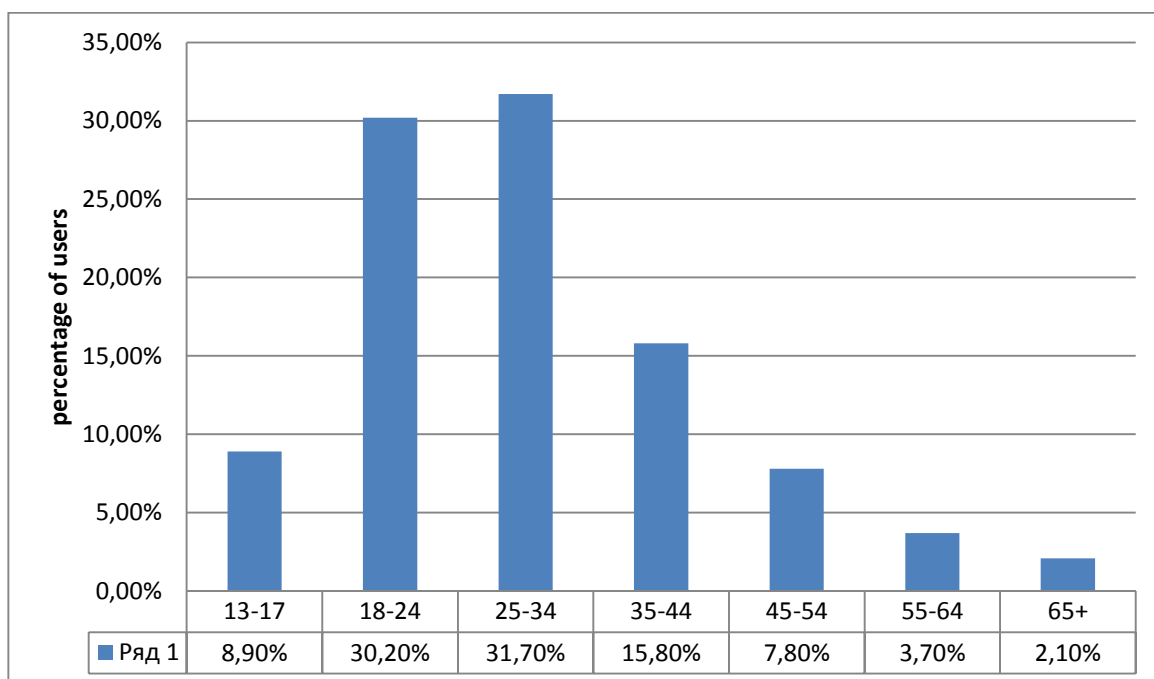
**Table 1.** The countries that took the lead in the distortion of international tourists in 2019.

No	Countries	Number of travelers (in 2019)
1.	France	90 mln
2.	Spain	83.7 mln
3.	USA	79.3 mln
4.	China	65.7 mln
5.	Italy	64.5 mln
6.	Turkey	51.2 mln
7.	Mexico	45 mln

8.	Thailand	39.8 mln
9.	Germany	39.6 mln
10.	United Kingdom	39.4 mln

**Source:** according to world population review and UNWTO indicators.

There are a lot of factors that influenced these countries in the leadership of the arrival of international tourists, and social media is a part of them in the modern age of advanced technologies and the Internet. As of April 2022, the number of Internet users worldwide has reached 5 billion, which is 63% of the world's population. Among these, the number of social media users is equal to 4.65 billion<sup>82</sup>. This indicator is of great importance on a global scale and proves the relevance of studying tourism from the point of view of social media. The scope of use of social networks is very high on the scale of social media, among them, Facebook, YouTube, WhatsApp and Instagram are the leaders in terms of the number of users of social networks. Nowadays, Instagram is part of Facebook, and their algorithm is the same and they are studied similarly in terms of strategies. In order to choose strategies, prepare content, and generally maintain it in these networks, it is necessary to study the audience that uses these networks. The age distribution of Instagram users is shown in the following chart:



**Figure 1.** Age distribution of Instagram users.

**Source:** <https://www.statista.com/statistics/325587/instagram-global-age-group/>

With nearly one billion monthly active users, Instagram is one of the most popular social networks in the world. The app is particularly popular in India and the United States, with 201 million and 157 million Instagram users each, respectively. According to the graph above, the largest share of Instagram users worldwide is between the ages of 18 and 34. Representatives of this age group are active in terms of travel and tend to choose their destinations mainly through Internet networks, social media, in particular, social networking sites. Therefore, analyzing the Instagram network of tourist destinations that are mostly chosen and visited by international tourists is very useful as of learning a foreign experience of using social media. In addition, one of the most popular features of Instagram

<sup>82</sup> <https://www.statista.com/statistics/617136/digital-population-worldwide/>

is stories. Users can post photos and videos to their Stories stream, and the content can be viewed by others for 24 hours before it disappears. In January 2019, the company reported that Instagram Stories had 500 million daily active users. The largest part of these stories is the daily life of users, and among them, travel-related content has a very large index and power. Because travelers are not interested in advertising, but in the real opinion of travelers about the tourist destinations they want to visit.

**Table 2.** Analysis of Instagram activity of destinations.

<b>№</b>	<b>Tourist destinations</b>	<b>Name on the platform</b>	<b>Number of followers</b>	<b>Posts</b>	<b>Number of posts in 5 months (January, February, March, April, May 2022)</b>	<b>Number of stories in 1 day</b>
1	France	francefr	218000	2532	153	1
2	Spain	Spain	829000	4836	333	2
3	USA	visittheusa	259000	2671	57	-
4	China	visitchina	10000	526	(In 2018)	-
5	Italy	visititaly	322000	2840	249	2
6	Turkey	goturkiye	1600000	5897	327	3
7	Mexico	visitmexiko	707000	3402	264	4
8	Thailand	tourismthailand	166000	2579	78	1
9	Germany	germanytourism	553000	3071	87	24
10	Britain	lovegreatbritain	426000	2557	96	-

**Source:** based on author's research.

The above table shows the analysis of the tourist destinations that led in terms of the number of international tourists in 2019 on Instagram, one of the most active and popular social networking sites. Among these countries, the Instagram page of Turkey is the most followed in terms of users, and this destination regularly delights its followers with high-quality and useful content. Turkey is the most active destination among the top 10 countries in terms of the number of visits by international tourists, both in terms of the number of posts and the number of followers. It can be proved that the aspect of activity in social media is one of the indicators that affect the visit of tourists to this country.

Nowadays, Asian countries play leading role in promoting their tourism and hospitality sector through social media platforms. One of the active user and promoter touristic destinations via Instagram account is Indonesia which is known with its own brand “wonderfulindonesia”. It covers big auditorium equal to 769000 and has released 3536 posts until now. When compared with 10 leading tourism destinations, it would be in the third place after Spain and before Mexico. To excel among competitors and to show influential brand, Indonesia worked out the strategy that takes it to the next level. Tourism strategy in Wonderful Indonesia's branding through social media was carried out in several stages; the first stage was planning. In 2015, re-branding was conducted with the addition of typography and touches on Wonderful Indonesia's logo. Then the second stage was the design of the program by placing the right positioning for each Indonesian tourism destination which includes three elements of tourism products, namely natural, cultural and man-made with marketing strategy programs that are carried out namely BAS (Branding, Advertising and Selling) which refers in major cities of the world such

as Berlin, New York, Amsterdam, Madrid and Paris. The third stage was the performance of the Ministry of Tourism, which according to the Central Agency Statistics, foreign tourist arrivals to Indonesia in 2017 increased rapidly to 14.4 million tourists. In addition, another proof of performance was Wonderful Indonesia's physical branding ranked 42nd in 2018 set by the World Economy Forum. The fourth stage was to grow and maintain brand equity. This was achieved by Wonderful Indonesia by gaining 46 awards in 22 countries in 2016. Then in 2017 Wonderful Indonesia received 27 awards in 13 countries, whether in 2018 won "Brand of the Year Indonesia 2018" by Philip Kotler Center for ASEAN Marketing. Moreover, at the end of 2017, the growth number of foreign tourists was recorded at 22%.

### **Conclusion.**

In today's global world, if touristic destinations want to be on the top and have good advertising from user-generated content, they should be active user of social media, mainly social networking sites. According to the statistics of 2022, one of the most used social networking sites is Instagram which has colorful opportunities for its users to show the most beautiful sites of touristic destinations. Therefore, learning from the experience of destinations with high tourist flow gives best results for developing tourist countries in the beginning of long way.

### **References:**

- Prawibowo, D., & Purnamasari, O. (2019). The Strategy of Indonesian Ministry Of Tourism In Wonderful Indonesia's Branding Through Social Media. *Perspektif Komunikasi: Jurnal Ilmu Komunikasi Politik dan Komunikasi Bisnis*, 2(1).
- Manning, J. (2014.) Social media, definition and classes of. In K. Harvey (Ed.), *Encyclopedia of social media and politics* (pp. 1158-1162). Thousand Oaks, CA: Sage.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business horizons*, 54(3), 241-251.
- Trottier, D., & Fuchs, C. (2015). *Social media, politics and the state. Protests, Revolutions, Riots, Crime and Policing in the Age of Facebook, Twitter and YouTube*. New York and London: Routledge.
- Svatol'ovb, V. (2012). Social media such as the phenomenon of modern business. *Journal of Marketing Development and Competitiveness*, 6(4), 62-84.
- Xalimova, N. J. (2021). IJTIMOY MEDIANI SHAKLLANTIRUVCHI FUNKSIONAL BLOKLAR VA ULARNING VIRTUAL DUNYODA QO'LLANILISHI. "Экономика и туризм" международный научно-инновационной журнал, 2(2).
- Khalimova, N. J. (2022). Uzbekistan Hospitality Training Programs and its Problems. *Journal of Ethics and Diversity in International Communication*, 2(3), 57-66.
- Khalimova, N. J. (2020). Analysis of foreign experience in hotel career enhancement programs. *Central Asian Problems of Modern Science and Education*, 2020(2), 3-14.
- <https://www.statista.com/statistics/617136/digital-population-worldwide/>
- <https://www.statista.com/statistics/325587/instagram-global-age-group/>



# THE IMPORTANCE OF THE ALGORITHM FOR CALCULATING ECONOMIC MODELING OF OPTIMAL PROCEDURES FOR THE DEVELOPMENT OF ACCOMMODATION AND PUBLIC FOOD SERVICES

Rakhimov Abdikhakim Muhammadievich  
Karshi Engineering and Economic Institute, independent researcher  
[Ab.raximov@mail.ru](mailto:Ab.raximov@mail.ru)

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## ABSTRACT:

In the article, in the context of the development of accommodation and catering services in the region, priority is given to econometric studies in determining priority development trends based on the introduction of new methods and innovative technologies for the accommodation and catering network, optimally using the existing regional economic potential. The index of intersectoral development potential of accommodation and catering services in the region is based on the relative level of KRIs, and we characterize the following models according to bipolar criteria.

**Keywords.** Econometric model, demand and supply, kinetic production, accommodation and catering services, information and communication services, financial services, index cap, hotel facilities.

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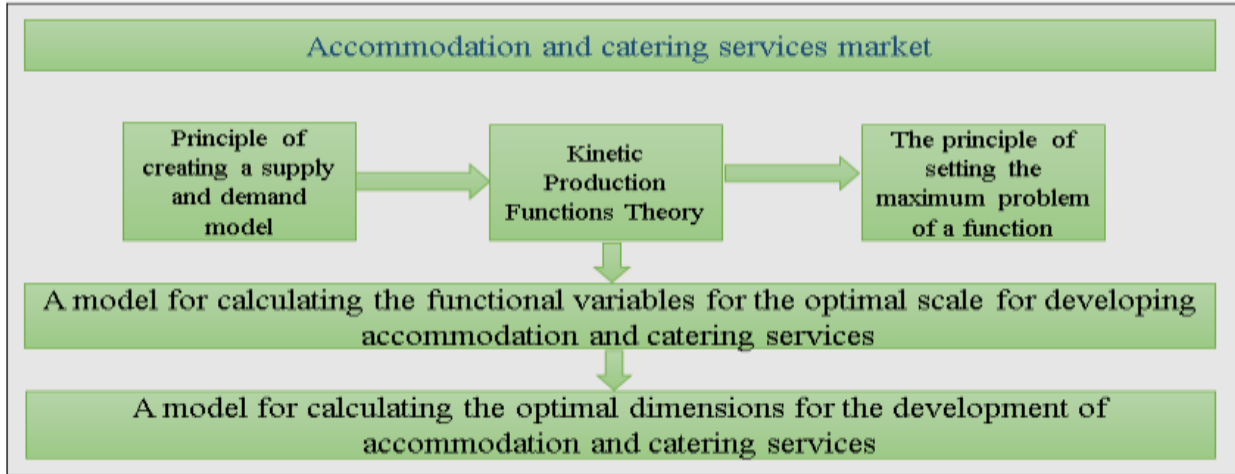
## Introduction

As an integral part of the social environment of the population of our country, the need for a cultural lifestyle is growing, combining various aspects of the development of world and regional cultures and adopting a separate form. The impact of this process has a significant impact on the activities of the entities of residence and public catering services, which raises their demand for social and economic development to higher and new levels. This situation creates a natural process that leads to the development of the market for accommodation and catering services, but it also creates enough complications. Therefore, the determination of the point of intersection of supply and demand in the service market, which ensures a balance between the interests of individuals and consumers, is becoming an increasingly complex social and economic phenomenon.

We believe that it is appropriate to form a balanced system of the accommodation and catering services market in the region on the basis of optimal measures that cover the interests of service entities and consumers.

Here, optimal measurements are applied to the socio-economic indicators of the network, and the main task is to determine the parameters that give the optimal value.

In our study, we proposed a model for calculating the optimization function variables for the development of accommodation and general catering services for the population based on the principle of product market supply and demand model formation [1] and the principle that poses the maximum function problem [2], the theory of kinetic production functions [3] (Fig. 1).



**Figure 1. Scheme of the formation of the optimum metrics calculation function for the development of housing and catering services for the population**

Today, determining the equilibrium point in the service market is becoming more complicated due to the highly variable nature of service entities and consumer interests. This process is a reality that has been fully studied and evaluated and taken into account in the scientific justification of all proposals aimed at future implementation in service network development issues [4]. Our research results are no exception. For this reason, we felt the need to calculate the optimal dimensions for the development of accommodation and catering services for the population based on the development of econometric models that take into account the characteristics of supply and demand.

The interactions in the nature of supply and demand go back to the methods of mathematical analysis theory to identify jobs that satisfy mutual monotony conditions. According to him, given  $X = [x_1; x_2]$  Let the pair of functions  $y_1 = g_1(x)$  and  $y_2 = g_2(x)$  with positive real variables defined in the scalar interval satisfy the following conditions [5]:

I.  $\frac{dg_1}{dx} > 0$  for an arbitrary  $x, x \in X$ ; The relationship  $\frac{dg_2}{dx} < 0$  is valid

II. The set  $X$  contains an element  $x_0$  so that the equality is  $g_1(x_0) = g_2(x_0)$ .

III. The function  $y = y(g_1, g_2)$  defined in set  $X$  is found so that this function reaches its maximum value at point  $x_0$ .

In our opinion, the simplest form of this function is defined as follows, i.e.

$$y = g_1(x) * g_2(x) \quad (1,5)$$

Here,  $g_1(x)$  are exponential functions, and  $g_2(x)$  are power functions. In fact, according to the condition of checking the maximum of the function, the derivative of the first degree of the function (1.5) is set to zero, and the root of the equation is taken as the maximum. In this case

$$y' = g_1'(x) * g_2(x) + g_1(x) * g_2'(x) = 0 \text{ or } \int \frac{g_1'}{g_1} dx = - \int \frac{g_2'}{g_2} dx \quad (1,6)$$

And the root of the differential equation gives the relation  $g_1 = g_2^{-1}$ . The exponential and degree determination of these functions allow the second condition to be fulfilled. As a result, we can write (1.5) as:

$$y = e^{\varphi * f(x)} * f(x)^\omega, \varphi * \omega < 0 \quad (1,7)$$

In particular, when  $f(x) = x$ , from (1,6).

$$y = e^{\varphi * x} * x^\omega, \varphi * \omega < 0 \quad (1,7)$$

We will have an appearance.

In the theory of kinetic production functions, the parameter pair  $(\varphi, \omega)$  of the econometric model of model (1.7) determines the optimal distribution of the variable  $x$  (resource).

We mentioned four main types of accommodation and catering services development above. One of them

is network development based on regional potential. This type of development is very important because all types of development are directly and indirectly related to it [6]. Depending on the purpose of the research, we consider the following methodological approach as appropriate.

1) The choice of possible regional indicators at the level of macroeconomic indicators that determine the state of socio-economic development of the region - this ensures the stability and expansion of the location of the development site of the housing and catering network;

2) Evaluation of the intensity of the correlation between the indicators of choice - this makes it possible to form the correct expression of their general relationship to the main indicator of the network;

3) Building linear econometric models to assess potential regional indicators related to the main indicator of the residential and restaurant network - this creates an opportunity to assess the impact of potential indicators on the main indicator of the network;

4) determination of the expected medium-term values of possible regional indicators - this determines the average rates of economic growth in the medium term;

5) Determining development indicators for the accommodation and catering network based on future regional potential, using elasticity coefficients computed with potential indicators and average expected growth rates.

The results of this methodological approach allow, based on the existing socio-economic potential of the region, to determine the average and conditional lower limits of the naturally provided development, to identify different priority development directions, to evaluate the target indicators for development. from the network in the future.

It is known that one of the methods of forecasting the development of the industry is forecasting using econometric models. Various econometric models are used for forecasting. Including single equation regression models (linear single factor and multifactor), time series models (trend, compound additive prediction model, automatic regression model, etc.), in forecasting socioeconomic processes from a system of simultaneous equations (independent, recursive, approved) is widely used.

In modern econometric studies, it is common to build forecast models based on a specific scenario.

A wide range of forecasting techniques can be used to calculate expected values for residential and restaurant development. Among them, the standard economic modeling method, which is part of the method of formalizing forecasting in the exploratory and normative direction, has a number of advantages. Following are the main advantages of forecasting using econometric models:

- Calculates forecast indicators at the macro, macro, medium and micro levels of development and fully encourages long-term forecasting;

-A specific scenario for the development of production and separate industries;

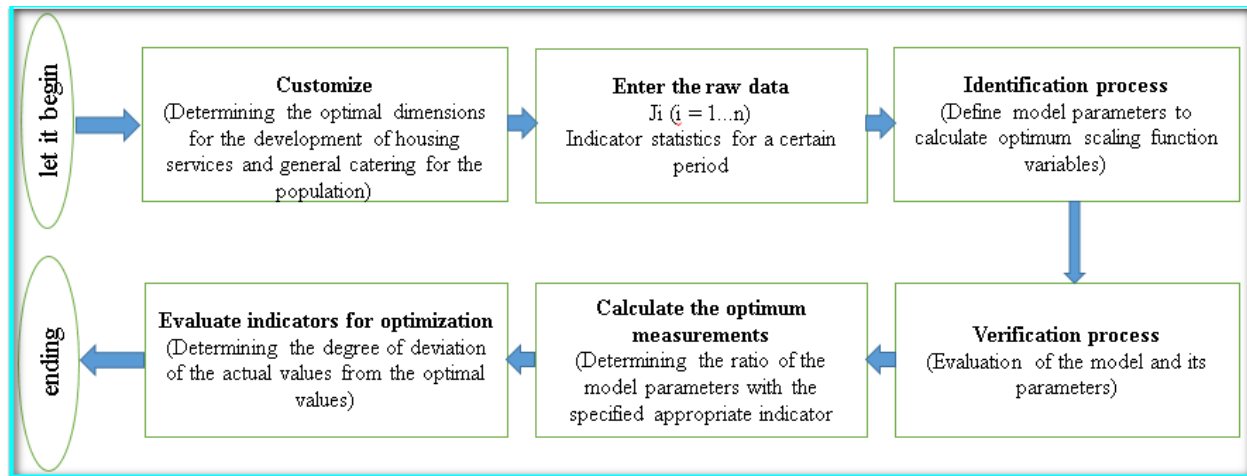
- Allows for multivariate prediction;

- Increasing forecast accuracy, has methodological and technological priority in establishing its reliability;

- The only way to predict social and economic processes of complex stochastic nature and an uncertain set.

In general, the econometric approach in forecasting the development of accommodation and public catering services represents the state of network development for the previous and current period, analyzes, evaluates the results of planning, evaluates the state of future development based on current trends in the exploratory direction of forecasting, predicts the main directions of development based on a normative approach.

Here, econometric models developed on the basis of various econometric methodologies have the functions of expressing, calculating, analyzing, comparing, evaluating, determining and improving in the direction of development and ensuring the effectiveness of research. Finally, we have the following computation algorithm (Fig.2)



**Figure 2. Algorithm block diagram for calculating optimal measures for the development of accommodation and public catering services for the population [7]**

We select the main indicators to determine the optimal dimensions of the market for accommodation and catering services in the cross section of the territory and regional divisions (regions).

In order to bring the real economic indicators of accommodation and catering services in the Kashkadriya region closer to the optimal amount in the future, to increase the number of service entities, especially to expand the coverage of consumers - visitors according to existing possibilities, to ensure optimal efficiency of the use of working capital, and not to transfer a significant part of working capital To the amount of the main fund, it is advisable to abandon such principles as optimizing the working resources of the network in accordance with the volume of work performed, increasing the efficiency of their use and increasing the number of employees.

#### List of used literature

- B.I.Smagin, A.B.Smagina. (2016). The logic of the formation of production functions. Development of the agro-food complex: economics, modeling and information support. Collection of scientific papers. Voronezh, 2016. P. 178-183. <https://www.elibrary.ru/item.asp?id=25535583>
- Ali, Syed Mithun, et al., (2021). Modelling of supply chain disruption analytics using an integrated approach: An emerging economy example. Expert Syst. Appl. 173, 114690. <http://dx.doi.org/10.1016/j.eswa.2021.114690>
- Derek H., Yang Q.Ch. (2020). A More Optimal Stochastic Extremum Seeking Control Using Fractional Dithering For a Class of Smooth Convex Functions. IFAC-Papers Online Volume 53, Issue 2, 2020, Pages 3737-3742. <https://www.ScienceDirect.com/science/article/pii/S2405896320327026>
- Nan Jiang, Rob Law, Li Li. Impacts of peer-to-peer accommodation on the hotel industry: Hoteliers' perspectives. International Journal of Hospitality Management. 88 (2020) 102516 / <https://www.sciencedirect.com/science/article/pii/S0278431920300682?via%3Dihub>
- Mattila, A. S., Lin, I. Y. Restaurant servicescape, service encounter, and perceived congruency on customers' emotions and satisfaction. Journal of Hospitality Marketing & Management, (2010), 19(8), 819–841
- Rakhimov, A. Assessment of the influence of internal and adjacent sectors in the development of housing and public catering services for the population (in the case of Kashkadarya region). Economics and Education, 23(4), 2022, 397–402. Retrieved from <https://cedr.tsue.uz/index.php/journal/article/view/613>.
- Bulletin of the Kashkadarya Regional Statistics Department. Electronic source: <https://www.qashstat.uz/uz/rasmiy-statistika/services-2>

# ECONOMETRIC MODELING OF THE EFFECTIVENESS OF INNOVATIVE TECHNOLOGIES IN THE TEXTILE INDUSTRY OF UZBEKISTAN

Suleymanova Shoira Alavkhanovna  
Phd student of the “Industrial economics and management” department,  
Tashkent State Technical University

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## ABSTRACT:

This article analyzes the role of innovative technologies in the conditions of innovative development of Uzbekistan based on current problems such as improving the textile sector of the economy, effective use of existing natural and economic potential. Also, the forecast for the textile sector of our country was calculated based on the econometric model.

**Keywords:** textile sector, textile industry, economic potential, innovative technologies, econometric model .

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## Introduction

The light industrial sector of the national economy, especially the sector of enterprises producing textile products, is one of the steadily developing sectors in Uzbekistan. The basis of this is the introduction of innovative technologies into the network, the use of modern textile technologies, and the introduction of foreign and local investments into the network. In 2021, compared to 2011, technological innovations introduced into the textile production network, i.e., the textile industry, rose by 5.0 times in Uzbekistan. During this period, the expenses allocated to technological innovations in the textile industry increased by 3.3 times or 88693.5 mln. increased to Soum. This, in turn, shows that this network is attractive to technological innovations.

At the same time, there are a number of problems in the development of the textile network, the solution of which will lead to an increase in the volume of production of products in the network. This, in turn, not only provides the domestic market with quality products, but also plays a major role in providing foreign exchange earnings to the industry by exporting products to foreign markets and leads to an increase in the overall efficiency of the industry.

Econometric methods serve as an effective tool in researching the factors affecting the increase in the volume of textile products in Uzbekistan, including innovative factors. It is possible to develop a system for the formation of demand for textile products and promotion of sales based on the research of the dynamics of the indicators of the textile network, the determination of the factors affecting them, the research of the appearance of connections between them, and on the basis of forecasting for future periods.

The following factors were selected to create a multi-factor econometric model of the textile production network of the Republic of Uzbekistan and innovative factors affecting it (semi-annual data from 2011 to 2021 were obtained): result indicator – the volume of textile production, billion Soums - (Y), influencing factors – the volume of scientific research and experimental-constructive developments carried out by organizations, mln. Soums ( $X_1$ ), expenses allocated to technological innovations, mln. Soums ( $X_2$ ), expenses allocated to technological innovations in the textile industry, mln. Soums - ( $X_3$ ), total number of innovations introduced in the textile industry, unit ( $X_4$ ), and new technologies (technical achievements), number of software tools, unit - ( $X_5$ ) obtained from outside the republic. Since the factors included in the multifactor econometric model are in different measurement units, we bring them

to a single measurement unit by logarithmization.

Descriptive statistics were conducted on the factors included in the model before creating a multi-factor econometric model based on the republic's textile network. The results of the descriptive statistics are presented in Table 1 below.

Table 1

Descriptive statistics by factors<sup>83</sup>

	LNy	LNx1	LNx2	LNx3	LNx4	LNx5
Mean	13.70237	12.27244	14.22104	10.46485	3.372370	4.480336
Median	13.29947	12.26657	14.53873	10.07925	3.295837	4.290084
Maximum	15.42671	13.21096	15.97035	12.46988	5.056246	6.280396
Minimum	12.27670	11.22846	11.88094	9.643524	1.945910	2.890372
Std. Dev.	1.237749	0.644101	1.158345	0.897125	0.832858	0.947581
Skewness	0.336695	0.049007	-0.965782	1.196495	0.410432	0.112298
Kurtosis	1.399920	1.713190	3.123085	2.981847	2.582490	2.028701
Jarque-Bera	2.762568	1.526696	3.433918	5.249506	0.777456	0.911044
Probability	0.251256	0.466103	0.179611	0.072458	0.677919	0.634117
Sum	301.4520	269.9936	312.8628	230.2266	74.19214	98.56739
Sum Sq. Dev.	32.17246	8.712195	28.17704	16.90150	14.56669	18.85611
Observations	22	22	22	22	22	22

Source: data from the State Statistics Committee

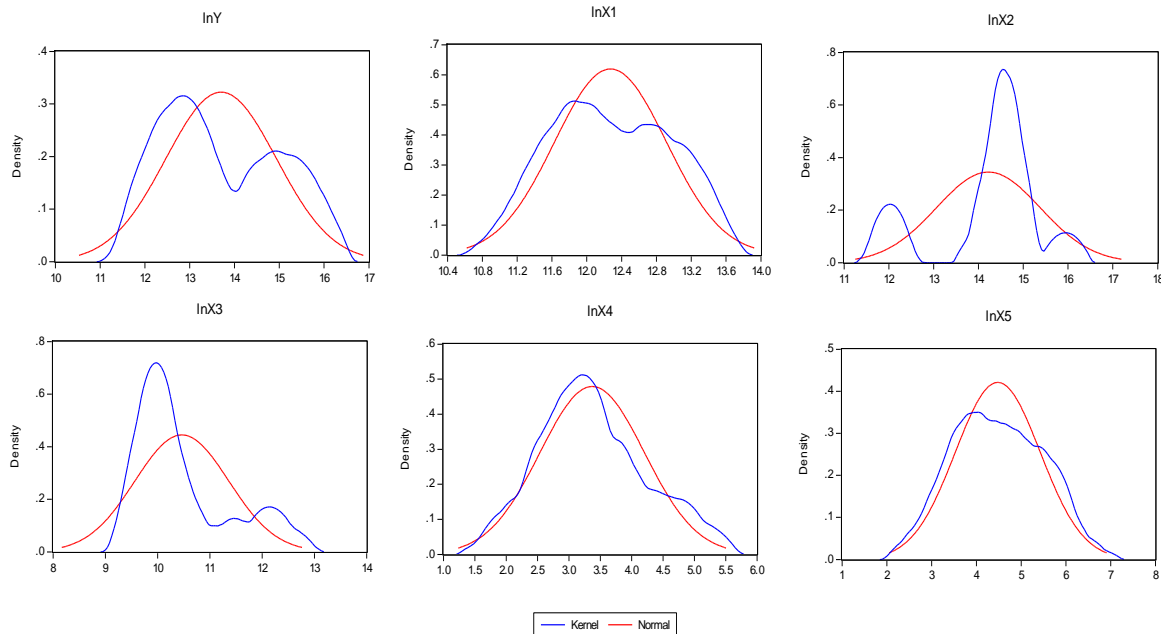
The average value (mean), median (median), maximum and minimum values (maximum, minimum) of each factor can be seen from the table data. In addition, the values of the standard deviation of each factor (std. dev. (Standard Deviation) - the coefficient of standard deviation shows how much each variable deviates from the average value) are presented.

Skewness is a coefficient of asymmetry, and if it is equal to zero, it means that the distribution is normal and that the distribution is symmetrical. If this coefficient is significantly different from 0, then the distribution is asymmetric (that is, not symmetrical). If the coefficient of asymmetry is greater than 0, that is, positive, then the normal distribution graph for the studied factor is shifted to the right. If it is less than 0, that is, it is negative, then the normal distribution graph for the studied factor is shifted to the left. Graphs of normal distribution functions of all factors are presented in Figure 1 below.

The normal distribution function is defined by the following formula:

$$p(x) = \frac{1}{\sqrt{2\pi}\sigma} \cdot e^{-\frac{(x-a)^2}{2\sigma^2}}, \quad -\infty < x < \infty, \quad (1)$$

<sup>83</sup> Developed by the author.



Figure

1. Graphs of normal distribution functions of factors<sup>84</sup>

It can be seen from the pictures that all the factors obey the normal distribution law. The kurtosis coefficient of some factors was greater than 3, so it was sharper than the theoretical graph of normal distribution ( $\ln X_2$ ).

Since the asymmetry coefficients of all factors ( $\ln Y$ ,  $\ln X_1$ ,  $\ln X_3$ ,  $\ln X_4$ ,  $\ln X_5$ ) except the  $\ln X_2$  factor are positive, the right "tail" of their graphs is shifted to the right of the theoretical normal distribution graphs. Since only one factor  $\ln X_2$  has a negative value, its distribution function "tail" is shifted to the left.

These shifts mainly indicate changes in the dynamics of the studied factors. In some years, some factors had a sharp increase, while others did not change significantly. In general, all the studied factors obey the law of normal distribution.

Correlation analysis is necessary to select factors for a multifactor econometric model. For this, special and pair correlation coefficients are calculated between factors. The matrix of individual and pairwise correlation coefficients between the factors is presented in Table 2 below.

Table 2

Matrix of individual and pairwise correlation coefficients between factors<sup>85</sup>

	LN <sub>Y</sub>	LN <sub>X1</sub>	LN <sub>X2</sub>	LN <sub>X3</sub>	LN <sub>X4</sub>	LN <sub>X5</sub>
LN <sub>Y</sub>	1.000000					
LN <sub>X1</sub>	0.961223	1.000000				
LN <sub>X2</sub>	15.58799	-----	1.000000			
LN <sub>X3</sub>	0.0000	-----	0.558704	1.000000		
LN <sub>X4</sub>	0.627127	0.0018	2.978547	-----	1.000000	
LN <sub>X5</sub>	3.600641	0.0079	-----	0.373236	-----	1.000000
	0.0018	0.0079	-----	1.799179	-----	-----

<sup>84</sup> Developed by the author.

<sup>85</sup> Developed by the author.

	0.0009	0.0078	0.0871	-----		
LN <sub>X4</sub>	0.877206	0.460169	0.654404	0.688426	1.000000	
	8.170927	1.542586	3.870404	4.244737	-----	
	0.0000	0.0624	0.0010	0.0004	-----	
LN <sub>X5</sub>	-0.566849	-0.162302	0.214626	-0.174224	-0.167330	1.000000
	-1.238288	-0.735590	0.982739	-0.791257	-0.759023	-----
	0.2299	0.4705	0.3375	0.4381	0.4567	-----

It can be seen from this table 2 that the private correlation coefficients indicate the density of connections between the resulting factor (lnY) and the factors affecting it (lnX<sub>i</sub>). Therefore, private correlation coefficients show that there are different connections between the output factor - textile production volume (lnY) and influencing factors (lnX<sub>i</sub>).

For example, the density of connection between the volume of production of textile products (lnY) and the volume of scientific research and experimental development carried out by organizations (lnX<sub>1</sub>) is equal to 0.9612. This shows that there is a strong connection between the volume of production of textile products and the volume of scientific research and experimental-constructive developments carried out by organizations. Also, there is an average relationship between the volume of textile production (lnY) and the costs allocated to technological innovations (lnX<sub>2</sub>), that is, the value of the private correlation coefficient between them is equal to 0.6271. There is also a moderate relationship between the volume of textile production (lnY) and the expenditure allocated to technological innovation in the textile industry, (lnX<sub>3</sub>). The correlation coefficient between these factors is 0.6571. In addition, there is a strong relationship between the volume of textile production (lnY) and the total number of innovations introduced in the textile industry (X<sub>4</sub>). The correlation coefficient between these factors is 0.8772. However, there is an average inverse relationship between the volume of production of textile products (lnY) and new technologies (technical achievements) received from outside the republic, the number of software tools (X<sub>5</sub>). (Table 2).

In addition, Table 2 shows, there are pairwise correlation coefficients, which show the correlation densities between the two factors (lnX<sub>i</sub>, lnX<sub>j</sub>). The most critical thing here is that the influencing factors should not be closely related to each other. That is, there should be no multicollinearity between influencing factors. Multicollinearity is said to exist if the value of the pairwise correlation coefficient between two determining factors is greater than 0.7. From the data in Table 2, it can be seen that the connection densities between the influencing factors are not greater than 0.7. Judging by the pairwise correlation coefficients in the correlation matrix, there is no multicollinearity between the influencing factors.

Also, in Table 2, coefficients for determining the reliability and probability of correlation coefficients were calculated (values in the rows below the calculated correlation coefficients). At the bottom of each correlation coefficient is its t-Student's calculation value and probability. It is assumed that the calculated probability between the factors is not greater than 0.05. For example, the private correlation coefficient between the volume of textile production (lnY) and the total number of innovations introduced in the textile industry (X<sub>4</sub>) is  $r_{Y,X_4} = 0,8772$ ,  $t = 8,17$  and  $prob. = 0,0000$ . This shows that there is a strong relationship between these two factors. The private correlation coefficient is reliable. There is a positive relationship between the two factors with 95 percent certainty.

According to the pair correlation coefficients, for example, the pair correlation coefficient between the expenses allocated to technological innovations (lnX<sub>2</sub>) and the new technologies (technical achievements) obtained from outside the republic, the number of software tools (lnX<sub>5</sub>) is equal to  $r_{X_2,X_5} = 0,2146$ ,  $t = 0,9827$  and  $prob. = 0,3375$ . This indicates that there is a weak relationship between these two factors and that the pairwise correlation coefficient is not reliable.



In checking the above, we look at their dot graphs to determine the relationship of each factor with the resulting indicator (Figure 2).

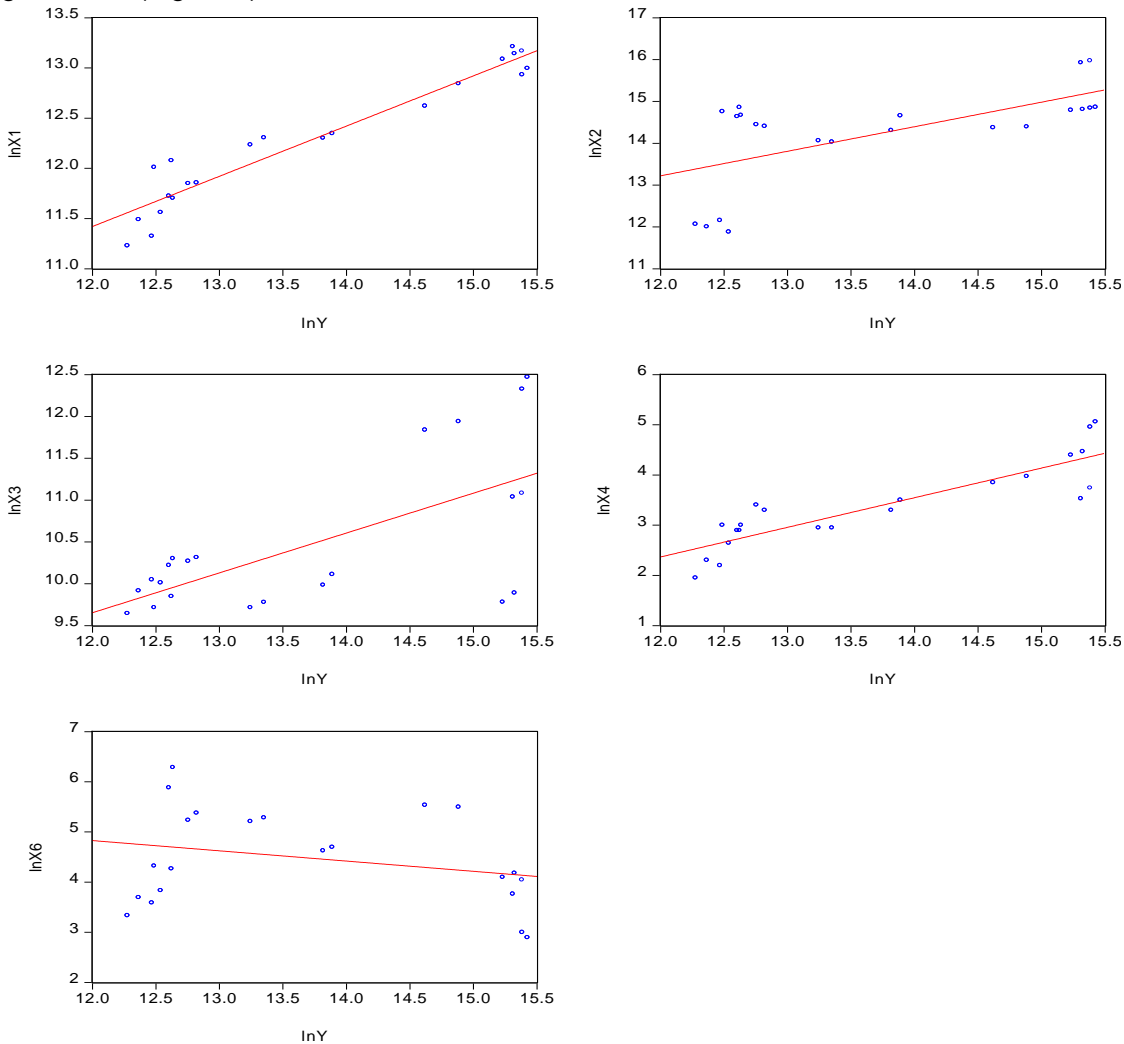


Figure 2. Forms of connection between the resulting factor (lnY) and influencing factors (lnXi)<sup>86</sup>

Therefore, we include all factors in the model when constructing a multifactor econometric model of the gross product of the sewing and knitting industry.

Another way to check the absence of multicollinearity between influencing factors is to calculate the coefficients of VIF (Variance Inflation Factors - effect of multicollinearity). The estimated VIF coefficients for each factor are presented in Table 3 below.

Table 3

Measuring the effect of multicollinearity between influencing factors<sup>87</sup>

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
LN <sub>X1</sub>	0.040721	2226.343	<b>5.838417</b>
LN <sub>X2</sub>	0.007060	520.1911	<b>3.273644</b>

<sup>86</sup> Developed by the author.

<sup>87</sup> Developed by the author.

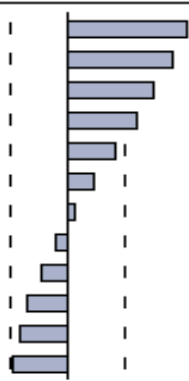
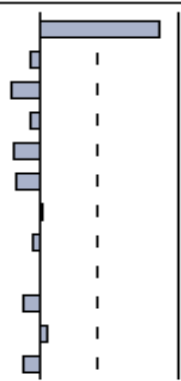
LNx3	0.006999	279.4342	<b>1.946617</b>
LNx4	0.021568	93.97844	<b>5.170353</b>
LNx6	0.004601	34.86784	<b>1.427824</b>
C	3.780653	1368.787	NA

If there is multicollinearity between the significant factors, then the Centered VIF is >10. It can be seen from Table 3 that the VIF coefficients of all influencing factors are less than 10. Therefore, the correlation analysis of the factors also shows that there is no multicollinearity.

Table 4 below provides estimates of autocorrelation and eigenautocorrelation between factors.

Table 4

Determination of autocorrelation and private autocorrelation between factors<sup>88</sup>

Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
		1 0.897	0.897	20.236	0.000
		2 0.790	-0.075	36.723	0.000
		3 0.654	-0.210	48.618	0.000
		4 0.518	-0.080	56.498	0.000
		5 0.359	-0.198	60.499	0.000
		6 0.190	-0.180	61.687	0.000
		7 0.045	0.018	61.760	0.000
		8 -0.088	-0.063	62.051	0.000
		9 -0.193	-0.003	63.563	0.000
		10 -0.299	-0.130	67.487	0.000
		11 -0.358	0.062	73.633	0.000
		12 -0.415	-0.127	82.708	0.000

The autocorrelation and private autocorrelation tests between the factors also produced high results. That is, there is no autocorrelation in the studied time series. Because, from all the observations, it can be seen that all the residuals have probability values less than 0.05.

So, at the next stage, we will create a multi-factor econometric model for the gross product of the sewing and knitting industry of the Republic of Uzbekistan. In general, a multifactor econometric model looks like this:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_n x_n + \varepsilon, \quad (3)$$

where  $y$  - is the resulting factor,  $x_i$  -influencing factors,  $\varepsilon$  -random error.

The "method of least squares" is used to determine the unknown parameters  $\beta_0, \beta_1, \beta_2, \dots, \beta_n$  in the multifactor econometric model (3.3).

The results of calculations for determining the unknown parameters of the multifactor econometric model are presented in Table 5 below.

Table 5

Estimated parameters of the multifactor econometric model<sup>89</sup>

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNx1	1,859273	0,201795	9,213672	0.0000***
LNx2	-0,216685	0,084022	-2,578915	0.0202***

<sup>88</sup> Developed by the author.

<sup>89</sup> Developed by the author.

LN <sub>X3</sub>	0,19723	0,083657	2,357603	0.0315***
LN <sub>X4</sub>	0,110591	0,036861	3,000217	0.0024***
LN <sub>X6</sub>	-0,037797	0,011833	-3,194213	0.0001***
C	-8,301537	1,94439	-4,269481	0.0006***
R-squared	0.969780	Mean dependent var		13.70237
Adjusted R-squared	0.960337	S.D. dependent var		1.237749
S.E. of regression	0.246506	Akaike info criterion		0.264137
Sum squared resid	0.972241	Schwarz criterion		0.561694
Log likelihood	3.094492	Hannan-Quinn criter.		0.334233
F-statistic	102.6914	Durbin-Watson stat		2.349333
Prob(F-statistic)	0.000000			

\*\*\* - 0.05 percent accuracy

Using the data of Table 5, we present the mathematical representation of the multifactor econometric model:

$$\ln \hat{y} = -8,3015 + 1,8592 \ln X_1 + 0,2167 X_2 + 0,1972 \ln X_3 + 0,1106 \ln X_4 - 0,0379 \ln X_5 \quad (4)$$

The multi-factor econometric model calculated on the development indicators of the textile industry of the Republic of Uzbekistan shows that if the volume of scientific research and experimental design development carried out by organizations in the network ( $\ln X_1$ ) increases by an average of one percent, the volume of production of textile products in the republic ( $\ln Y$ ) increases by an average of 1.8592 percent. as possible. If the expenditure allocated to technological innovations in textile enterprises ( $\ln X_2$ ) increases by an average of one percent, the volume of production of textile products in the republic ( $\ln Y$ ) can increase by an average of 0.2167 percent. An average one percent increase in expenses allocated to technological innovations in the textile industry of our country ( $\ln X_3$ ) leads to an average increase in the production volume of textile products ( $\ln Y$ ) in the republic by 0.1972 percent. If the total number of innovations introduced in the textile industry ( $\ln X_4$ ) increases by an average of one percent, the volume of production of textile products in the republic ( $\ln Y$ ) can increase by an average of 0.1106 percent. And finally, if the number of new technologies ((scientific achievements), software tools ( $\ln X_5$ ) obtained from outside the republic increases by an average of one percent, the volume of production of textile products in the republic ( $\ln Y$ ) may decrease by an average of 0.0379 percent. This is mainly due to the failure to apply these innovations to production on time.

To check the quality of the multifactor econometric model (4), we examine the coefficient of determination. The coefficient of determination shows how much of the resulting factor is made up of the factors included in the model. The calculated coefficient of determination ( $R^2$  - R-squared) is equal to 0.9698. This shows that 96.98 percent (4) of the production volume of textile products in the republic is made up of the factors included in the multifactor econometric model. The remaining 3.02 percent (1.0-0.9698) is the influence of unaccounted factors.

The fact that the standard errors of the factors in the multifactor econometric model (4) also took small values indicates that the statistical significance of the model is high.

In order to be able to compare models with different numbers of factors and this number of factors does not affect the  $R^2$  statistic, a smoothed coefficient of determination is usually used, i.e.:

$$R_{adj.}^2 = 1 - \frac{s^2}{s_y^2} \quad (5)$$

Since the adjusted coefficient of determination (Adjusted R-squared) equals 0.9603 and it is close to  $R^2$ , the model can accept variations in the number of influencing factors.

Fisher's F-criterion is used to check the statistical significance of the multifactor econometric model (4) or its adequacy (suitability) to the studied process. Fisher's calculated F-criterion value is compared with its value in the table. If,  $F_{\text{account}} > F_{\text{table}}$ , then the multifactor econometric model (4) has statistical significance, and it can be used to forecast the resulting indicator - the volume of production of textile products in the republic (LnY) for future periods.

So, we find the table value of the F-criterion to check the statistical significance of model (4). For this, we calculate the values of the degrees of freedom  $k_1 = m$  and  $k_2 = n - m - 1$  and the significance level  $\alpha$ . Based on the level of significance  $\alpha = 0,05$  and the degrees of freedom  $k_1 = 5$  and  $k_2 = 22 - 5 - 1 = 16$ , the table value of the F-criterion is  $F_{\text{table}} = 2,85$ . The calculated value of the F-criterion is  $F_{\text{account}} = 102.6914$  and the table value is equal to  $F_{\text{table}} = 2.85$ , and since the condition  $F_{\text{account}} > F_{\text{table}}$  is fulfilled, the multifactor econometric model (4) can be called statistically significant, and from it the production volume of textile products in the republic (LnY) can be used in forecasting for future periods.

Student's t-test is used to check the reliability of the calculated parameters (regression coefficients) of the multifactor econometric model (4). By comparing the calculated ( $t_{\text{account}}$ ) and table ( $t_{\text{table}}$ ) values of Student's t-test, we accept or reject the  $H_0$  hypothesis. To do this, we find the tabular value of the t-criterion based on the conditions of the selected reliability probability ( $\alpha$ ) and degree of freedom (d.f. =  $n - m - 1$ ). Here  $n$  - the number of observations,  $m$  - the number of factors.

The table value of t-criterion  $t_{\text{table}} = 2,1190$  is equal to confidence probability  $\alpha = 0,05$  and degree of freedom d.f. =  $22 - 5 - 1 = 16$ .

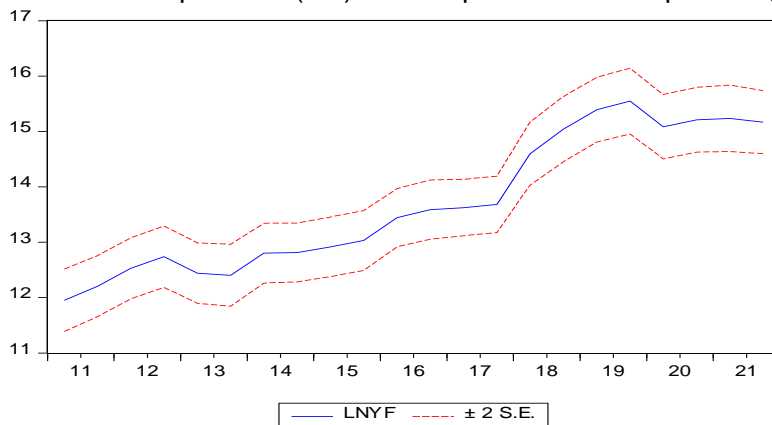
As can be seen from the calculations for determining the parameters of the multifactor econometric model, the calculated values of the t-criterion for all factors are more accurate than the tabular value in terms of  $\alpha = 0,05$  accuracy (Table 5) (negative values are indicated). by module). This allows these factors to be included in a multifactor econometric model.

The coefficient of MARE (Mean absolute percent error) is calculated from the (4) multifactor econometric model when forecasting the result indicator for future periods, and it is found using the following formula:

$$MAPE = \frac{1}{n} \sum_{i=1}^n \frac{|y_i - \hat{y}_i|}{y_i} \cdot 100\%, \quad (6)$$

where  $y_i$  - the actual values of the resulting factor,  $\hat{y}_i$  - the calculated values of the resulting factor.

If the calculated MARE coefficient value is less than 15.0 percent, the model can be used to predict the resulting factor, otherwise, it cannot be used. The value of the coefficient of MARE in terms of the volume of production of textile products (LnY) in the republic is 1.3471 percent (Fig. 3).



Forecast: LNYF	
Actual: LNY	
Forecast sample: 2011S1 2021S2	
Included observations: 22	
Root Mean Squared Error	0.210221
Mean Absolute Error	0.178414
Mean Abs. Percent Error	1.347148
Theil Inequality Coefficient	0.007642
Bias Proportion	0.000000
Variance Proportion	0.007671
Covariance Proportion	0.992329
Theil U2 Coefficient	0.728844
Symmetric MAPE	1.345215

Figure 3. Indicators of using the calculated model in forecasting<sup>90</sup>

This is less than 15.0 percent (MAPE=1.3471), that is, it is 1.3471 percent. Therefore, the multifactor econometric model (4) can be used to forecast the production volume of textile products in the republic.

Therefore, with the help of this (4) multi-factor econometric model, we will make forecast calculations of the volume of production of textile products in the Republic of Uzbekistan for future periods.

For this, we first create a trend model for each influencing factor. A trend model is a time-dependent function of an influencing factor, and it generally looks like this:

$$X_i = \beta_0 + \beta_1 \cdot t + \varepsilon \quad (7)$$

The trend model for the volume of scientific research and experimental-constructive developments (lnX<sub>1</sub>) carried out by organizations of the textile network has the following appearance:

$$\ln \hat{X}_1 = 11,1402 + 0,0984 \cdot t \quad (8)$$

$$R^2 = 0,9853, F_{\text{account}} = 1339,02, t_{\text{account}} = 36,5927$$

The trend model for expenditure allocated to technological innovation (lnX<sub>2</sub>) looks like this:

$$\ln \hat{X}_2 = 12,6184 + 0,1393 \cdot t \quad (9)$$

$$R^2 = 0,6103, F_{\text{account}} = 31,3214, t_{\text{account}} = 5,5965$$

The trend model for expenditure allocated to technological innovation in the textile industry, (lnX<sub>3</sub>) looks like this:

$$\ln \hat{X}_3 = 9,6546 + 0,0704 \cdot t \quad (10)$$

$$R^2 = 0,6008, F_{\text{account}} = 7,0303, t_{\text{account}} = 2,6515$$

The trend model for the total number of innovations introduced in the textile industry (lnX<sub>4</sub>) looks like this:

$$\ln \hat{X}_4 = 2,1488 + 0,1064 \cdot t \quad (11)$$

$$R^2 = 0,6881, F_{\text{account}} = 44,1323, t_{\text{account}} = 6,6432$$

The trend model for the number of new technologies (technological achievements), software tools (lnX<sub>5</sub>) obtained from outside the republic looks like this:

$$\ln \hat{X}_5 = 4,7267 - 0,0214 \cdot t \quad (12)$$

$$R^2 = 0,6215, F_{\text{account}} = 4,4040, t_{\text{account}} = 2,6636$$

According to the analysis of the trend models created between the influencing factors and the time factor, all the coefficients in the trend models (8) - (12) were found to be statistically significant and reliable. So, we calculate the trend models (8) - (12) and put their calculated values into the multifactor econometric model (4). First we calculate the forecast values of the influencing factors, and then the forecast calculations of the resulting factor. As a result, we will have the values of the variables included in the multifactor econometric model of the volume of textile production in the Republic of Uzbekistan (4) during the forecast period (Table 6).

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<sup>90</sup> Developed by the author.

Table 6

The dynamics of the development indicators of the textile industry of the Republic of Uzbekistan in 2011-2021 (by half-years) and their forecast values for 2022-2030 (by half-years)<sup>91</sup>

Years	Production volume of textile products, mln. Sum, Y	The volume of scientific research and experimental-constructive developments carried out by organizations, mln. sum, X1	Costs allocated to technological innovations, mln. sum, X2	Expenditures allocated to technological innovations in the textile industry, mln. sum, X3	Total number of innovations introduced in the textile industry, unit, X4	New technologies (technological achievements) received from outside the republic, the number of software tools, unit X5
2011.1	214635,40	75241,27	173256,30	15421,60	7	28
2011.2	259985,20	82707,40	190053,20	23120,50	9	36
2012.1	234564,30	97542,90	163241,50	20235,40	10	40
2012.2	278671,20	104859,30	144486,20	22279,50	14	46
2013.1	297842,50	123566,70	2265341,20	27463,10	18	357
2013.2	307156,60	120778,70	2343796,60	29735,60	20	534
2014.1	346123,70	139847,50	1875211,40	28854,30	30	187
2014.2	369728,00	140755,90	1802509,60	30120,10	27	216
2015.1	265412,70	164423,80	2564123,50	16542,80	20	75
2015.2	303491,60	175433,10	2829744,20	18878,80	18	71
2016.1	566314,80	205632,80	1278543,80	16548,30	19	183
2016.2	629091,30	220490,10	1238915,00	17599,60	19	196
2017.1	1003452,10	219542,70	1632145,60	21654,70	27	102
2017.2	1076032,80	230362,70	2319456,20	24588,20	33	109
2018.1	2236514,20	302547,20	1745216,70	138415,70	47	253
2018.2	2916353,80	377490,80	1777611,40	153187,50	53	243
2019.1	4805048,10	413256,50	2775413,40	225364,60	142	20
2019.2	5008818,20	440147,90	2846037,60	260376,10	157	18
2020.1	4123652,30	482214,60	2645214,90	17654,80	81	60
2020.2	4523823,40	509814,50	2692384,00	19729,70	87	65
2021.1	4463214,80	546321,80	8205413,70	62145,80	34	43
2021.2	4797880,00	523354,70	8626500,20	65089,80	42	57
2022.1	7010971,23	663165,59	7449667,81	78838,76	99	69
2022.2	8388050,48	731783,51	8563675,18	84594,12	110	68
2023.1	10035612,54	807501,35	9844268,84	90769,63	123	66
2023.2	12006785,05	891053,72	11316359,73	97395,96	136	65
2024.1	14365130,85	983251,29	13008583,93	104506,02	152	63
2024.2	17186697,63	1084988,56	14953859,72	112135,14	169	62
2025.1	20562470,24	1197252,61	17190027,89	120321,19	188	61
2025.2	24601304,53	1321132,66	19760587,86	129104,83	209	59

<sup>91</sup> Developed by the author.

2026.1	29433437,59	1457830,60	22715543,87	138529,70	232	58
2026.2	35214687,39	1608672,72	26112377,67	148642,59	258	57
2027.1	42131477,32	1775122,51	30017166,72	159493,75	287	56
2027.2	50406847,61	1958794,91	34505869,57	171137,05	319	55
2028.1	60307647,57	2161471,94	39665803,43	183630,34	355	53
2028.2	72153140,46	2385120,01	45597342,76	197035,66	395	52
2029.1	86325298,49	2631909,01	52415871,78	211419,59	439	51
2029.2	103281120,03	2904233,33	60254029,03	226853,56	489	50
2030.1	123567366,00	3204735,12	69264287,54	243414,25	544	49
2030.2	147838190,91	3536329,91	79621920,81	261183,89	605	48

Source: data from the State Statistics Committee

Between 2011 and 2021, the average value of textile production in the republic was 3547982.5 mln. In particular, in 2015-2016, the volume of production of textile products in the republic increased by more than 2 times. The production volume of textile products in our country increased by 7.74 times between 2016 and 2021.

During the forecast period, textile products in our country represented 95691785.0 million pounds on average, and it is expected that this figure will increase to Soum. Moreover, the production of products is experiencing an exponential growth during the forecast period. One of the main reasons for this is that textile products produced in our country are in demand not only in the domestic market of our country, but also in the markets of a number of developed countries. Therefore, it is necessary to increase the volume of production.

The analysis of the volume of scientific research and experience-design developments carried out by enterprises and organizations of the textile industry shows that in 2011-2021 this indicator increased by 6.8 times.

The rate of growth of this indicator has rapidly increased since 2019 and reached 180,707.9 million per year. That is, in the enterprises of the textile network, their own scientific research centers and laboratories appeared. The enterprises provided these centers and laboratories with various testing equipment, which led to an increase in the quality and volume of products. During the forecast period, i.e. in 2023-2030, textile firms are expected to increase scientific research and experimental design development, and consequently, this indicator is estimated to reach 1698555.1 million in 2023. By 2030, it is expected to reach 6741065.0 million Soums.

Of course, the above-mentioned centers and laboratories apply know-how to production processes. During 2011-2021, the republic spent an average of 4739510.6 million Soum per year on technological innovation. As an example, we can see that in the retroactive period, that is, in 2021, this cost will be 16831913.9 million. In 2021, this indicator is 46.3 times greater than it was in 2011. One of the main reasons for this is the strategy of Uzbekistan to expand to the Russian and European markets and increase their share in the textile industry. Therefore, starting in 2021, the amount of expenses allocated to technological innovations in our country is increasing. If we pay attention to the forecast period, this indicator is expected to rise by 8.85 times by 2030 compared to 2021.

During the period 2011-2021, the number of innovations introduced into the textile industry totaled 914 units, and in 2030, this indicator is 1148. Therefore, it can be concluded that enterprises themselves are interested in introducing innovations into production. Because the market of textile products is a market based on pure competition, failure to introduce innovations in product production can lead to a decrease in the profits of enterprises and eventually bankruptcy.

In 2011-2021, various innovations were introduced to the textile industry of our country mainly from Europe, South Korea, China and a number of other countries. It can be observed that the amount of this indicator decreases over the forecast period. One of the main reasons for this is that textile industry equipment and software for managing their activities are produced directly in Uzbekistan in our country. Naturally, the volume of the latest technologies and software imported from foreign countries is decreasing.

### List of used literature

- Decree of the President of the Republic of Uzbekistan dated February 17, 2017 "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan" No. PF-4947 // Collection of legal documents of the Republic of Uzbekistan, No. 6 of 2017.
- Decree of the President of the Republic of Uzbekistan "On the development strategy of the new Uzbekistan for 2022-2026" No. PF-60.
- Decree of the President of the Republic of Uzbekistan dated April 18, 2017 No. PF-5017 "On measures to further improve the management of the housing and communal services system".
- F. Kotler. Marketing management. Express course. 2nd edition / translation from English. Edited by Bozhun S.G. 2005.
- Information of the State Statistics Committee of the Republic of Uzbekistan. - Tashkent, 2017-2021.
- Magnus Ya.R., Katyshev P.K., Peresetsky A.A. Econometrics. Basic course: Flying. — 6th edition, - M.: Delo, 2004. ISBN 5-7749-0055-X
- Econometric Theory. Peter C. B. Phillips Cowles Foundation for Research in Economics, Yale University, USA. ISSN: 0266-4666
- Economic-mathematical methods and models. Guidelines for students of all forms of education. Part 2 - Econometrics / Comp.: V.F. Gamaly, B.V. Dmitrishin, V.S. Sotnikov. - Kirovograd: KNTU, 2014
- <http://cbu.uz>
- [www.stat.uz](http://www.stat.uz)



# ECONOMIC EFFICIENCY OF USING THE POTENTIAL OF NATURAL RESOURCES IN THE DEVELOPMENT OF INDUSTRIAL ENTERPRISES

**Khojanova Gulshoda Otamurodovna**  
**Doktoral student, Karshi Engineering Economic Institute faculty of**  
**—Innovative Economics, Uzbekistan**

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## **ABSTRACT:**

Today, taking into account human life, it is necessary to further expand access to natural resources. This article provides information on ways to capture natural resources capacity. The problems in this area have been studied and the necessary suggestions and recommendations are made.

**Key words:** Natural Resource, Minuff Feed, Nature, Economic Efficiency, Natural Resource Peace

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## **Introduction**

Throughout the history of Uzbekistan, the issue of natural resources has been and still remains one of the main ones. At the present stage of the development of society, when new production relations are being formed, this issue is paramount in the reform policy. In the socio-economic development of the country, one of the priority places is the increase in the efficiency of the agrarian economy. This criterion is important for characterizing the economic well-being of the country, since it is associated with the satisfaction of a person's vital needs - the provision of good nutrition. However, among all the reform actions, it was the changes in the agrarian sector of the country's economy that turned out to be the most difficult to implement. It should be especially noted that state support for agricultural producers is insufficient, which, as a rule, is not allowed by any economically developed country in the world.

## **LITERATURE REVIEW.**

In particular, the views of academician I.P. Gerasimov and professor D.L. Arman give a perfect and detailed description of natural resources. That is, "natural resources are various means that people receive directly from nature and which are necessary for their life".

According to another mature scientist professor Yu.G. Sushkin, natural resources are natural resources that can be used to obtain a sufficient amount of electricity for the needs of the population, the production of the necessary food products, raw materials used for industry. Another scientist, A.A. Minz, invites researchers to divide natural resources into business classes based on the forms and directions of their use.

Since the 90s of the XX century in our country, the economic efficiency of agricultural production has been sacrificed for political "expediency". According to a number of scientists, the creation of an environmentally sustainable production in the agro-industrial complex, as a rule, is accompanied by a significant increase in the economic efficiency of production. This is due to the fact that increasing the efficiency of the use of natural resources, including land, is inextricably linked with environmental stabilization in the industrial sector of the agro-industrial complex.

## **RESEARCH METHODOLOGY.**

Research methods such as observation, comparison, interviews, questionnaires were used in conducting

research on the topic.

## **ANALYSIS AND RESULTS.**

The use of land (natural) resources has a number of features. These include the following: spatial limitation of land resources, the multi-purpose nature of their use, non-mobility - that is, they are not subject to movement as needed, some limited options for using land, since the land use process is divided into two types - intensive and extensive .

The earth reveals its essence, as the main means of production, through soil fertility. Preservation of soil fertility of lands and its rational use in economic activities is of economic and social importance. The economic significance of soil fertility is determined by the fact that, being a natural condition for the intensification of agriculture, it contributes to the growth of productivity and gross yields of agricultural crops, and thus affects the economic well-being of an individual commodity producer, economy, region and country as a whole. There are natural, artificial and economic fertility. The initial basis of agriculture is the natural fertility of the soil. Natural and artificial soil fertility are integrated into the economic. They share the potential economic fertility - the maximum possible satisfaction in agricultural production, and the actual one, which depends on the level and degree of land use. The ratio of actual economic fertility to potential indicates the level of use of land resources as the main means of production.

The use of the productive power of soil fertility makes it possible to obtain one or another effect with a certain degree of efficiency in the production process.

In recent years, in the scientific literature, along with the economic efficiency of the use of land resources, the concepts of environmental, social and technological efficiency are considered. Land as a resource is characterized by a multiplicity of meanings and ways of functioning. An integrated multidimensional approach to the concept of "land resources" serves as a necessary tool for cognition, which allows you to cover and present in unity, at first glance, disparate, but in fact objectively interconnected aspects of the functioning of this natural component.

An important means of managing and organizing production is the rational organization of land. The organization of the land area is the most effective placement on the territory of the economy and the use of all available agricultural land, fixed assets, industrial and non-industrial facilities, road network, protective plantings, water and other natural resources.

The division of labor, causing the specialization of production, simultaneously presupposes the formation of reliable mutually beneficial ties and thereby creates objective prerequisites for the development of more advanced forms of agricultural organization. production. The result of the combination of factors of production (labor, capital, natural resources and useful activities of economic entities) is the manufactured product, which becomes a commodity, provided that it is sold to the consumer.

The economy, which is based on knowledge and high technology, is replacing the industrial economy based on the extensive use of natural resources.

In the economic aspect, land, as a natural resource, is understood as a means of production, which has a number of specific features that distinguish it from others. These features, in addition to those listed above, are as follows:

- land is not the result of human labor, and therefore has no value;
- land cannot, unlike other means of production, be quantitatively increased or qualitatively modified; it cannot be replaced by other, more advanced means of production;
- all means of production wear out in the process of use, while the land, with proper operation, not only does not lose its properties, but can improve them.
- land, in addition to all of the above, is a specific subject of market relations. Firstly, not the entire land fund goes through the system of sale and purchase, for example, specially protected territories, reserve lands, are excluded from this area. Secondly, land is mortgaged, sold, bought and leased under certain conditions. In this

land resources are fundamentally different from other means of production, which can be sold, always and without any special limiting circumstances.

In the process of achieving certain goals, we exploit land resources as one of the components of the natural complex, and production and society create conditions for their functioning, which include the need to ensure high efficiency. Efficiency is associated with the effect, which is considered as an action, a consequence of any cause, activity, as a result of the development of any process. In the process of production, substances of nature are consumed, which must be replaced back. The ratio of substances consumed to those received determines the environmental efficiency. The use of natural resources and material allows you to create new products that have value. Substances introduced into the natural complex by the project generate capital costs and annual costs. The combination of output value and costs reflects the economic efficiency of land use. Thus, economic efficiency reflects the degree of implementation of production relations and is measured by a system of cost indicators that characterize the efficiency of production. Technological efficiency characterizes the use of production resources by comparing actual data with the standard level (yield, productivity, agricultural production in comparable prices per 100 hectares of conventional arable land, per average annual worker, per 100 rubles of agricultural production assets). Social efficiency characterizes social development, the level of which is determined by the degree of achievement of the normative standard of living and is measured as the ratio of the increase in active life time to the time spent on obtaining it.

In order to give an objective assessment of the level of management of individual enterprises and their divisions by distinguishing between the influence of objective and subjective factors on production results, to reveal the reasons and show ways to overcome the backlog, to identify reserves for increasing production and improving its efficiency, it is necessary to analyze the criteria for the rationality and efficiency of using natural resources. resources.

The criterion of rationality is evaluated from the point of view of the quality of efficiency, taking into account the use of a specific criterion. As criteria for the rational use of natural resources, indicators of changes and dynamics of their state are used, taking into account the damage caused to them.

In the current market economy, the criterion of efficiency should be a priority, since it is, in its own way, an indicator of the profitability of production, which is what all modern natural and economic activities strive for. Also, efficient production should include the rational use of natural resources, only in such a combination will the subjects of nature management achieve maximum profit, since these criteria are interconnected and complement each other. It is impossible to achieve the effective use of natural resources without their systematic and rational use [3]. The system of complex interaction of rationality and efficiency criteria is shown in Fig.1.



**Figure-1. The system of interaction between the criteria of rationality and efficiency of nature management<sup>92</sup>**

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<sup>92</sup> Compiled on the basis of the author's research

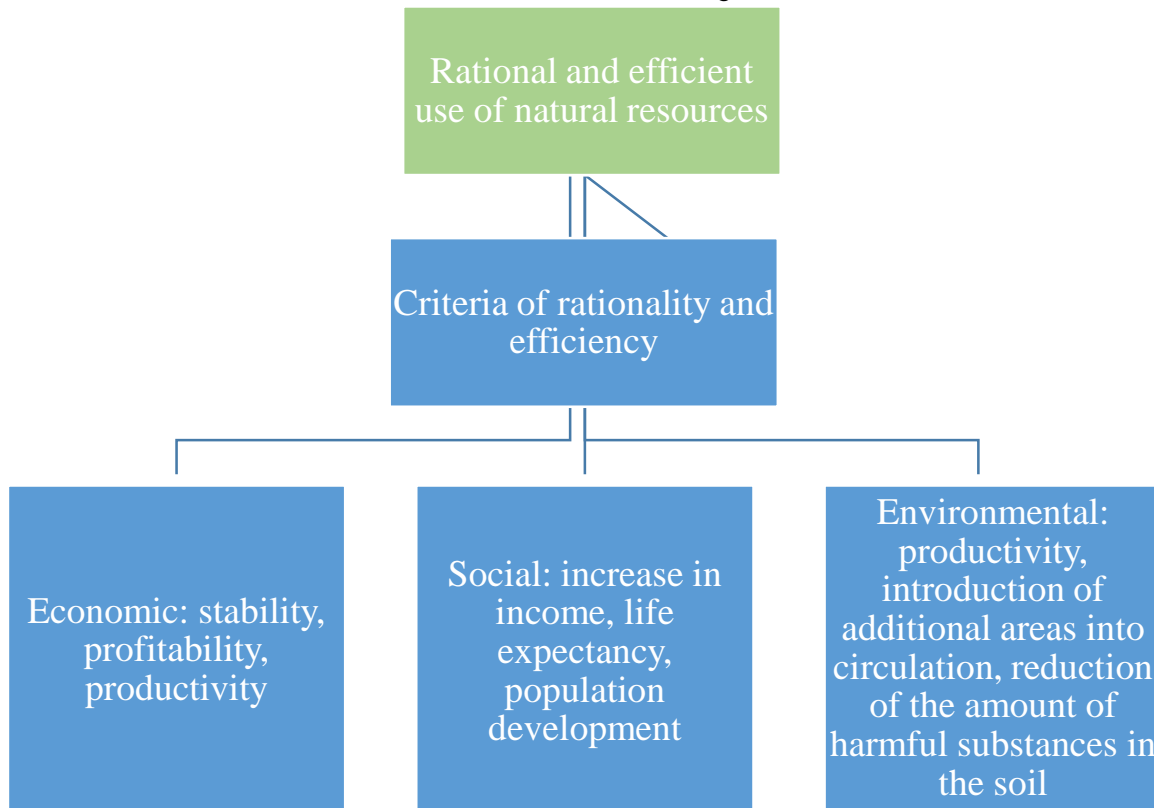
Economic criteria are used to evaluate the results of production activities for a certain period in dynamics, to compare the level of efficiency by enterprises, industries, inter-industry complexes, as well as by districts, regions and the country as a whole. The main indicator of economic efficiency is profitability.

Social criterion - characterizes the compliance of the results of economic activity with the social goals of society. It expresses the degree of satisfaction of the entire set of needs due to the created product and is associated with the standard of living of the population, the content and working conditions, the state of the human environment, and the scale of free time.

Efficient nature management - characterizes the balance of results of economic activity, social needs of society and environmental indicators of environmental protection activities.

Ecological criteria of rationality and efficiency can be manifested at different levels. The primary effect is to reduce the negative human impact on the natural environment, that is, in the rational use of natural resources. First of all, this is manifested in a decrease in the volume of pollution and the concentration of harmful substances in the soil and an increase in the area of suitable natural resources for conducting natural and economic activities. The final effect is to increase the level of life expectancy of the population, increase the natural wealth of the country, which shows a connection with social efficiency.

Criteria of rationality and efficiency of natural and economic activities are classified into three main groups: economic, social and environmental. These criteria are shown in Figure 2.



**Figure-2. Classification of criteria for the rational and efficient use of natural resources<sup>93</sup>**

At the same time, without social achievements it is impossible to achieve economic and environmental efficiency. The degree of solution of social problems (attitude towards work, moral and psychological climate, etc.) often has a decisive impact on the dynamics of the rational and efficient use of natural lands. Both economic and

<sup>93</sup> Compiled on the basis of the author's research

social efficiency in unity influence the ecological effect.

The following table shows the growth rates of the gross domestic product and regional product of the Republic of Uzbekistan and Kashkadarya region (Table 1).

**Table 1**

**Growth rates of gross domestic product and regional product of the Republic of Uzbekistan and Kashkadarya region <sup>94</sup>**

Indicators		Unit of measure	2010	2015	2019	2020	2021	The difference between 2021 and 2010	
								+;-	%
Gross domestic product	Republic of Uzbekistan	billion soums	78936,6	221350,9	529391,4	602193	734587,7	655651,1	930,6
		growth rate, %	107,1	107,2	105,7	101,8	107,4	0,3	100,3
	Kashkadarya region	billion soums	6 944,1	17 247,7	32399,3	35 605,3	43 833,3	36889,2	631,2
		growth rate, %	103,1	106,6	101,8	102,7	107,6	4,5	104,4
		Share, %	8,8	7,8	6,1	5,9	5,9	-2,9	1196,4
Industrial product	Republic of Uzbekistan	billion soums	38119,0	97598,2	322535,8	368740,2	456056,1	417937,1	102,7
		growth rate, %	105,9	105,3	105,0	100,9	108,8	2,9	378,7
	Kashkadarya region	billion soums	4 957,5	8 721,9	20 360,1	14 612,3	18 771,9	13814,4	118,4
		growth rate, %	97,5	105,1	93,7	102,9	115,4	17,9	968,1
Agriculture, forestry and fisheries	Republic of Uzbekistan	billion soums	32746,5	103302	224265,9	261892,2	317027,6	284281,1	98,0
		growth rate, %	106,0	106,1	103,1	102,9	103,9	-2,1	1007,7
	Kashkadarya region	billion soums	2912,8	9 320,1	20415,1	24510,3	29352,8	26440	95,8
		growth							

<sup>94</sup> It was compiled by the author based on the information of the State Statistics Committee of the Republic of Uzbekistan and the statistical newsletter of the Kashkadarya region.

		rate, %	106,7	106,0	101,2	104,0	102,2	-4,5	1047,5
Services	Republic of Uzbekistan	billion soums	27126,8	78530,4	193697,8	219978,5	284165,4	257038,6	103,2
		growth rate, %	115,8	113,4	113,2	103	119,5	3,7	1128,2
	Kashkadarya region	billion soums	1 136,7	4058,9	8800,9	10349,5	12823,8	11687,1	96,2
		growth rate, %	118,9	117,0	111,1	106,7	114,4	-4,5	930,6

According to the analysis, the socio-economic indicators of the Kashkadarya region are developing in accordance with the average indicators of the Republic. In particular, the average growth rate of the Gross Territorial Product in 2021 was 107.6%, this indicator was 107.4% for the Republic. Among the sectors of the economy, the sector with the highest growth rate is the industrial sector. In 2021, compared to 2010, it can be seen that the production volume of industrial products increased by 1096.4%, and in Kashkadarya region, it increased by 278.7%. This was influenced by the following factors: firstly, an increase in the real production volume of industrial products and secondly, an increase in the prices of industrial products.

Criteria of rationality and efficiency are closely interconnected. Using the example of indicators of agricultural production in the Voronezh region, it can be seen that a decrease in the indicators of the economic criterion serves as the basis for a decrease in environmental results, which in turn leads to a drop in indicators of social achievements, since it is the main indicator of growth and decline in the rationality and efficiency of land use.

Thus, the criteria for the rational and efficient use of natural resources in modern economic conditions require a comprehensive and deep scientific justification using indicators combined into groups or systems that objectively reflect the specific situation and existing production conditions. An increase in one indicator (productivity) will not lead to rational and efficient nature management.

## CONCLUSION

It can be concluded that the basis of rational land use and protection of land resources is the achievement of a set of economic, social, environmental and other goals of society. The interconnection and consistency of all these goals is possible with a systematic approach to the analysis of the efficient use of land resources. It is very important to find out the degree of correspondence or discrepancy between the current state of the entire production system of the agro-industrial complex and the goals that economics has traditionally singled out:

- production of agricultural products;
- social reproduction of the population;
- reproduction of land and natural potential.

This will allow us to outline ways to implement measures to bring it to a state of equilibrium.

Since the increase in the level of land use is an objective necessity and a condition for the progressive development of society, and there is practically no limit to this process, the concepts of rational and efficient use of land have been and remain relevant.

For the successful functioning of any economy, it is necessary to systematically implement rational environmental management, taking into account a set of factors: environmental and reclamation, economic, social, technological, engineering, legal, etc. Only in combination can they indicate the quality and validity of the adopted design decisions. The most significant impact is exerted by environmental, reclamation, economic and social factors.

## REFERENCES:

- Komov N.V. Land resources management of Russia: the Russian model of zemlepol use and land ownership / N.V. Komov - M.: Russ. LIT, 1995. p - 299.
- Meadows D.H., Meadows D.L., Randers J., Behrens W.W. The Limits to Grow – A Report for the Club of Rome's Project on the Predicament of Mankind. N.Y., 1972. p -205.
- Lopyrev M.I. Agrolandshafts and agriculture / M.I. Lopyrev, S.A. Makarenko - Voronezh: VGU, 2001. p -168.
- Weltausstellung und Stadtteit Kronsberg (Der staedtebauliche Rahmen fuer die Expo 2000, Hannover). – Hannover, 2000, p-29
- Ovchinnikova N.G. Ecological and economic conditions for the formation and development of land use in modern conditions / N.G Ovchinnikova, A.S. Cheshev .- Rostov-on-Don.: Publishing House. 2010. p- 211.
- Magomadova H.A., Investment projects in the formation of a functions and implementation of environmental measures // Engineering Bulletin of Don. 2013 No. 2 [Electronic resource] Access mode: <http://www.ivdon.ru/magazine/archive/n2y2013/1613> (Free access) - plug. From the screen. - Russian language.
- Rastylov O.A., Pogorelov V.A., Assessment of the most effective land use option // Engineering Bulletin of Don. 2013 No. 2 <http://www.ivdon.ru/magazine/arkhive/n2y2013/1686> (free access) - plug. From the screen. - Russian language
- Pulodova H.Sh. "Tajikistan: positioning of natural resources for the development of mining industries." // Russian entrepreneurship. All-Russian monthly scientific and practical magazine. Moscow, Publishing House "Creative Economics", 2012. -No. 8 (206) -0.38p.l.
- Ergashev R. X., Khamraeva S. N. Economics of agricultural infrastructure //T.: New Century Generation. – 2012.
- Khamraeva S. N. Analysis and problematic issues of food security in Uzbekistan //TRANS Asian Journal of Marketing & Management Research. – 2020. – №. 4. – C. 31-35.
- Khamraeva S. N. Features and trends of digital economy development in uzbekistan and abroad //ACADEMICIA: AN INTERNATIONAL MULTIDISCIPLINARY RESEARCH JOURNAL. – 2021. – T. 11. – №. 2. – C. 1198-1205
- Nasimovna K. S., Otamurodovna K. G. Main Features of Attracting Foreign Investment and Increasing their Efficiency in the Digital Economy //Academic Journal of Digital Economics and Stability. – 2021. – C. 120-126.
- Khojanova G. O.Ways of effective usage of the potential of natural resources in the development of industrial enterprises in the regions //Journal of innovations in social sciences –Surxondaryo 2022.-3- 44-49
- Хўжанова Г.О. Минтақада табиий ресурслардан фойдаланишнинг иқтисодий-ҳуқуқий асослари //O'zbekiston respublikasi fanlar akademiyasi mintaqaviy bo'limi Xorazm ma'mun akademiyasi axborotnomasi 2022-5-2 116-118
- Хўжанова Г.О. Минтақада табиий ресурслар салоҳиятини иқтисодий баҳолаш // Та'лим тизимida ijtimoiy gumanitar fanlar" Toshkent 3/2022 174-178

# DEVELOPMENT MODELS OF THE INFORMATION SOCIETY AND ITS INTERRELATION WITH THE GLOBALIZATION OF THE WORLD ECONOMY

**Tursunov Sherzod Abdukodirovich**

Associate Professor of the Department of Management and Marketing  
at the Tashkent State University of Economics  
E-mail: [shert1977@mail.ru](mailto:shert1977@mail.ru),

**Xidirova Barchinoy Ilxomovna**

Senior Lecturer of the Department of Management and Marketing  
at the Tashkent State University of Economics  
E-mail: [khidirovabarchinoy@mail.ru](mailto:khidirovabarchinoy@mail.ru),

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## ABSTRACT:

This article discusses the models of the information society development and its relationship with the globalization of the world economy. The article also provides analytical information about the Western and Asian models of the formation of the information society.

**Key words:** information society, information technology, globalization, concept, infrastructure, integration, investments, models, world economy, telecommunication networks, privatization, liberalization.

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## Introduction

In many countries of the world, there is currently a process of transition to a new socio-economic formation, a global information society, which will be a set of national information infrastructures. Before proceeding directly to the consideration of the stages of this process, the concepts and programs of these countries aimed at accelerating the development of their information infrastructures and integration into the global information space, it is necessary to identify the main models of informatization, against which country differences will be more noticeable. As a rule, the criteria for this are the macroeconomic policy and the concept of the state in the context of the formation of the information society, the specifics of its legislative system, the peculiarities of the national culture and mentality. Conventionally, two main models of the development of the information society are distinguished: Western and Eastern. Moreover, within the framework of the Western model, it is necessary to separate the path chosen by Europe from the American path, and within the framework of the Eastern model, China (PRC) occupies a special place in this regard.

The main feature of the macroeconomic policy of the countries of the European Union is the search for a certain balance between the full control of the state and the laws of the market, in other words, a combination of government and market forces, taking into account the fact that the role of each of them may change depending on the situation.

This approach to the role of the state in the development of the information society was expressed in the EU resolution of 1993. Where the need to achieve a balance between market and social orientations was noted, it was reflected in the report of the Danish government "Information Society 2000", which emphasizes "... the market



cannot be allowed to take control of the strategy for developing information highways, however, this strategy must take into account the possibilities of market forces" [1].

At the same time, the EU continues to pay great attention today to the issues of privatization and liberalization of the information and communication technology market. For most European countries, the problem of privatization has already been resolved; discussions are currently on the policy of liberalization of telecommunications, which is still one of the most pressing issues discussed at the international level. Leading positions in the process of liberalization are occupied by Great Britain, Sweden, Finland, and the Netherlands. Thus, Great Britain began its national liberalization policy as early as the mid-1980s, while the liberalization of the telecommunications sector in the Scandinavian countries originates at the turn of the 1980s and 1990s. Significant impetus to this process was given by the signing in February 1997 by 69 countries representing 90% of the world market of telecommunications services, an agreement on its liberalization [2].

Another, no less urgent problem is the question of what should be developed first: networks or services. In general, the prevailing opinion in Europe is that it is first necessary to develop the service sector. The United Kingdom and France are among the countries that have an opposite view on this problem. In their plans for the development of the information society, it is indicated that it is the construction of networks that is the driving factor in the development of the service sector. At the same time, it should be noted that practically all programs aim to develop "universal service". The reason for this is the serious concern of the EU countries related to the aggravation of the problem of inequality in the information society, when a large part of the population may simply find itself outside of it.

Not the last role in the development of the information, society, development model and its subsequent implementation is played by national cultural characteristics. Often, they largely determine the demand in the country information technologies. As a result, each country is characterized by its own characteristics of the use of the Internet and e-mail, its audience for various types of information and telecommunication technologies.

The American way of forming the information society is determined by the general model of socio-economic development, in which the functions of the state are reduced to a minimum, and the activities of individuals - to the maximum. The main thing in this approach is to leave everything in the hands of the private sector and the forces of the market, complete liberalization of the information and telecommunications technology market. At the same time, much attention is paid to the development of information superhighways, their social orientation, and the problem of universal service. He is assigned the role of a counterbalance in the case when the policy of liberalization is aimed mainly at improving the quality of services and reducing their prices for the business community, and not for the population as a whole. The United States is in solidarity with Great Britain that, first, it is necessary to build information networks, because of which the service sector will subsequently be developed. But in the field of cultural influence on the informatization process, the approaches of these countries diverge. In the US, the main emphasis is on the further development of "home entertainment" with the help of new information technologies, while in the UK the demand for such products is not decisive.

Representatives of the Eastern model of the development of the information society seek to develop an alternative approach to the Western, which is based primarily on the approval of their own value orientations in relation to industrialization, informatization and social development. It is based on the cooperation of the state and the market, an attempt to establish a connection between the cultural values inherent in Confucianism and the social changes that are taking place. Within the framework of the Eastern model, Japan and the countries of Southeast Asia stand out, certain shifts have been outlined in China and India.

The progress of Japan in the development of the information society as a whole is comparable today with the success in this area of the United States. One of the most important factors in their achievement is the significant expenditure on research and development, the high priority of information and communication technologies in solving the problems of the socio-economic development of the country.

The Asian model covers the newly industrialized countries of Southeast Asia (Singapore, Malaysia, the Republic of Korea, Taiwan) and Japan. A distinctive feature of this model is the long-term state planning of efforts in the field of information and communication technologies (ICT). ICT is seen as the basis for long-term international competitiveness: as an opportunity to increase the efficiency of "traditional" industries, and as a basis for high-tech exports.

The "offshore" model, typical for China and India, provides for the "targeted" development of the export-oriented ICT industry because of a preferential taxation regime and attraction of foreign investment. An important competitive advantage of this group of countries initially was the cheapness of labor and, in the case of India, the presence of an English-speaking layer of specialists [3].

The economic model of development of Asian countries is based on the rejection of Western norms, on the assertion of their own value orientations and the desire to develop a new approach to industrialization and social development. It is based on the cooperation of the state and the market, as well as an attempt to establish a connection between the cultural values inherent in Confucianism (work discipline, emphasis on education, frugality, family values - devotion, trust and mutual assistance based on the recognition of authority) and social transformations.

Within the framework of the Asian model, Japan, the countries of Southeast Asia and India stand out.

\* Japan. In 1960-1970 Japan was the center of industrial development. By all accounts, the Japanese miracle was based on a special, Japanese management style based on a different (compared to European) corporate culture, on a multi-level system of subcontracts organized on the principle of a hierarchical pyramid. This management style is based on three traditional values: on (gratitude), *giri* (responsibility) and *wa* (harmony).

Today, Japan's progress on the path of informatization is comparable to the success of the United States. Japan has overcome the post-war period and has become a developed economic power in the world. One of the most important factors for achieving success has always been and still is the high cost of research and development and the high priority of engineering and technology in ensuring the country's socio-economic development.

Technological progress and the expansion of the market for computers, semiconductors and telecommunications served as the basis for the development of an information-oriented society in Japan. Innovations caused by the development of information technology have led to a reduction in the cost and increase in the efficiency of computer equipment.

Computers have become widely used in various spheres of life: financial services and insurance have become on-line, automated information systems have become widely used in scientific research and development, in production and design, and in wholesale trade. The more computers became widespread, the more they were networked together.

The strategic goals of Japan were:

- construction of a set of interconnected and compatible telecommunication networks;
- development of information devices that combine the capabilities of a computer, television and fax;
- development of software and information services;
- training of qualified personnel capable of working with these systems.

These government goals have served as a huge impetus for the rapid development of information-oriented activities in the country. In 1949, Japan officially announced the development of technology and technology as a means of improving the quality of life of the population. The main task of engineering and technology is to increase the level of consumption. In turn, rising standards of living stimulate technological progress.

Today, after 50 years of stable growth, Japan is facing difficult times: the population is aging, resources and

energy are limited, environmental problems and protection from natural disasters are aggravating. The world is rapidly developing a society of global competition, which is becoming more acute. The Japanese can no longer be sure that they will live better tomorrow than they did yesterday.

Scientific and technological progress is still regarded as the most important factor in economic growth. Following the example of the developed countries of Western Europe and the United States, Japan has achieved great results in adapting imported technologies. True, until recently it was completely dependent on other countries in the field of new knowledge and technologies. The main priority was quality control, not the encouragement of creative intellectual activity that generates new products and technologies. Now a new stage of development is beginning.

The main priority is the own production of new knowledge, new technologies, new products. Not only revolutionary discoveries along this path are important, but also the search for new applications of known knowledge and technologies. The focus is on new ideas, points of view and previously unappreciated originality. There is a search for an institutional way to encourage this kind of activity and people with a pioneering, entrepreneurial spirit. Originality, diversity, difference from others are beginning to be valued much higher than typicality and conformism. Gender and age do not matter in this process. It is emphasized that the role of business in the development of new technologies and industries is also very large, while the role of the state is to create favorable conditions for creativity in this area, to reduce the risk of entrepreneurs operating in priority areas. The Japanese government realized that in order to stimulate creative activity, the intellectual capital of the nation must be made available to all, since it is a public good that cannot be owned individually in the conventional sense. To solve this problem, the public sector is increasing its investments in fundamental research in the development of new ways of data transmission and intelligent systems for flexible information processing. It is noted that in a developed information society, state support for intellectual activity is needed. The emphasis shifts from a society of mass production and consumption to a society with a higher quality multilateral way of life, that is, production to "man and society". The increase in well-being should be aimed at increasing the efficiency of all processes and increasing the level of comfort at home, at work and in society. A large role is given to technology - ease of use, the development of an interface between technology and people, the adaptation of technology to the needs of people, and not people to technology. With the further building of the information society in Japan, the main emphasis is placed on the daily needs of people, on the development and implementation of information and communication technologies that improve the quality of life of the population.

To achieve these goals, the government intends to increase spending on research and development, primarily in the field of high technology, and intensify activities in the field of information science and technology, as these areas are becoming the first priorities for development.

\*Southeast Asian countries. The economic success of these countries was largely facilitated by Japanese investment. Their development is based on the Japanese model, although these countries are still not among the industrialized ones. According to the neoclassical theory of development, this is achieved if the government's policy is directed towards:

- Maintaining a balanced macroeconomic and stable political condition.
- Strict adherence to the market principles.

The experience of these countries shows that their success is based on cooperation between the state and entrepreneurs, on state intervention in decision-making in the field of large investments of private capital. In addition, the state participates in the creation of industrial and social infrastructure. Thus, the fundamental liberal principle of non-intervention of the state in the economy in these countries has been transformed. This model is called the model of economic cooperation between the state and the market.

\* India. In developing countries, there are two models of reforming the telecommunications sector, and, therefore, two strategies for building the information society - Latin American and Asian, which differ in two main parameters - the pace and scale of reform.

Telecommunications reform in the developing world began in the mid-1980s in Chile, Argentina and Malaysia, which began to try different ways to introduce competition into their telecommunications markets. For developing countries, two fundamentally different strategies are clearly distinguished: privatization and liberalization. Privatization is the transfer of state-owned enterprises and activities to full or partial private ownership or control. Liberalization is the reduction of barriers to entry into a market, or part of it, by allowing third parties to compete with established, usually monopoly, producers of goods and services. Experience has shown that those countries that have tried simultaneously pursue privatization and liberalization have failed and stretched the achievement of these goals over time.

The Asian model of reform is characterized by the fact that reform begins with the introduction of competition, leaving privatization to a later period, and full privatization never takes place (the exceptions are Hong Kong and the Philippines, which have always been under strong non-Asian influence). The Latin American model begins with privatization, designed rapidly improve the quality of telecommunications services at the expense of delaying the introduction of competition into the market.

India has chosen neither the path of full privatization nor the path of soft liberalization. Her path can be called an intermediate one. State-owned enterprises are not transferred to the private sector, and competition is allowed in the local service market, while 49% of the foreign presence is allowed (there are 200 million middle-income families in the country, so the domestic market is very promising). Long-distance and international communications remain in the hands of the state.

India chooses the third model - an intermediate path, which is closer in scope and depth to the Latin American model, and in speed of implementation - to the Asian one. India considers its human resources as its main capital on the path of market-oriented economic growth and on the path of integration into the global information society. It has the third largest (after the US and Russia) scientific and technological potential in the world and a good legislative system. Features of the ideology of building an information society in India - phased and gradual, reliance on national cultural roots.

The software industry and market are currently developing at a particularly rapid pace in the world. Thus, the annual growth rate of the global software market is, according to various estimates, from 10% to 20%. A significant share in this sector is occupied by the development of software for export, the so-called software outsourcing [5].

Thus, the experience of India clearly demonstrates that with government support, the task of creating a software manufacturing industry can be successfully implemented. The Indian path is based on the priority development of the ICT export industry, the creation of favorable investment, tax, administrative and other conditions for the industry. The government expects its unique telecommunications reform strategy to enable the country rapidly enter the global information community.

#### **REFERENCES:**

- Vershinskaya O.N. Existing Models for Building an Information Society//Information Society, 1999, N3, p.53.
- National Innovation Systems: Analytical Findings. — Organization for Economic Cooperation and Development: DSTI/STP/TIP(98) 6/REV1
- Kadyrov A.M., Sevliyants S.G., Otto O.E., Akhmedeva A.T. Information and innovation development of the economy of Uzbekistan. T: Iktisodiyot. 2011, 65s.
- Recommendations to the European Council: Europe and the Global Information Society, M. Bangemann and others, 24–25 June, Korfu, 1994.
- Software Export Industry in Uzbekistan// UNDP ICTP Project Study. - T., 2006, p. 5.

- **DIGITAL MEDICAL PLATFORM FOR THE IMPLEMENTATION OF THE ANALYSIS OF MEDICAL SERVICES PROVIDED TO THE POPULATION**

Qodirov Farrux Ergash o'g'li

Assistant of the Department of Information Technology  
Karshi branch of Tashkent University of Information Technologies  
named after Mohammed al-Khwarizmi Uzbekistan, Karshi  
ORCID ID [0000-0002-4574-7728]

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**ABSTRACT:**

This article provides feedback on the possibilities of digital medical platforms for the implementation of the analysis of medical services provided to the population and the effective ways of using information technology in their organization. In addition, the article presents the Digital scheme of the platform and the database implementation algorithm.

**Keywords:** Health Services, Information Technology in medicine, digitalization, digital platform, Information System.

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## **Introduction**

Health services have many entities that are constantly used, aimed at ensuring the full life of the population and remain producers of various forms of ownership.

To combine the solution of such a variety of problems, a digital platform is offered for the model of providing health services in modern conditions. The use of Information Technology in the health sector helps to improve the quality of management, efficiency, availability and quality of services.[1]

The solution to the problem of inequality in the use of health services in the conditions of digitalization of the economy is achieved by improving the technical capabilities of ensuring the general availability, accuracy and speed of diagnosis of diseases, increasing the level of professional use of specialists on the basis of the development of digital platforms for the provision of these services. The digital platform of Health Services is understood as a system of algorithmized mutually beneficial relations of public sector organizations and non-profit organizations in the field of Health Services, implemented in a single information space, which leads to a decrease in transaction costs through the use of a package of digital technologies. Reorganization of the system for working with data and distributing the functions of participants. The information system is built on a three - way architecture: Client - Application Server-Database Server. In addition, it contains two special information modules of the corresponding functionality.[2] the analytical module is designed for the processing of balanced indicators that are engaged in the unification of processed data and perform the function of exchanging this data with regulators (Fig.1) The principle of operation is as follows, in an automated mode, the information system of regulators can receive and analyze the information collected according to the balanced indicators of the health institution they set. Then, based on the analysis, this institution will help you decide on the provision of information.

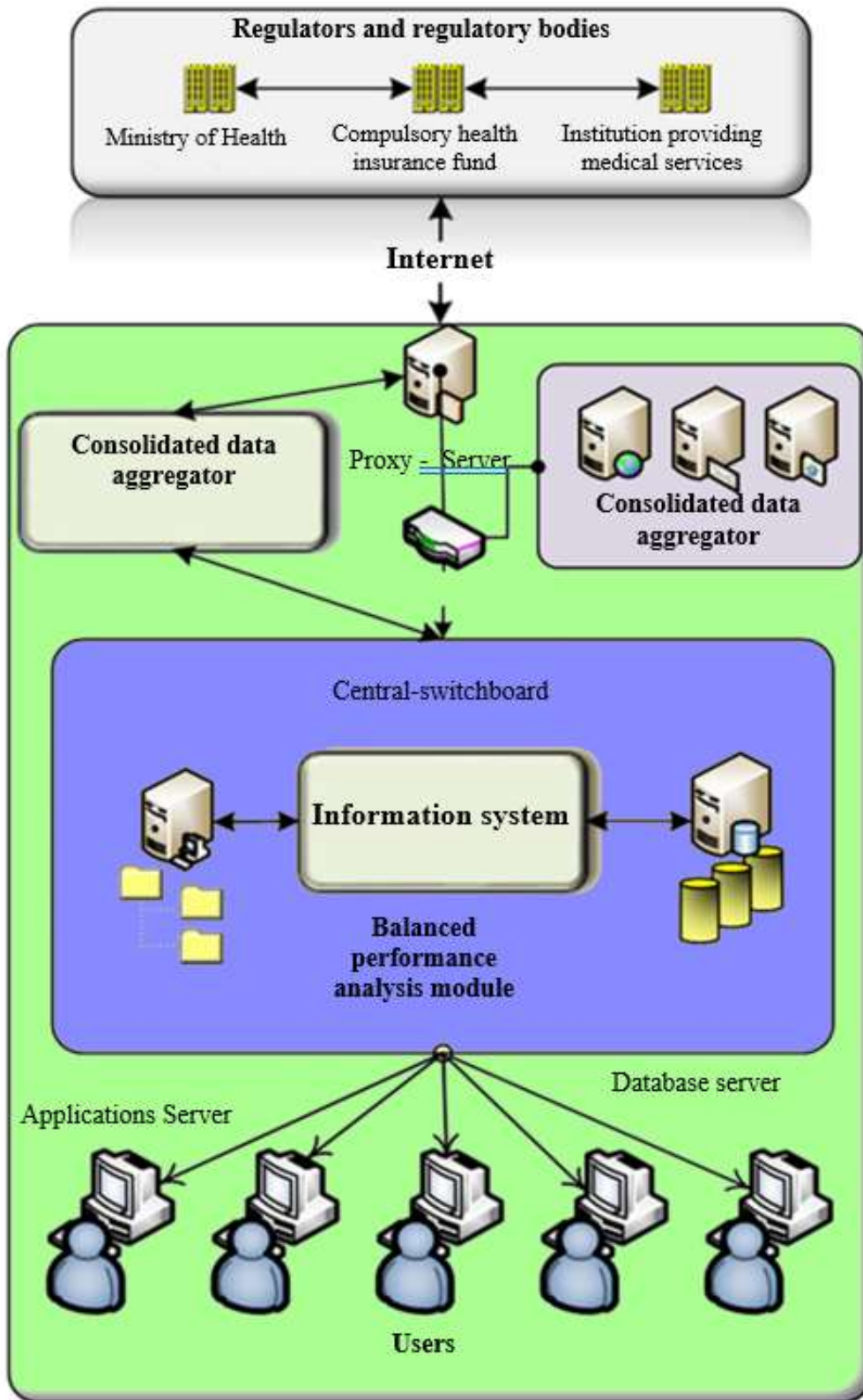
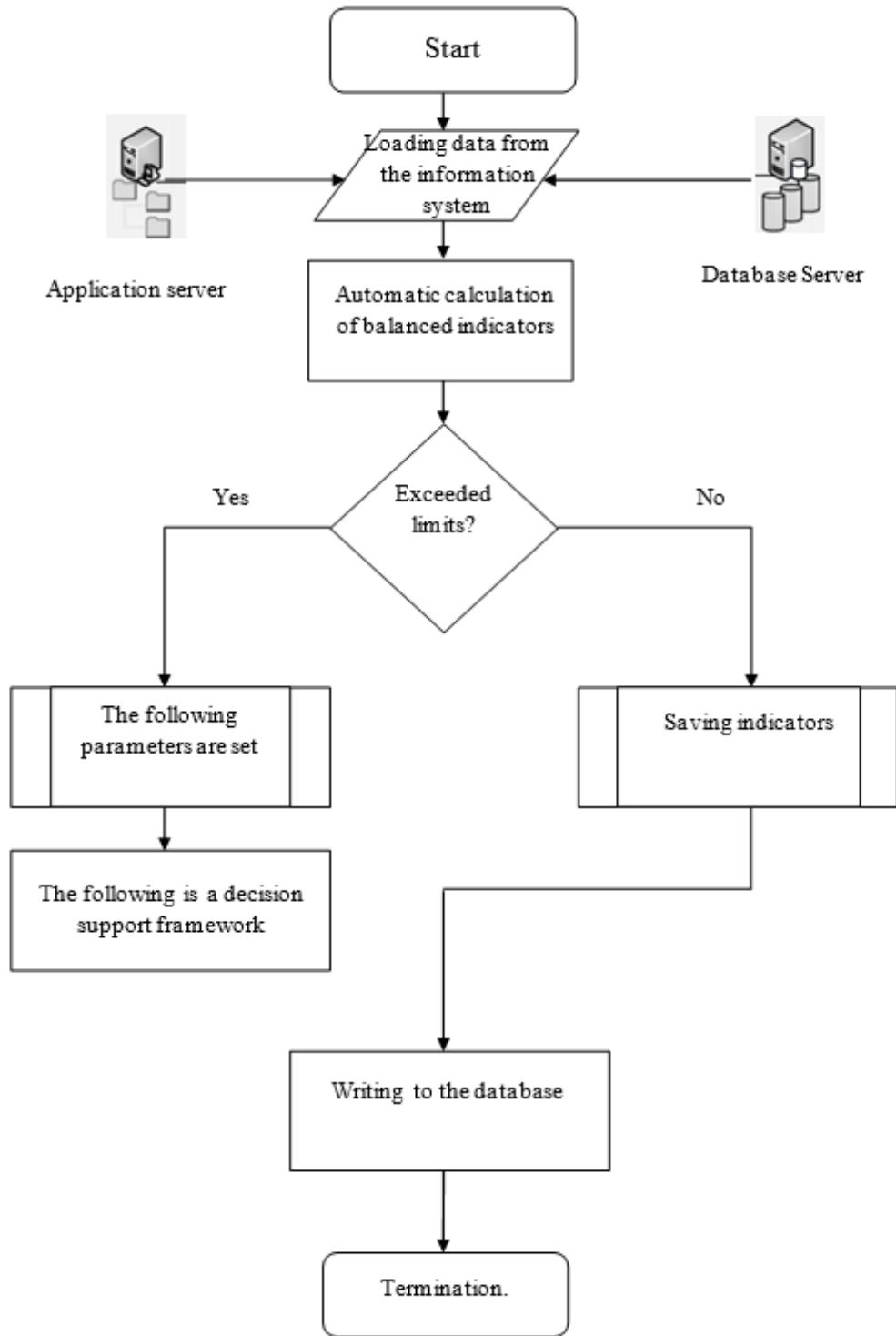


Figure 1. Digital platform for the provision of Health Services.

The proposed digital platform shows the mechanism of interaction of regulators and funds with health institutions.[3] The architecture provides a limited access zone, which includes internal and public services, the so-called demilitarized zones (dz). Its main activity is to create an additional level of security in the local network, which in turn reduces damage during a cyber attack on one of the mass services. As a common service, it can be, for example, a web service: physically placed in a local network (Internet), providing its server, external network (Internet) responds to any requests, external access to other local resources (for example, file servers, workstations) is insulated. A proxy server is an intermediate server between the user and the target server, which allows customers to perform indirect requests and receive responses to other network services and protects the client's computer from some network attacks. To ensure the reliable operation of analytical modules of information systems of regulators and health institutions, it is necessary to carry out a number of integration measures. It should be noted that in the construction of the proposed platform lies the principle of "openness of access", that is, any medical institution equipped with the appropriate software and hardware can be connected to a single Information Network.[4] basic functional requirements are listed below:

1. The possibility of integration of other hospitals and foundations with IP.
2. Access the API to connect a third-party IP.
3. Internet dispatch room, its additional activity is the ability to remotely evaluate the work and file a complaint (with an identifier confirming the receipt of the service in this section).
4. Automatic calculation of performance indicators (when filing a complaint).
5. Formation of reports on various criteria (parameters/indicators).
6. Recommendation system for Specialists (Doctors), Service Personnel, Administrators in order to increase the indicators on the basis of the analytical module.
7. History of appointment in the patient's personal account.
8. Analysis of the physical condition of consumers using artificial intelligence, which makes it possible to identify and structure categories of patients early: from "those who do not need constant medical monitoring" to "those who require high-tech medical intervention."
9. Analysis of balanced indicators of the functioning of a health institution to solve the issue of its financing.
10. Providing appropriate assistance to the institution based on the analysis of indicators.

Based on intelligent algorithms, a model for providing health services to consumers in remote and inaccessible areas has been developed, a client-specific model for serving the health care sector to consumers living in remote and inaccessible areas of territorial entities. The Model is shown in Figure.3. A distinctive feature of his activity is the use of artificial intelligence for diagnosis and decision-making. The Model ranges from a person who does not need medical attention to immediate hospitalization.[5]

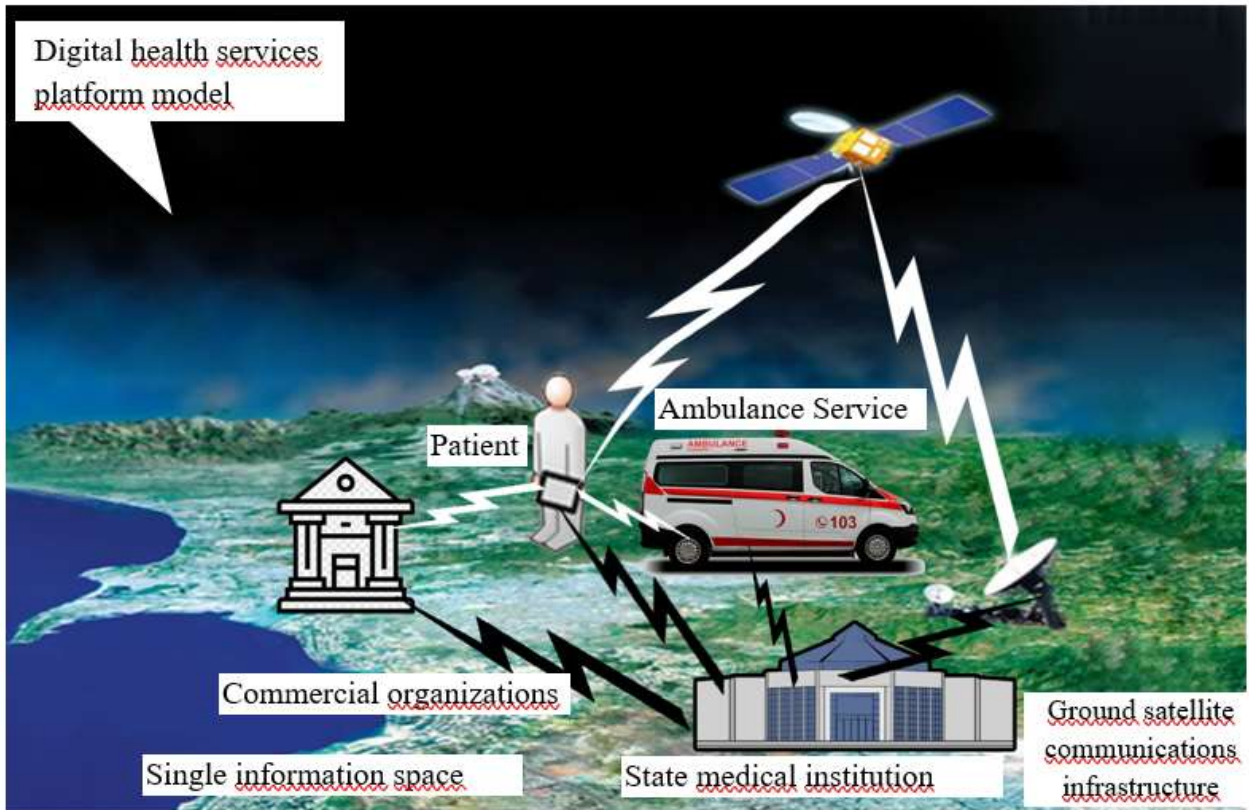


**Figure 2. The algorithm of operation of the balanced indicators control module.**

Institutional reforms in the field of health of Uzbekistan have led to a significant increase in individual medical institutions of various directions. The problem of providing quality services especially affected rural areas, small settlements and remote areas. In order to reduce the negative consequences of the process of optimizing the



network of health institutions, all participants in the service process are offered this digital platform model for the provision of health services with information assistance.[6]



**Figure 3. A model of medical care for patients in remote and inaccessible areas.**

On the one hand, it helps the information system to adapt to external influences in general, and on the other hand, it protects against incorrect poses and system lockdowns. For this, the block "Decision Support Program" is built. The construction of such digital platforms for the development of Health Services is a priority in the country:

- implementation of public policy in the field of health through the health management bodies of territorial entities on the territory (region) of the country;
  - introduction of economic methods in the implementation of a conceptual approach to the regulation of Health Services;
  - subsidy for the performance of public duties, tariff policy in the MHI system, allocation of planning functions for taxation, lending, as well as between the federal Center and territories (territories): center-development of unified methodological approaches, regions (territories) - planning the volume of Health Services;
  - development of manufacturers of health services of various forms of ownership, determination of their place in the service market for each of them;
  - passports of the approved national program "digital economy of the Republic of Uzbekistan".
  - the formation and development of the infrastructure of Health Services manufacturers on the basis of public-private partnerships, the application of operational license models that give the private partner the right to provide services within the period specified in the DSHS agreement, or models that provide financing, design, construction and use of the object by a private partner with the right of ownership;
  - the public partner assumes financial risks, and the private partner compensates for economic risks.[7]
- For such purposes, the advantages of expanding the information infrastructure and introducing intelligent

algorithms into systems are obvious.

1. The possibility of providing health services remotely (saving the budget by reducing the cost of maintaining paramedic and medical facilities in small settlements).
2. Early diagnosis of diseases.
3. Patients self-treatment.
4. Efficiency in decision making.

For technical support of data transmission, it is proposed to use a series of space satellites with backup channels for the transmission of additional volumes of Information, extensive coverage of the country's territory, an extensive network of ground transmission and reception. The equipment is also capable of ensuring the stability of communication channels.[8]

The Model allows organizations of the health sector and non-profit producers of the services under consideration to participate in the provision of services in a single information environment. Figure.3 shows the usual scenario algorithm for serving a client. A distinctive feature of the proposed model is the possibility of using intelligent algorithms, accompanied by expert diagnostics by a specialist.

The duty of the supplier, especially the enterprises engaged in medical care, is state, especially shirik. The state has provided the state with resources for unitary investment, providing an opportunity to participate, which means that the state owns real estate, takes investment measures, and introduces innovations. Medical and sanitary supervision of the development of the mechanism. Currently, there are many different types of health-related activities, such as health insurance.[9]

Against the background of the introduction and genesis of the digital economy, the main directions of development of services in the medical field are single:

- information infrastructure, which includes a set of information, software, technical, information-technological and legal tools and systems that ensure the processes of collecting, processing, storing and transmitting large amounts of data;

-systems for providing medical services to recipients (introduction of a system for continuously providing consultation services on a digital platform);

-systems for urgent provision of medical services based on service-oriented architecture (implementation of a rapid system of data collection, processing, transmission and analysis for general and special purposes);

-systems of distance learning methods based on professional standards and its introduction into the system of continuous personnel training. Currently, the problem of training highly qualified specialists is, first of all, the lack of a single leadership that can give specialists a first impression of the possibilities, practical areas and effectiveness of services in practical activities in the digital economy.

In accordance with this algorithm for servicing consumers living in remote areas, the total costs include the means of compulsory medical insurance (hereinafter referred to as MTS) and personal funds of the recipient of the service, including transportation costs. Large time and transportation costs are hampered by consumers living in remote and poorly populated areas for service.

## References

- Farrux Qodirov / Econometric modeling of medical services in the territories. / International Conference on Information Science and Communications Technologies ICISCT 2022 Applications, Trends and Opportunities 28th, 29th and 30th of September 2022, Tashkent, Uzbekistan.
- Qodirov Farrux Ergash o'g'li. ECONOMETRIC MODELING OF THE DEVELOPMENT OF MEDICAL SERVICES TO THE POPULATION OF THE REGION / Berlin Studies Transnational Journal of Science and Humanities. 2022/5/9. 1.1 Economical sciences.

- Ф.Э.Кодиров, О.Д.Дониёров. / Эффективные модели развития медицинского обслуживания населения Кашакадъинской области. 2022. журнал Символ науки номер 7-2. страницы 15-17.
- Axborot texnologiyalari Axborot texnologiyalari haqida / J Abdirasulov - Архив научных исследований, 2020.
- Modern mobile applications and their peculiarities and also analysis and general characteristics based on the android operating system Страницы-106-111/ F.E OGLI QODIROV, Z.A.MANSUROVA... - Наука среди нас, 2019
- Khudoyar Suyunovich Mukhitdinov, Farrukh Do'stmirzayevich Juraev. / Methods of Macroeconomic Modeling. / 2020/12 journal Special Issue on International Research Development and Scientific Excellence in Academic Life Page 30.
- Kh.S.Mukhitdinov, A.N.Rakhimov. / The forecast for the development of the public services sector. 2020/12 journal Solid State Technology.
- Farrux Qodirov, Xudayar Muhitdinov. / Features that increase efficiency in the provision of medical services and factors affecting them. 2022/7/30 TA'LIM VA RIVOJLANISH TAHLILI ONLAYN ILMIY JURNALI.
- Irina Bozorova Jumanazarovna, Qodirov Farrux Ergash o'g'li, Karayeva Dilfuzaxon Mamasharipovna. / MODERN PROGRAMMING TECHNOLOGIES AND THEIR ROLE. / 2020 Материалы конференции Интеллектуальный капитал XXI века страницы 19-21.

# GLOBAL DATABASE OF IMPLEMENTATION OF DIGITAL TRANSFORMATION PROCESSES IN THE REGION INDUSTRY

Khalimov Javlonbek Shakhriyorovich  
Karshi State University assistant  
[halimovjavlonbek3@gmail.com](mailto:halimovjavlonbek3@gmail.com)

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## ABSTRACT:

The article recognizes the important element of the digital transformation of the region's industry. The importance of creating a global database for the transformation of regional industries is shown.

**Key words:** Regional industry, industrial digitization, industrial transformation, infrastructure, concept, transformation process, Regional industry, model, global database.

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## Introduction

At the current stage of development, creating a global database and ensuring its economic security is an important task in the process of digital transformation of the regional industry. Because in the processes of transformation of industrial sectors in the region, the global information base, information security serves as a basis for making decisions on socio-economic issues. Various risks and threats may appear in any processes in the industrial sector in the region. Transformation of regional industry and organization of safe, healthy working conditions is one of the main tasks and obligations of professionals and all workers. Based on this situation, the information structure is determined during the production process in digital data transformation. Transformation of the regional industry and its protection is a guarantee of protection of vital interests of individuals and society from accidents and unpleasant events in dangerous production facilities and their consequences.

Digital transformation of industry today remains one of the most important tasks of regional technological development of any subject of any country. Digital transformation in the regions is planned for 2017-2030. An important factor stimulating digital transformation in various sectors of the economy is the increased availability of modern information technologies, new software, various digital devices, equipment, information and communication technologies based on the Internet and mobile communication.[5]

## Research methods

The scientific approach to the management and security of the region's industry was well developed by the world economists Taylor Frank, Lilian Gilbert and Henry Gantt. As the creators of industrial management, they were highly effective in perfecting many manual operations by using observation, measurement, logic, and analysis. Analyzing production efficiency and finding its main components are the first phase of industrial production transformation. Taylor, for example, measured how much iron ore and coal a man could lift in shovels of various sizes. They recorded the observations made in the research facility on magnetic tape with a movie camera and, for accurate measurement, they studied the movements and the time spent on each movement.[6]

The main principles of U. Taylor's idea of "management" are as follows:

- development of the most convenient methods of production, based on the development of studies such as the time, effort, concentration or effort spent on it;

- absolute compliance with developed standards;
- necessity to select, train and place workers in their workplaces and assignments so that they show the highest results;
- payment of wages according to work results;
- use of their tasks of managers who carry out control in a special specialized direction;
- to create and maintain a friendly relationship between workers and managers in order to ensure the possibility of management.

Regional industry, economic and information security of enterprises and their protection methods from the point of view of foreign scientists V.K. Senchagov, defines the economic security of the enterprise as a set of measures taken by the enterprise against economic threats, which includes a combination of factors, does not depend only on the internal situation, the impact of the enterprise's external environment.

According to A.H. Glumov and E.P. Kiselitsy, the economic security of the enterprise is characterized by the sum of qualitative and quantitative economic security indicators, the main one of them is determined by evaluating the status of the use of the company's resources according to the criteria of economic security. In the transformation of industrial enterprises in the regions, great attention should be paid to ensuring the security of their resources. It also allows to achieve economic efficiency and optimize the information security of industrial enterprises through the analysis of risks.

The development of the information environment of the enterprise, the introduction of new modules of the corporate information system, the modernization of data transmission channels lead to the emergence of weaknesses and create a favorable environment for the emergence of new factors of information risks. In this literature, the security of the national economy, states, certain regions, and industrial enterprises is generally discussed. However, the issues related to ensuring the economic and informational security of the subjects of the region's industry have not been comprehensively studied.

### **Result and discussion**

If we categorize the industrial structure of the region economically, the following natural resources are distinguished based on it:

1. Natural resources of general importance;
2. Material production resources;
3. Service sector resources.

As a result of the reforms carried out on the development of the regional industry in the conditions of the digital economy, methods of using modern technologies for the development of the regional industry are emerging. More attention is being paid to communication service. Creation of modern models of the regional industry depends more on the exchange of information, improvement of information models.[7]

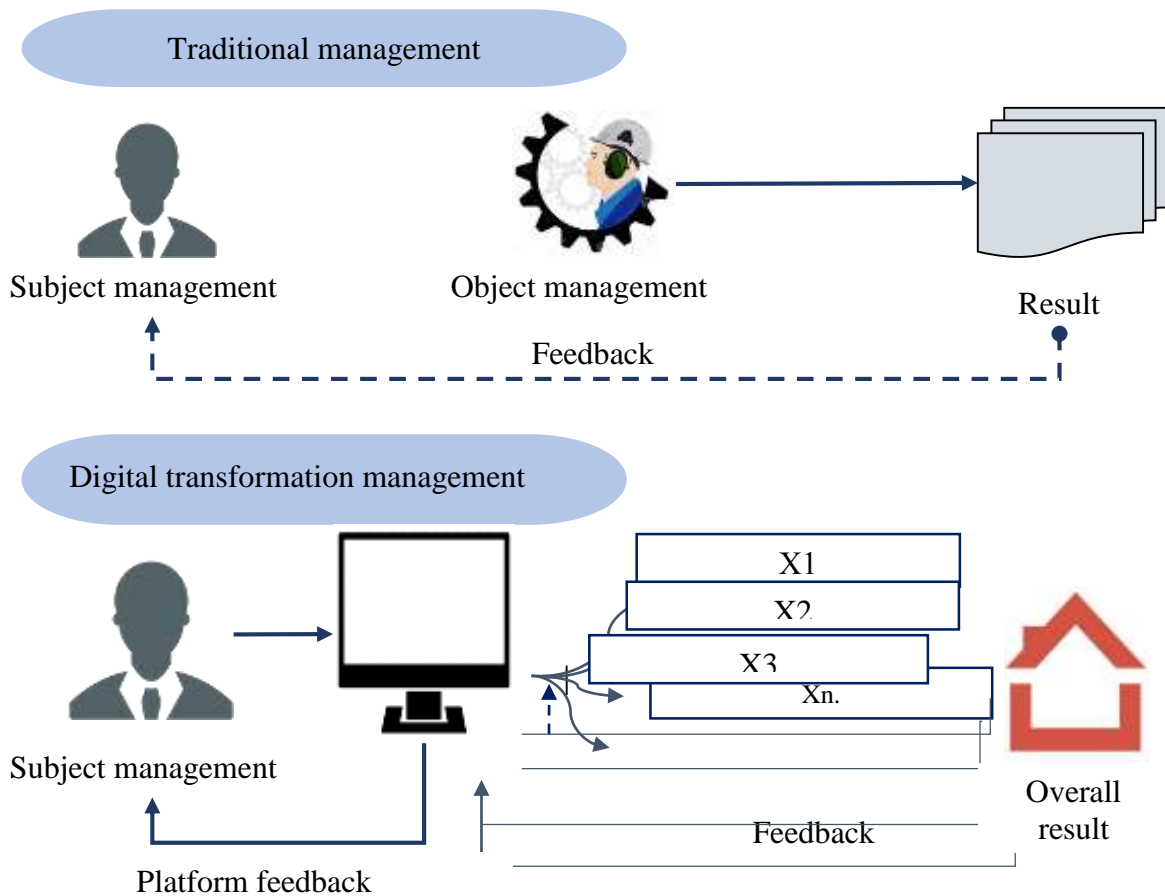
The structure of the information model of transformation by regional industry will consist of:

- conditions of the research object (on the basis of modern technologies);
- creating an imitation model, justifying it;
- using numerical methods, developing a discrete model of the problem;
- development of big data in algorithmic language (Big data);
- Performing calculations in ICT, analyzing the results.

In the process of transformation of the regional industry, feedback stages are implemented (Figure 1). A mathematical model never fully embodies the properties of the object being studied. It is approximate in nature as it is constructed on the basis of various assumptions and limitations. Therefore, the results based on it will be approximate. The accuracy of the model, the issue of assessing the level of reliability of the results is one of the main issues of the transformation process.

At the first stage, the precise statement of the problem, given and sought quantities, and endogenous control

parameters that should be used to create a model of the object are introduced.[8]



**Figure 1. Stages of mathematical modeling in the creation of a database<sup>95</sup>**

- The socio-economic description of the region, the level of urbanization, the structure of the workers of the industry in the field of professional skills;
- National description of the region, national characteristics, composition, number of industries;
- Description of the material and technical base of the regional industry, transport network and its development prospects in the region.

In the second stage, an information base model is created based on the rules. It is impossible to take into account all the factors affecting the process studied in the system at the same time, because the mathematical model becomes too complicated. Therefore, only the main factors that have the strongest influence are taken into account when creating a model. Here we have selected the factors that determine the ways of development of the information system of the regional industry of our region:[9]

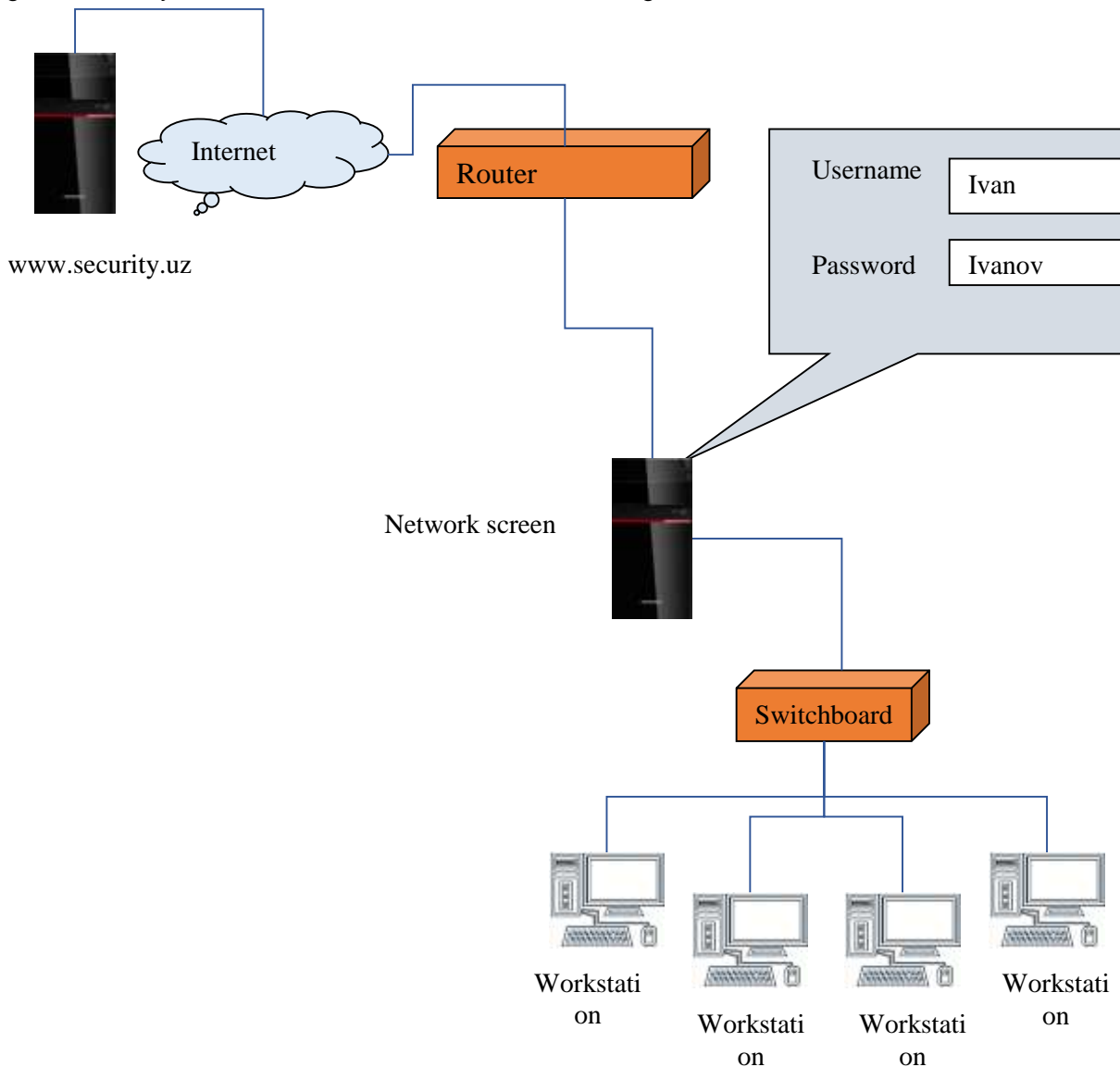
At the third stage, a mathematical model of the problem is created. At this point, the necessary corresponding equations should be solved and the indicators should be determined. For example, if a mathematical model is described by a differential equation, using numerical methods it is replaced by finite-difference equations defined at a finite number of points.

At the fourth stage, a program is created for use in the Database Management System (DMS) in an

<sup>95</sup> Developed by the author

algorithmic language based on the algorithm determined by numerical methods. For example, it should have a general property, that is, the program should give good results in a sufficiently large field of variable values of the parameters of the problem expressed in the mathematical model. At the last stage, the program (DMS) is put in and the obtained numerical results are analyzed and evaluated in depth.

In the implementation of digital transformation processes in the regional industry, a large database will certainly be formed. It is also necessary to implement a number of measures for the stable operation of electronic resources of the digitized industrial system.[10] These include Hadoop security, cloud security, monitoring and auditing, key management, and data anonymization. The application of these security parameters is distinguished by its importance in the management of electronic systems of the regional industry. This, in turn, leads to the creation of a structural scheme for the implementation of active communication with the Exemplary DMS of the regional industry information model. We can see this in Figure.2 below.



**Figure 2. A structural scheme for the implementation of active dialogue with the Exemplary DMS of the transformation process of the regional industry**

Figure.2 shows that the experimenter actively communicates with the DMS. Before communicating with the workstations, information about the monitored control indicators and its final production in the network is used. If the indicator is greater than one, demand is greater than supply, if less than one, the opposite is true. The control indicators are analyzed at the position of the level that can be allowed by the experimenter. If they need to change, the operator can change this or that control parameter. Blocks define new adjustable pointers. As soon as the operator concludes that a satisfactory balance has been reached, he transfers the system to the workstations.[11]

Thus, the provision of an information model, through a human-machine simulation system, allows the creation of an information base that provides the best ratio of information use to the industry of the Region and ensures their security.

Separation of control parameters, evaluation of intermediate decisions and selection of final decisions are imposed on the operator, most of the possible solution options are solved in DMS. For this, first of all, its main characteristics are distinguished and an imitative relationship is established between them. After the simulation model is built, that is, after the problem is expressed in a mathematical form, it can be analyzed through certain simulation experiments. The study is based on the need to develop a structural-structural model that is compatible with the macro-economic nature of modeling in the development of transformation processes through the development of an information base of the regional industry, allowing a full analysis of the situation in the production process in the industry with the help of generalizing aggregate indicators.[12]

### **Conclusion**

In conclusion, we attach importance to information supply to obtain practical results and calculated indicators of the transformation process. To obtain general information, materials and documents related to the development of production sites of the region's industry, infrastructure improvement, documents from statistical reports, planning organizations, and the results of scientific research work are used as a basis.

### **References and sources**

- PF-6079 State program "Development strategies of the Republic of Uzbekistan until 2035" 5.10.2020
- Introduction to the "digital" economy / general. ed. A. V. Keshelava. M. : VNII Geosystems, 2017. 28 p.
- Bliyants K. M. Features of evaluating the effectiveness of information technologies in management activities in the agro-industrial complex // Regional problems of transformation of the economy. 2016. No. 1. S. 38-43.
- Ermakova Zh. A., Parusimova N. I., Pergunova O. V. Evaluation of the economic efficiency of information and communication technologies at industrial enterprises // Vestnik OGU.2014. No. 1. S. 255-260.
- Designing the future. Problems of Digital Reality: tr. 1st International Conf., Moscow, Feb. 8—9, 2018. M. : IPM im. M. V. Keldysha, 2018. 174 p.
- Sagynbekova A. S. Digital economy: concept, prospects, development trends in Russia // Theory. Practice. Innovation. 2018. No. 4. URL: <http://www.tpinauka.ru/2018/04/Sagynbekova.pdf> (date of access: 11/18/2018).
- 7. Granberg A.G. Fundamentals of regional economics. - M.: "Economics", 2000. -346 p. Gavrilov A.I. Regional Economics and Management. - M.: UNITI, 2002. -239 p. Tavares G. N., Tavares L. M. On the Statistics of the Sum of Squared Complex Gaussian Random Variables // IEEE Transactions on Communications, 55(32), 2007. – p. 1857-1862.
- Mukhitdinov Kh. S., Rakhimov A.N. EMPIRICAL MODELS WHICH WERE BUILT FOR EACH SECTOR OF THE SERVICE SECTOR TO THE POPULATION OF THE REGION. South Asian Journal of Marketing & Management Research (SAJMMR) <https://saarj.com>
- Farrux Qodirov / Econometric modeling of medical services in the territories / International Conference on Information Science and Communications Technologies ICISCT 2022 Applications, Trends and Opportunities 28<sup>th</sup>, 29<sup>th</sup> and 30<sup>th</sup> of September 2022, Tashkent, Uzbekistan.



- F.E. Kadirov / EMPIRICAL MODELING OF MEDICAL SERVICE PROVISION IN THE REGIONS./ Khorezm Ma'mun Academy newsletter 2022-7/2 Vestnik Khorezmskoy Academy Ma'muna Khiva-2022
- Kadirov, son of Farrukh Ergash / SERVICE NETWORKS FOR THE POPULATION OF KASHKADARYA REGION AND FACTORS AFFECTING THEM / "Uzbekistan Agriculture and Water Management" scientific and popular magazine #8. 2022
- Qodirov Farrux Ergash o'g'li. ECONOMETRIC MODELING OF THE DEVELOPMENT OF MEDICAL SERVICES TO THE POPULATION OF THE REGION / Berlin Studies Transnational Journal of Science and Humanities. 2022/5/9. 1.1 Economical sciences.

# FORECASTING FAMILY HOUSEHOLD THROUGH ECONOMETRICAL MODELING

Nazarova Gulruh Umarjonovna  
Assistant of Karshi engineering-economical institute  
[gulruhnazarova85@mail.ru](mailto:gulruhnazarova85@mail.ru)

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## ABSTRACT:

Using econometric modeling technology in the digitalization of family handicrafts, the theoretical and methodological foundations of the transformation and development of handicrafts in the future have been improved. A mathematical apparatus for creating a complex numerical econometric model of craft development in the region has been developed.

**Key words:** Econometric model, mathematical apparatus, Household, handiHousehold, householdman, empirical model, trend models.

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## Introduction

A number of studies are being carried out around the world to improve the methodological base for increasing the role of family crafts in the development of crafts, including in the following priority areas:

- assessment of trends in the development of family crafts in the national economy and substantiation of promising areas;
- increasing the role of family crafts in the system of employment and labor relations in the process of digital transformation;
- management, social capital, heritage and gender issues in family crafts;
- a systematic approach to identifying problems in family fisheries;
- improvement of organizational and economic mechanisms for the development of family crafts;
- assess the role of family crafts in the development of regions.

Based on the foregoing, it can be concluded that one of the most important factors in increasing the level of competitiveness of Uzbekistan with foreign handicraft enterprises is the creation of favorable conditions for the creation of a whole network of handicrafts.

## Methods

The famous American economist J. Schumpeter[4] (1883-1950) in his book "The Theory of Economic Development" described the craftsman as an innovator. The scientist believes that crafts are the introduction of innovations that play an important role in the development of the capitalist economy, ensuring economic growth. "We are calling in artisans whose function is to introduce new combinations." The British economist Friedrich von Hein (1899–1984), winner of the Nobel Prize in Economics (1974), approached this problem differently. According to him, the craftsman is not an activity, but a search for new economic opportunities, providing behavior [5]. The scientist interprets the craft as an activity.

Neither abroad nor we have yet a generally accepted definition of mastery. The American scientist Robert D. Hisrich said: "Household is the process of creating something new that has its own value, and an entrepreneur is a person who spends all the necessary time and days on it, takes all the financial, psychological and social risks, and is satisfied with money and achievement as a reward" [6], he said.

The theoretical institutional framework for digital mastery is a form that today can be traced back to the development of modern digital mastery. The institutional basis of the craft is a qualitative indicator that characterizes what is directly related to social institutions and is directly related to the study of the craft.

Institutional change, also known as institutional development, is a process of transformation that takes both quantitative and qualitative forms. These processes take place in interaction with various institutions - political, economic, social and others. The institutional environment is an environment in which metamorphoses take place, but at the same time they manifest themselves at the level of various institutions, and not in changes in rules and laws.

Resource theories and service theories are also widely used in research in this area[7]. Such a variety of theoretical approaches is useful for the scientific substantiation of the problems and phenomena occurring in the practice of family business. In this regard, Mukhitdinov Kh.S. and Juraev F. applied a macroeconomic model for the development of the national economy[8]. The authors hypothesized that business development under the influence of two factors indicates that the relationship between them is not linear, but is important as a factor that has a separate value. The research of Peterson and Distelberg has shown an interesting application of the general theory that lies on the boundary between human nature and the family system. As can be seen, early research in this area used a limited number of theories.

## **Results and Discussion**

In our opinion, the author's definitions of "household" and "entrepreneurship" correspond to modern conditions and requirements of a market economy, which indicates an attempt to reveal its economic content. Of course, all of these definitions have their merits.

In our opinion, the main focus in the concept of development of craftsmanship is primarily to support family businesses with economic potential, to create favorable opportunities for the development of industries necessary for the industry and region, but with low profitability, and an economy operating in accordance with the directions and goals of the social and economic policy of the republic. It is necessary to focus on the tasks of stimulating the structures, establishing tax incentives for small enterprises producing regionally important products, expanding the system of leasing service and investment risk insurance, and providing conditions that pave the way for the use of bank loans by small business enterprises with limited financial capabilities.

The importance of craftsmanship in the national economy is related to its role in society and its functions in the family.

In recent years, private character theories have also been widely used in research on family entrepreneurship in household. In particular, agency theory is recognized as a general theory widely used in family business research. According to this theory, the boundary of the management relationship between the family business owner (proprietor) and its members is classified. Such complex management processes are classified on the basis of agency theory[9]. Specially developed theories such as the "family chain" in the study of family entrepreneurship[10], the sustainable family business theory (SFBT) which has been used in research since 2000[11], are also successfully used in the study of family entrepreneurship. In addition, new theories[12] have emerged that help to explain the different strategies in the interaction of family and business systems and the main priorities of family business that differ from other types of business.

Household is the cradle of our national-traditional values, the national spiritual heritage left by our ancestors. In our country, there are seven generations of successors of craftsmen who continue the thousand-year-old crafts of our masters. Household is our national product, which expresses the beauty in the heart of the craftsman through manual work. There are many master craftsmen in Kashkadarya region. The development of their crafts, the sale of their products and the increase of their income, the exchange of experience with the artisans of our regions, such as Fergana, Bukhara, and Namangan, where handicrafts are developed, the wide promotion of handicrafts in our distant mountainous regions, and at the same time, the artisans can increase their number of apprentices and

help their apprentices to open their own business. at the same time, to increase the number of artisans, to create competition among artisans and to supply high-quality and cheap products to the domestic and foreign markets, to achieve and develop cheapness of handicraft products by increasing the quality and development of high-income residents of our region, to be employed even from home, and to sharply eliminate unemployment.

In particular, the theories used in research in the field of family entrepreneurship can be divided into large groups according to institutional theoretical approaches[14] and theories of social economy[15].

Therefore, family entrepreneurship requires a comprehensive functional analysis, which can be reflected in a theoretical model of the relationship of family functions, their complementarity, continuity and "family functions - entrepreneurship - well-being". According to him, family functions stimulate entrepreneurship in the family, which ensures well-being.

Based on this, it is appropriate to consider the system of family functions as factors that ensure family well-being, and secondly, as an important condition for the decision of family business.

Uzbek national crafts, which have been alive for centuries, are still a source of entrepreneurship and good income. Another important point is that the products created by craftsmen are displayed at trade fairs organized in a number of cultural centers and exhibition halls in the capital. We can proudly say that every craftsman who works hard and strives for innovation has a prosperous life and a full table. Such high attention and opportunities are the reason for the further expansion of the ranks of those who seek to learn a trade among young people.

Decree<sup>96</sup> of the President of the Republic of Uzbekistan No. PF-5242 of November 17, 2017 aimed at fully preserving and increasing the rich cultural heritage and historical traditions of the peoples of Uzbekistan, further development of national handicrafts, folk artistic and applied arts, and comprehensive support for citizens engaged in handicraft activities and implementation of comprehensive measures, on this basis, in order to ensure the employment of the population, especially young people, women and low-income families, defined the main directions of further development of national handicrafts in our Republic.

The emergence of mini technology allows the individual and high-quality production of goods in crafts. This can include the production and service of national headstones, national musical instruments, small equipment, various souvenirs.

A number of studies are being conducted in Uzbekistan to improve the methodological basis of increasing the role of family crafts in the development of handicrafts, including the following priority directions:

- assessment of trends in the development of family crafts in the economy and substantiation of promising areas;
- increasing the role of family crafts in the system of population employment and labor relations in the processes of digital transformation;
- management, social capital, heritage and gender issues in family crafts;
- a systematic approach to identifying problems in family crafts;
- improvement of organizational and economic mechanisms of family craft development;
- assessment of the role of family crafts in regional development.

A favorable microeconomic environment will be created in our country through the transformation of crafts. In particular, the legislation on the protection of private property and craft rights has been strengthened, the procedures for business registration, issuing licenses and permits for certain types of activities have been simplified, the state's interference in business activities has been limited, all forms and terms of reports submitted by craft entities will be shortened sharply, tax rates have been unified. done, a stable market mechanism will be formed that allows wide use of high demand material and technical resources. Figure 1.

The situation in Figure 1 can also be seen as an important feature of the innovative and digital economy.

Today, collecting information about handicraft business in the world markets, organizing archives, quick

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<sup>96</sup> <https://president.uz/uz/lists/view/1255>

finding, forming statistics can lead to some difficulties, i.e. excessive work, time, and expenses.

Therefore, we are thinking about the creation of a business system base for the production of handicraft products, technology. In order to clarify the issue, the info logical model of the database for the information system created using the data of the integration of the master-apprentice system with enterprises will be as follows.

We believe that this focus comes from the following distinctive features of the craft, namely:

- the ability to quickly adapt to market demand and produce quality products;
- meeting the demand for goods and services necessary for the needs of the population in a relatively short period of time;
- the initial investment volume is relatively small;
- opportunity to create new jobs soon and to help solve the employment problem;
- direct participation of the craftsman in the implementation of his tasks.

The current stage of the economic reforms implemented in Uzbekistan is characterized by the development of crafts and giving it wide economic freedom.

We define a linear regression equation as an econometric model of the development of craft activities in Kashkadarya region.

In our case, the overview of the four-factor linear regression equation is written as:

$$Y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 \quad (1)$$

Table 1

**Statistical data on the volume of products developed by craft enterprises in Kashkadarya region and the factors influencing it (real values)**

Years	Volume of products developed by craft enterprises (million soums) Y	Share of people employed in craft activities in small business and entrepreneurship (in percent) X <sub>1</sub>	Investments in craft activities (million soums) X <sub>2</sub>	Number of active craft enterprises (thousands) X <sub>3</sub>	The size of craft services (million soums) X <sub>4</sub>
2002	1040,6	2,83	394,18	0,283	275,1
2003	1310,4	2,91	585,24	0,306	337,6
2004	1529,6	3,17	735,73	0,336	407,4
2005	1873,2	2,97	885,89	0,378	468,3
2006	2410,8	2,99	994,32	0,403	602,7
2007	3057,6	3,32	1369,82	0,473	764,4
2008	3241,6	4,5	1495,91	0,509	795,4
2009	3595,2	4,6	1768,66	0,552	898,8
2010	4309,2	4,75	2365,43	0,649	1077,3
2011	5422,8	4,88	2682,18	0,665	1354,5
2012	6207,6	5,12	2941,99	0,798	1551,9
2013	7417,2	5,36	3482,25	0,816	1854,3

2014	9770,5	5,31	4736,78	0,828	2527,6
2015	11971,8	5,9	5727,27	0,855	2992,5
2016	14120,4	6,12	6598,32	0,869	3530,1
2017	16321,6	8,7	6996,16	0,888	3830,4
2018	18681,6	9,13	8981,54	0,958	4670,4
2019	22327,6	8,74	10103,08	0,971	5331,9
2020	30609,6	9,21	14716,15	0,992	7652,4
2021	39253,2	9,32	18412,48	1,117	9813,3

We build the empirical model using MS Excel

Table 2

**Building a linear empirical model based on the volume of products and influencing factors developed by handicraft enterprises in Kashkadarya region**

Regression statistics					
Multiple R	R- square	Normalized R- square	standard error	Observations	
0,999808683	0,999617403	0,999515377	232,9856526	20	
Analysis of variance					
	df	SS	MS	F	Significance F
Regression	4	2127363969	531840992,3	9797,684549	0,00000000
Remainder	15	814234,7149	54282,31432		
Total	19	2128178204			
	Coefficients		Standard error	t-statistic	P-value
Y- intersection	-617,9393807		221,7528035	-2,786613612	0,013828061
Variable X 1	286,9639174		73,83926673	3,886332166	0,001461415
Variable X 2	-0,871256267		0,406124698	-2,145292498	0,048707349
Variable X 3	-833,0880684		539,9548602	-1,542884655	0,143689759
Variable X 4	5,524631658		0,760329855	7,266098552	0,000000276

Using Table 2, we write expression (1) as follows:

$$Y = \underset{-2,787}{-617,94} + \underset{3,886}{286,96} X_1 - \underset{-2,145}{0,871} X_2 - \underset{-1,543}{833,088} X_3 + \underset{7,266}{5,525} X_4 \quad (2)$$

It can be seen from (2) that if the values determined by factor 3 are analyzed, the coefficient in front of X3 is insignificant ( $|-1.543| < 2.1$ ); the hypothesis of linearity of the model is not fulfilled only by this factor ( $p=0.14 > 0.05$ ). In all other cases, it can be noted that a qualitative empirical model has been built. Then we write the adequate condition of (2) as follows

$$Y = -617,94 + 286,96 X_1 - 0,871 X_2 + 5,525 X_4 \quad (3)$$

At this point, it is appropriate to check that there is no autocorrelation in model (3), then we check it by the Darbin-Watson criterion:

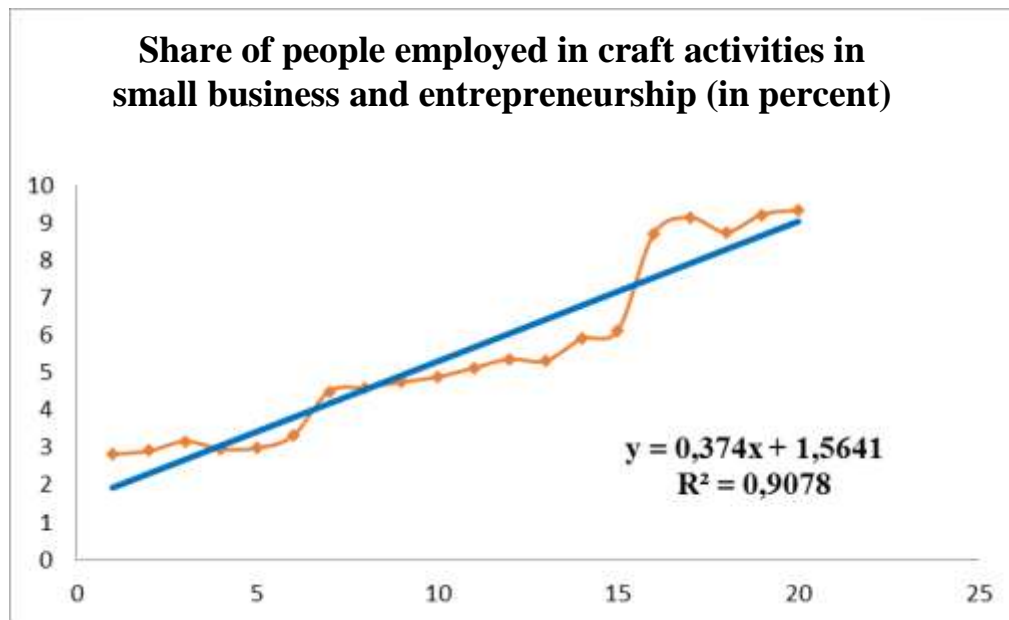
$$DW = \frac{\sum_{t=2}^T (e_t - e_{t-1})^2}{\sum_{t=1}^T e_t^2} = \frac{\sum_{t=2}^T e_t^2 + \sum_{t=2}^T e_{t-1}^2 - 2 \sum_{t=2}^T e_t e_{t-1}}{\sum_{t=1}^T e_t^2} = 2 - 2 \frac{\sum_{t=2}^T e_t e_{t-1}}{\sum_{t=1}^T e_t^2} \approx 2(1 - \rho_1)$$

Here, is the correlation coefficient of the first order. Positivity according to this criterion is explained by the value of DW around 2.

We calculate the correlation coefficient of the first order for the selected factors, i.e. In that case, equality is appropriate. This means that the quality of the model is high.

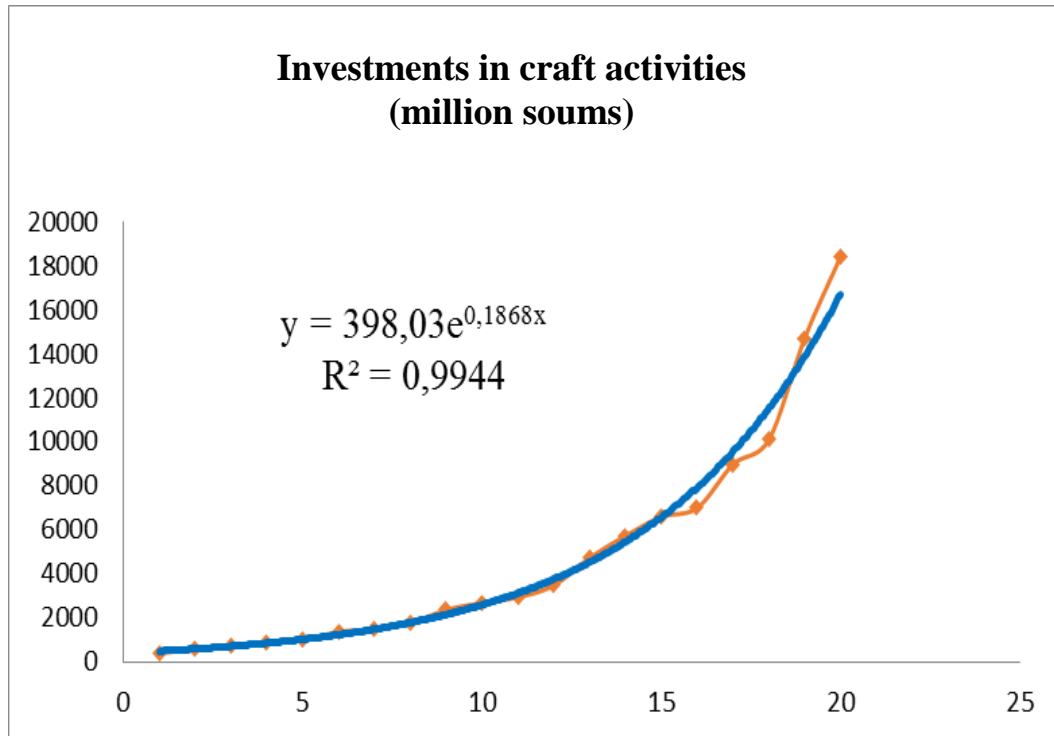
According to model (3), we define trend models for exogenous factors of this model in order to calculate forecast indicators of economic growth of handicraft enterprises in Kashkadarya region. We use MS Excel for this:

Figure 3 shows the calculated trend models for forecasting the process of change of the share of people employed in craft activities in small business and entrepreneurship. According to the analysis of the generated trend model results, the quality of this linear model is quite high.



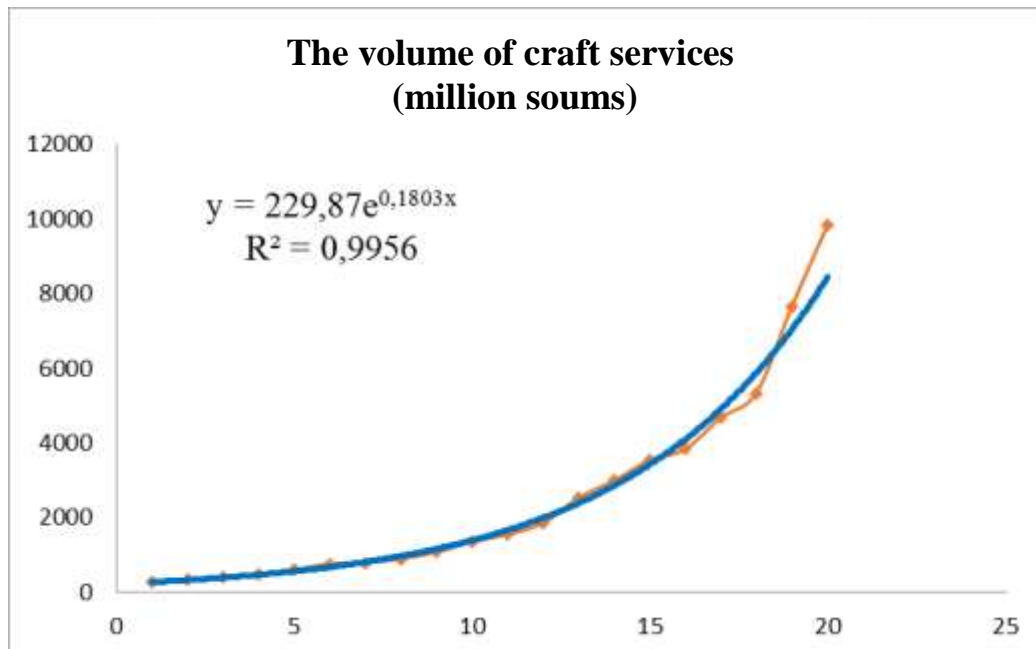
**Figure 2.** Share of people employed in craft activities in small business and entrepreneurship (in percent)

Figure 2 shows the calculated trend models for forecasting the process of investment in manufacturing activities. According to the analysis of the generated trend model results, the quality of this exponential model is quite high.



**Figure 3.** Investments in craft activities trend model

Figure 3 shows the calculated trend models for forecasting the process of investment in manufacturing activities. According to the analysis of the generated trend model results, the quality of this exponential model is quite high.



**Figure 5.** Estimated trend model for the volume of craft services

If we analyze the forecasts obtained based on the analysis of trend models calculated above and the results obtained from them, we can see this from Table 5.



**Forecast of the production volume and influencing factors developed by handicraft enterprises in Kashkadarya region**

<b>Forecast years</b>	<b>Volume of products developed by craft enterprises (million soums) Y</b>	<b>Share of people employed in craft activities in small business and entrepreneurship (in percent) X<sub>1</sub></b>	<b>Investments in craft activities (million soums) X<sub>2</sub></b>	<b>The size of craft services (million soums) X<sub>4</sub></b>
2022	40562,1	9,42	20117,14	10135,65
2023	48134,82	9,79	24248,92	12138,21
2024	57154,43	10,17	29229,31	14536,44
2025	67901,01	10,54	35232,61	17408,5
2026	80708,83	10,91	42468,9	20848,01
2027	95976,74	11,29	51191,43	24967,09

The analysis of Table 5 shows that according to the forecasts obtained from the model of production volume developed by handicraft enterprises in Kashkadarya region, it was predicted to increase by 1.03 times by 2021, and by 2.44 times by 2026.

**Conclusions**

Thus, the processes of digital transformation in handicrafts have a high image, on the one hand, it leads to an increase in the quality of life of the population, an increase in their importance in the world economy, on the other hand, as a result of digitization of some sectors of the economy, an increase in the level of customer loyalty, a high level of satisfaction of their needs, saving time. provides an increase in the quality of life of the population.

**References**

- Appendix 1 of the Decree of the President of the Republic of Uzbekistan No. 4947 of February 7, 2017 "Strategy of Actions in Five Priority Areas of Development of the Republic of Uzbekistan in 2017-2021". Lex.uz.
- PF-6079 State program "Development strategies of the Republic of Uzbekistan until 2035" 5.10.2020
- Introduction to the "digital" economy / general. ed. A. V. Keshelava. Moscow: VNII Geosystems, 2017. 28 p.
- J. Schumpeter. Theory of economic development. M., 1982.
- F. Hein. Competition as a discovery procedure. "World economy and international relations" journals, 1989. 12-soni.
- R. Hisrich., S. Peters. Entrepreneurship. M., 1991, 20-bet. Khudoyar Suyunovich Mukhitdinov, Anvar Norimovich Rakhimov. Empirical models which were built for each sector of the service sector to the population of the region.// South Asian Journal of Marketing & Management Research (SAJMMR) <https://sajr.com>.
- Mukhitdinov Khudoyar Suyunovich , Juraev Farrukh Do'stmirzayevich. Methods of Macroeconomic Modeling// International Journal of Trend in Scientific Research and Development (IJTSRD). Special Issue on International Research Development and Scientific Excellence in Academic Life Available Online: [www.ijtsrd.com](http://www.ijtsrd.com) e-ISSN: 2456 – 6470.
- Jorissen, A., Laveren, E., Martens, R., & Reheul, A. (2005). Real versus Sample-Based differences in comparative family business research. *Family Business Review*, 18(3), 229–246.; Chrisman, J. J., Kellermans, F. W., Chan, K. C., & Liano, K. (2010). Intellectual foundations of current research in family business: An identification and review of 25 influential articles. *Family Business Review*, 23(1), 9–26.

- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18(5), 573–596.
- Stafford, K., Duncan, K. A., Dane, S., & Winter, M. (1999). A research model of sustainable family businesses. *Family Business Review*, 12(3), 197–208.
- Harris, D., Martinez, J. I., & Ward, J. L. (1994). Is strategy different for the Family–Owned business? *Family Business Review*, 7(2), 159–174.
- Vallejo M.C., & Langa, D. (2010). Effects of Family socialization in the organizational commitment of the family firms from the moral economy perspective // *Journal of Business Ethics*, no. 96(1), pp. 49-62.
- Kelly, E. L. Kossek, E. E., Hammer, L.B., Durham, M., Bray, J., Chermack, K., et al. (2008). 7 Getting there from here: Research on the effects of Work-Family initiatives on Work-Family conflict and business outcomes. *The Academy of Management Annals*, 2(1), 305-349.
- Игебаева Ф. А. Семья как базовый агент социализации личности // *Инновационная наука*. – 2016. – №. 1-3(13).; Игебаева Ф.А. Семья в трансформирующемся российском обществе (на примере Башкортостана) // *Социологические исследования*. – 2014.- №.9.- С.73-76.;
- Рябова В.В. Трансформация функций семья в современном российском обществе // *Проблемы социально-экономического развития Сибири*. – 2014. - № 3. – с. 106-112.
- <https://president.uz/uz/lists/view/1255>

# SCIENTIFIC BASIS OF DEVELOPMENT OF DIGITAL TECHNOLOGIES

Nurmurodov Zafarjon Nurmurod ugli

Head of the regional inspectorate of the Kashkadarya region of the State Inspectorate for Control in the field of information and telecommunications of the Republic of Uzbekistan

E-mail: [zafargis@umail.uz](mailto:zafargis@umail.uz)

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## ABSTRACT:

The article provides information on the achievements made as a result of the use of digital technologies in agriculture. Also, the results obtained with the use of digital technologies in the development of agricultural products and forestry and fisheries were compared over the years.

**Key words:** corruption, digital technologies, investments, declaration, infrastructure, competition.

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## Introduction

Digital knowledge and modern information technologies are one of the important conditions for progress in today's time. Digital technologies not only improve state and community management, but also create great convenience for people in the social sphere. In addition, digital technologies create the basis for positive economic growth: they increase the quality of products and services, and reduce unnecessary costs, and another important advantage is to put an end to corruption.

In the Address of the head of our state to the Oliy Majlis, the wide implementation of digital technologies in all spheres of economic and social life was indicated as the highest priority. In this regard in order to ensure the implementation of the tasks specified in the state program for the implementation of the "Year of Science, Enlightenment and Digital Economy Development" and the sustainable improvement of the quality of life, as well as to create a favorable environment for conducting business activities and developing the "digital economy", the President of the Republic of Uzbekistan "Digital in Tashkent" "On measures for the wide introduction of technologies" was adopted.

With this decision, a list of information systems and software products to be introduced in 2020-2021, a plan of measures for the implementation of the "Digital Tashkent" complex program, a list of projects to expand the telecommunications infrastructure in 2020, promising information systems and software products in 2021-2023 list confirmed.

The main task of the program was to create an integrated information environment for managing city services, social sector objects, production, road transport and communal infrastructure, and then implementing the successful experience in other regions of the republic.

One of the main trends in the development of civilization in the current period is the increase of the population living in cities and the city becoming the main economic driver. Of course, from this point of view, it is an important task to create the necessary conditions for the population living in cities. In addition, in this way, digital technologies are of great help.

Digital technologies take urban management to a new level: not only dramatically reduces time and money, but also allows for large-scale population accumulation. In recent years, the concept of "Digital City" has been gaining popularity in the world - a city with a very modern, new look. If we also want to develop our cities in

accordance with modern trends, if we want to create comfortable conditions for our residents and guests, then this issue is of urgent importance for us.

## **ANALYSIS OF LITERATURE**

Digital technologies are developing at a rapid pace today. In developed countries, long-term state programs are being developed for the development of the digital economy. In particular, a state program for the development of the digital economy has been developed in our country, and the process of its implementation is developing rapidly.

The appeal letter of the President of our country Sh.M. Mirziyoev is accepted as an appeal to the parliament and citizens belonging to all strata of our society, and the timely, quality and efficient performance of the tasks assigned to all sectors of our country, which is mentioned in it, requires the united action of all strata of our society. It would not be an exaggeration to say that 2020 was named the "Year of Science, Enlightenment and Digital Economy Development" as the beginning of the first revolutionary period in the history of Uzbekistan's development.

In addition, the decision PQ-4847 was adopted in order to further increase the efficiency of reforms in the health care system in our country, to introduce advanced and digital technologies and quality management to the field, and to fully use the capabilities of medical institutions [3].

The origin of the digital economy, theoretical foundations A. Fork, L.W. Lapidus, D. Bell, M. Castells, W. Desouza, D. McConaz, M. Lynch, S. Dirican, S. Halford, M. Savage M.A. Schneps-Schneppe, D.E. It is thoroughly covered in scientific researches of foreign economists such as Namiot, P. Vinya, M. Kane, N. Popper, E. Filippov.

In his research, L.V. Lapidus developed theoretical rules and practical recommendations for managing e-business and e-commerce in terms of changing business models under the influence of the evolution of digital technologies [4].

Dobrolyubova, E.I., Yuzhakov, V.N., Efremov, and others, in the methodological manual "Digital Future of Public Administration by Results", focused on the possibility and necessity of using digital technologies to ensure the orientation of public administration to results [5].

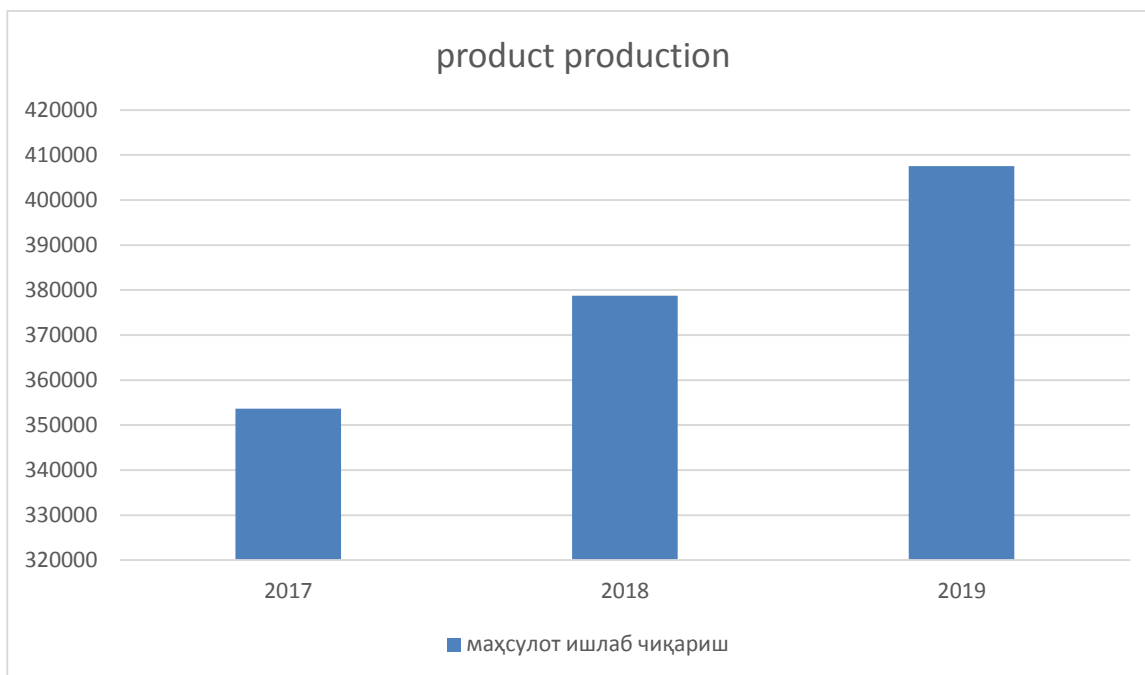
Scientists from Uzbekistan S.S. Gulomov, R.H. Ayupov, G.R. Boltaboeva, T. Shodiev, T.Z. Teshabaev, Z.M. Otakuzieva, Sh. Mustafakulov, R.S. Urunov, M.Yu. Jumanyozova, Z.M. Kurbanov, U.M. Asraev's works describe the theoretical foundations of the digital economy. In particular, Sh. Mustafaqulov's scientific research covered the new trends and characteristics of development [6].

J.S. Fayzullaev paid special attention to the problems of modern methods of managing the transport-logistics system, organization of complex organizational and technical facilities, application of logistics engineering principles for effective management of infrastructure in his scientific studies. At the same time, proposals were made to use a proactive (warning) management method in the management of the transport-logistics system [7].

Researcher O.S. Umarov in his article "Digital economy and its trends" describes the concept of digital economy, definitions of digital economy, technological changes characteristic of digital economy, the impact of digital economy development on employment, creation of national digital economic security system, information communication in gross national product. The share of technologies, the analysis of some indicators of communication and informatization, the number of special software tools used in networks and industries in our country were discussed in detail [8].

**Scientific innovation.** Because of the practical application of digital technologies in the Republic of Uzbekistan, we can see that labour efficiency has increased year by year. Based on statistical data on agriculture, the value of the gross domestic product in 2019 was 407,514.5 billion soums. This indicator is 5.1% more than in 2018. The share of net taxes on manufactured goods in GDP increased by 5.5% compared to the previous year,

making up 11.2% of GDP growth (Figure 1)<sup>97</sup>.



**Figure 1.**

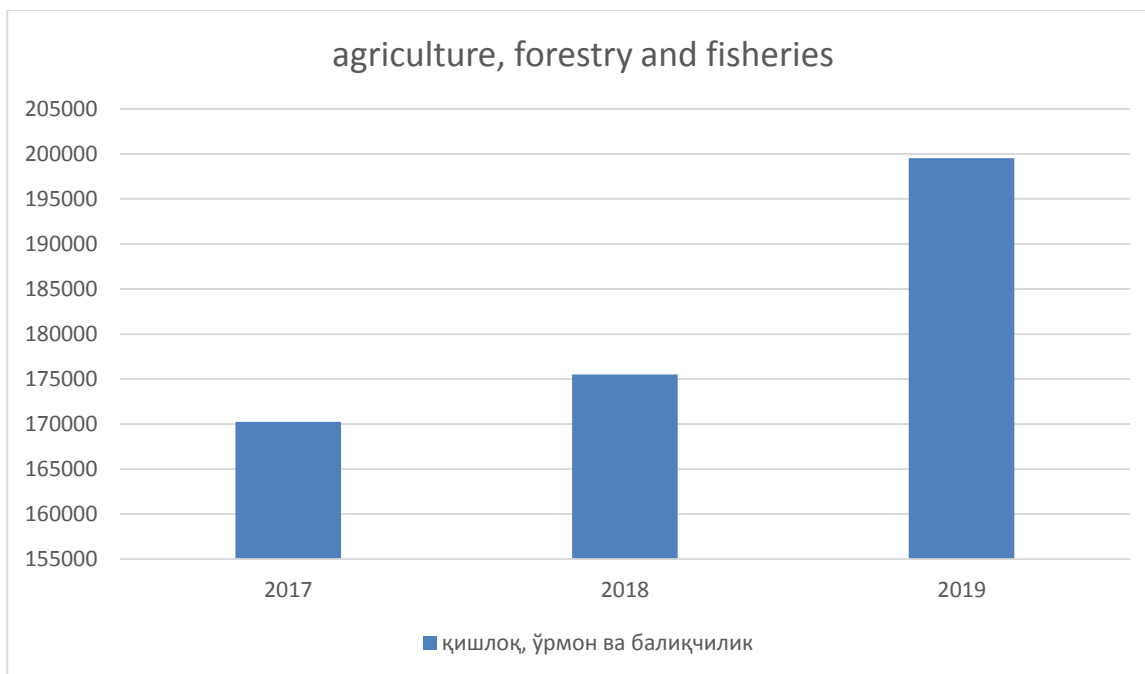
The total cost of production of agricultural, forestry and fishery products in January and December 2019 was 199,537.4 billion soums, an increase of 0.3 percent compared to the previous year. Production in the fields of agriculture, animal husbandry and hunting amounted to 197,703.3 billion soums, in forestry 4757.5 billion soums, and in fish farms 1076.8 billion soums.

In general, according to the structure of domestic product production by gross agriculture and farms, 53.2% of the products produced in 2019 were agricultural products and 46.8% were livestock products. In the distribution of produced agricultural products by categories of farms, 70 percent of agricultural products produced in 2019 fell to peasant (personal assistant) farms, 27.3 percent to farms, and 2.7 percent to organizations engaged in agricultural activities (Figure 2)<sup>98</sup>.

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<sup>97</sup> Statistic.uz

<sup>98</sup> Statistic.uz



**Figure 2.**

On December 29, 2018, the President of the Republic of Uzbekistan, Sh. Mirziyoev, in his address to the Oliy Majlis of the Republic of Uzbekistan, said, "reforming the management system of the agricultural sector, introducing advanced technologies for the rational use of land and water resources, and ensuring food safety are our most important tasks". For this, it is necessary to pay attention to the efficient use of available land resources in agriculture, the perfect mastery of the use of water-saving irrigation technologies, and the use of modern production and innovation methods. The production process in agriculture has its own characteristics. The effective development of production in agriculture requires three main means of production to organize production, land is the main means, and its use depends on natural climatic conditions. Therefore, in the process of agricultural production, in order to organize the effective use of land that can be used by labour resources living in rural areas, it is necessary to organize production taking into account the season. In addition, to harvest at least twice a year, increasing the production volume of agricultural products due to increasing their productivity it can be ensured that it goes.

Land is the main means of production, although it is limited, it can certainly be expanded to a certain extent. For this reason, production in the present period is considered to be due to objective reasons, i.e. lack of irrigation water, low level of productivity of the structural structure of the land. In order to ensure the effective use of available land in the conditions of the market economy, non-state agricultural production farms were established based on the establishment of peasants and farms for a certain period 5,586 farmers and peasant farms were established in the field of agriculture, forestry and fisheries, which is 8.6% more than in 2018.

According to the data of January 1, 2019, the number of people employed in economic activities in agriculture, forestry and fisheries was 29.6 percent. Although there were 6,882.9, thousand people in the village during this period, 2,037,300 economically active people in production, and 4,309,000 economically inactive people. Therefore, based on the development of agriculture, forestry and fisheries, it is necessary to provide jobs to those who are not economically active. It depends on the development of the production process in agriculture, forestry, fishery production because of free competition and on the basis of objective organization of economic transactions between agricultural entities and industrial enterprises.

### **Conclusions and suggestions.**

At present, digital technology is being given a lot of attention in order to develop agro services, industrialization of breeding, storage of agricultural products in places where they can be recycled, wholesale food markets and commodity exchanges.

The most important direction of application of digital technologies in agriculture is to free up redundant workers currently employed in agricultural production and attract them to other sectors of the economy. The most important direction of agricultural reform is to release the surplus workers currently employed in agricultural production and to attract their economy to other sectors. Agriculture alone cannot provide employment to all those living in rural areas. As a result, this situation is becoming an obstacle for the development and reform of agriculture. Highly efficient industrial methods of agricultural production, advanced agrochemical methods are slowly being introduced. Labour productivity also remains at a low level. However, this is only the economic aspect of the matter. There is a social aspect to it as well. Most of the people living in the countryside, especially the young people, do not have the opportunity to get a job or to start their own lives. This is causing serious social problems in the village, and is becoming a source of social stability risk. That is why we consider it our most important task to create new jobs in rural areas by opening mobile small businesses with modern technology. We have undertaken the task of creating completely new networks in the village and building social infrastructure, communications network, modern household and service provision. If the service sector is sufficiently organized, it is possible to provide employment to all those who wish in the village. At the same time, it became possible fundamentally change the image of the village, the culture of life. In addition, this is socio-political in the country helps to stabilize the situation.

### **REFERENCES**

- Address of the President of the Republic of Uzbekistan Sh.M. Mirziyoev to the Oliy Majlis dated January 24, 2020.
- Mustafakulov Sh. Digital economy is a new era of development of new Uzbekistan. <http://tsue.uz/?m=20200225>.
- Faizullaev J.S. Improving the management efficiency of the modern transport-logistics system. Article. Scientific electronic magazine "Economy and innovative technologies". No. 6, November-December, 2017.
- Umarov O.S. Digital economy and its trends. Article, "Economy and innovative technologies" scientific electronic journal. No. 3, May-June, 2018.
- Khajiev B., Otaboev F. Features of the development of the digital economy. Article "Economy and innovative technologies" scientific electronic journal. No. 5, September-October, 2020.
- Dobrolyubova, E.I., Yuzhakov, V.N., Efremov, A.A., Klochkova, E.N., Talapina, E.V., Startsev, Ya.Yu. The Digital Future of Public Administration by Results. - Moscow, 2019. 14 p.
- Lapidus L.V. Digital economy: e-business and e-commerce management. - M., INFRA-M, 2018. -381 p.
- Dobrolyubova, E.I., Yuzhakov, V.N., Efremov, A.A., Klochkova, E.N., Talapina, E.V., Startsev, Ya.Yu. The Digital Future of Public Administration by Results. - Moscow, 2019. 14 p..

# METHODS OF EVALUATION OF THE GOLD MINING INDUSTRY IN UZBEKISTAN

**Abdullaeva Dilfuza Abubakirovna**  
**Senior lecturer of Tashkent State Technical University,**  
**Department of Industrial Economics and Management**

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## ABSTRACT:

In this article, an enduring component of the global economy is the gold mining sector. The safety of this industrial information directly affects the nation's economy and finances. The financial reserves of each nation are discussed in relation to the confidentiality of economic information.

**Key words:** gold standard, currency, gold mining firms, technological, social, Economic, ecological.

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## Introduction

The Republic of Uzbekistan ranked 11th out of the top 12 nations in terms of gold mining in 2011, and by 2021 it has succeeded in entering the motherland.

Recent years have seen the industry's growth accelerated by the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated February 17, 2020 No. 86 "On Measures to Regulate the Licensing of Refining Activities" to further enhance the gold mining industry and increase the prospect of its production activities.

The "Gold Standard" was created in Great Britain in 1821. The gold standard was created to determine a monetary unit with a value equivalent to that of gold. The growth and acceptance of this business helped to build the nation's currency reserve as insurance against the "Dutch illness." The primary characteristics of gold in this context are its quality and long-term value. The popularization of the gold standard involved nations including France, Germany, and the United States. The primary cause of this is the proliferation of gold mines in North America, where trade with other nations has increased due to its involvement in the "Turkish Plague" and the "Chinese World Road" (comparatively to the Great Silk Road). during the region's swift cyclical cycle.

A variety of technical and economic criteria are considered in the valuation of gold mining firms. The elements influencing the gold mining sector must be identified in order to evaluate its businesses.

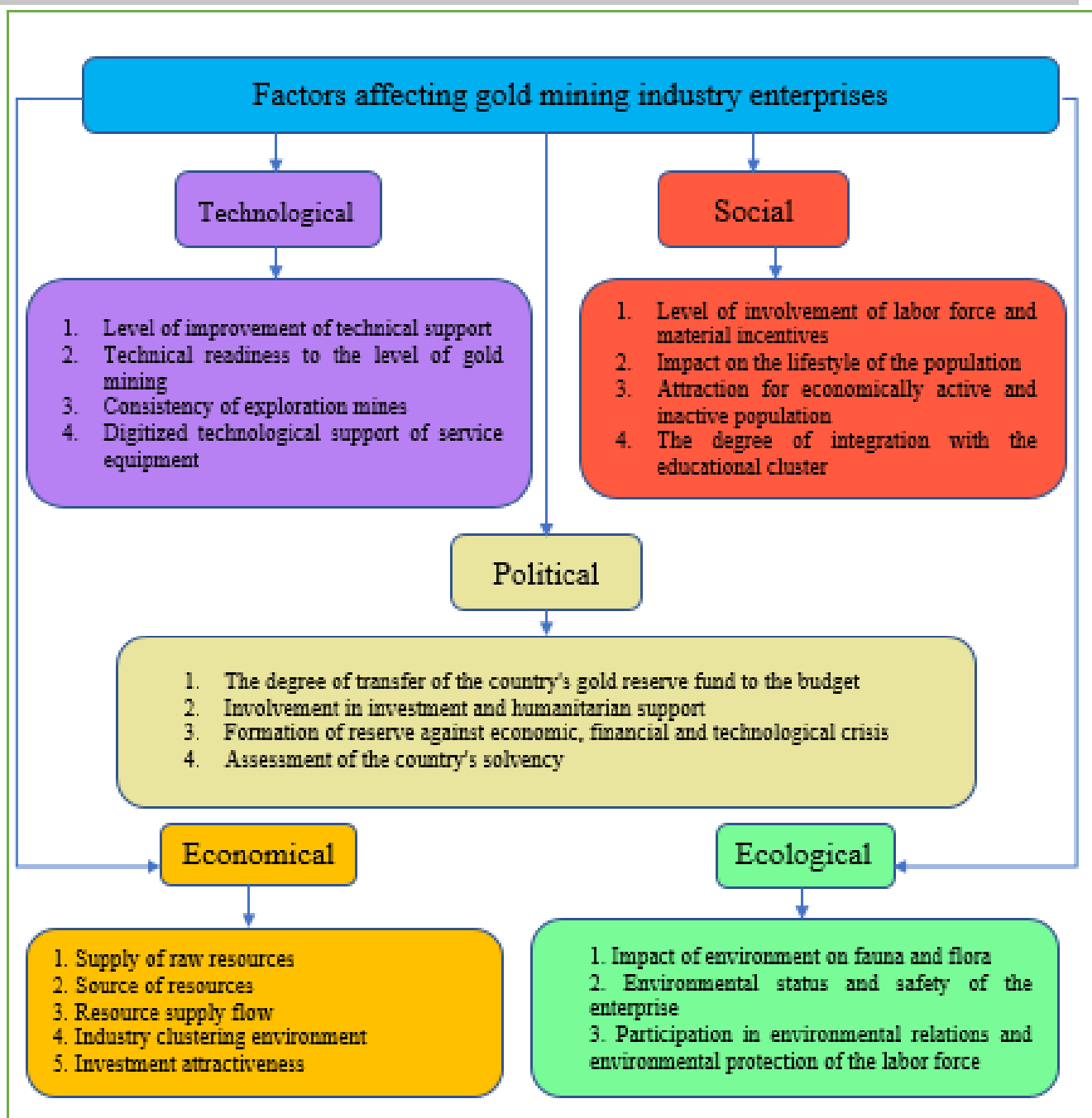
Although the factors impacting gold mining firms have been extensively studied, they are not widely promoted because this industry is seen as one of the targets of state policy. However, through the International Monetary Fund, international trade exchanges, and precious metals markets, it is feasible to create wide and intense forces affecting gold mining firms. In (Figure 1)

### **Figure 1. Internal factors influencing gold mining industry enterprises**

**Source: Author development**

Each nation's anti-crisis program and initiative considers the effect aspects. Additionally, the industry's growth is geared toward ongoing technical upgrading. Rarely do gold mining technology appear in advertisements for new discoveries and breakthroughs. These innovations are created upon





request asPf or made available for purchase as an addressable design proposal asPf. This indicates that in order for gold mining businesses to pursue competitiveness, they must pay attention to the growth of the nation's human, scientific, and technological capabilities.

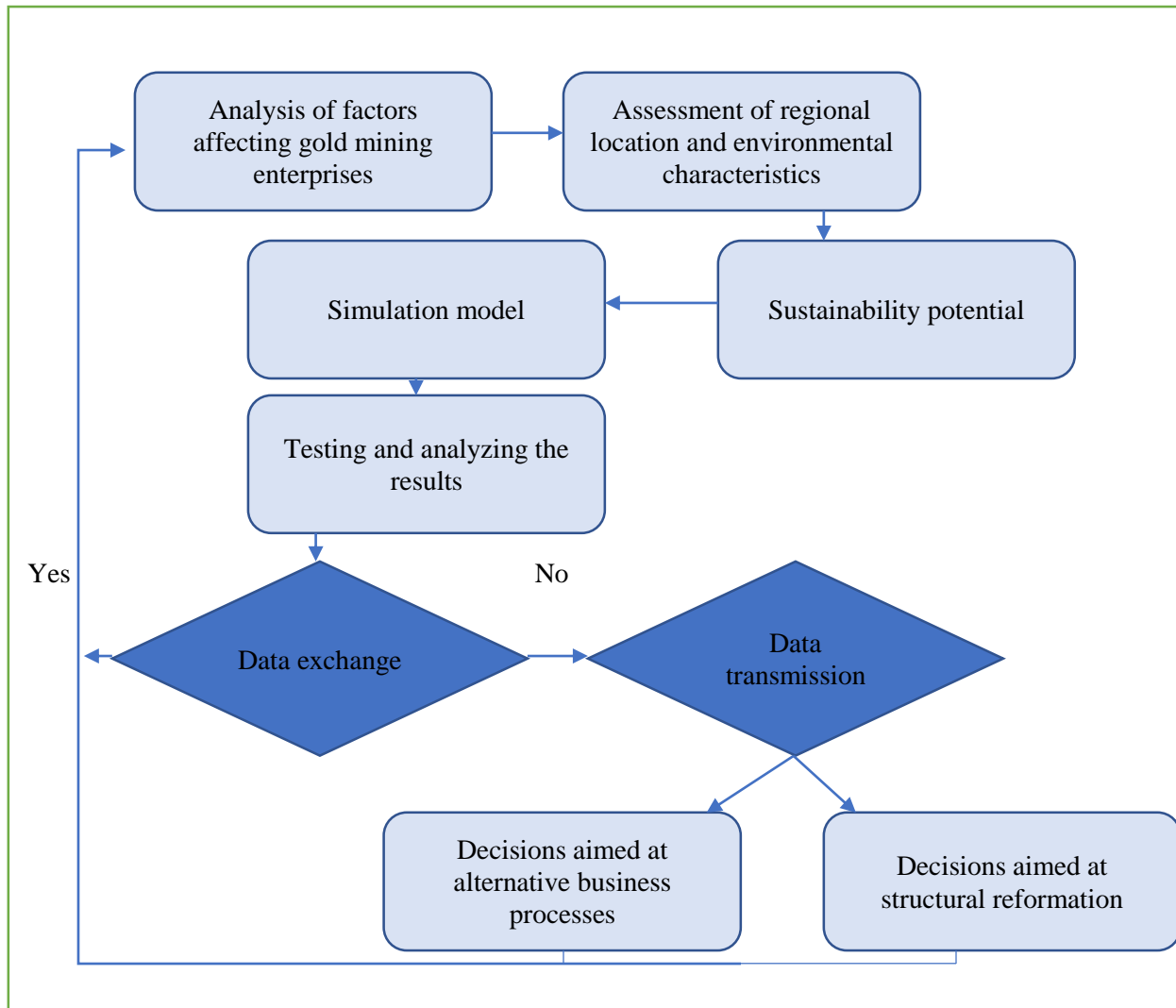
Foreign researchers Harrison, R. Link, and V. A. Sherbakova, as well as J. Heywood, G.M. Desmond, and R. Daft, made significant contributions to science.

According to Russian scientist V. Zhuravlev, who described them as having an open dynamic nonlinear system, the production activity of the nation's gold mining firms depends on the organizational and economic

mechanisms that ensure their stability.<sup>99</sup>

The economic stability of gold mining firms depends heavily on improving management operations. Taking into account all influencing elements, improving the organizational and economic mechanism of the business and ensuring its synergy helps the growth of gold mining firms.

The system developed by V. Juravlev to guarantee the stability of gold mining operations during a crisis is a useful tool for managing a budding business.

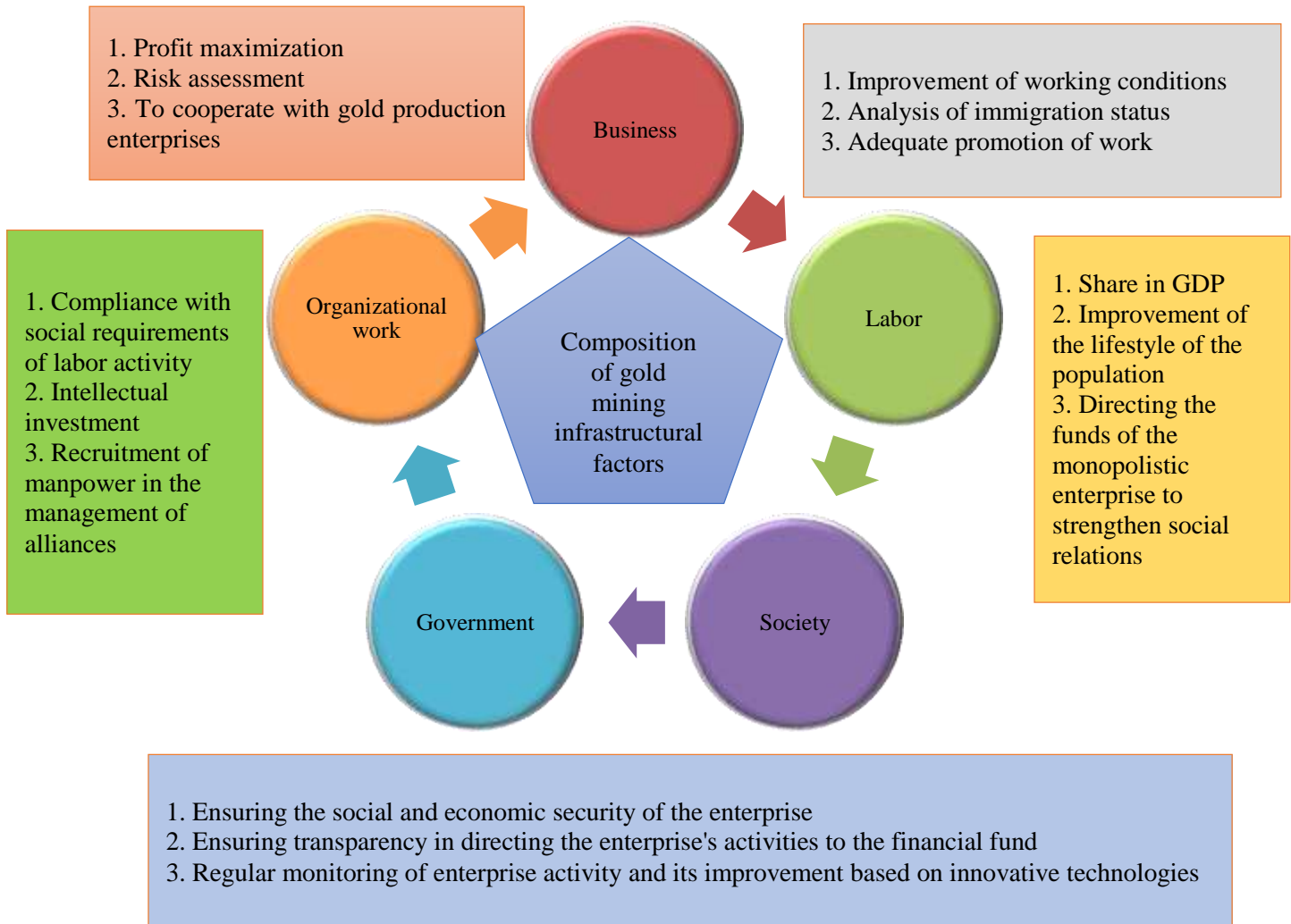


of mining industry as a condition of overcoming crisis. SHS Web of Conferences 35, 01150 (2017) DOI: 10.1051/shsconf/20173501150, 2017 p, 1-5

The greatest gold mines in the world are found in South Africa, where the management of the requirements of the gold mining sector has provided an example of the organizational and economic mechanism of the nation's infrastructure. According to him, the organizational structure of the gold mining industry is a key component of

<sup>99</sup> Zhuravlyov V.V.. Formation of the sustainable development mechanism at enterprises of mining industry as a condition of overcoming crisis. SHS Web of Conferences 35, 01150 (2017) DOI: 10.1051/shsconf/20173501150, 2017 p, 1-5

South Africa's economic success (Figure 3)



**Figure 3. Managing the needs of gold mining enterprises in the country's infrastructure**

Source: Lane, A. et al. «Трудный выбор, стоящий перед южноафриканской горнодобывающей промышленностью». *Журнал Южноафриканского института горного дела и металлургии* 115 (2015): 471-479.

The "Indicators of Economic Development of Gold Mining Companies" technique was created to enhance the o gold mining enterprises' organizational and economic mechanisms e 1). The purpose of this evaluation technique is to assess the financial viability of gold mining operations. Accordingly, the efficiency of the organizational and economic mechanisms of the enterprise is regarded as the activity of the assessment of gold mining enterprises.

Table 1.  
Method of indicators of economic development of gold mining enterprises

No	The name of the assessment	Evaluation formula	Normative indicator	Explanation
1	2	3	4	5
Competitiveness index of the enterprise				
1.	Assessment of the structural condition of the enterprise	$\pi = \frac{H-\varphi}{\varphi} (1)^{100}$ <p>here:  <math>\pi</math>- <i>determination of the position of the enterprise in the market structure in monopoly conditions;</i>  <math>H</math>-<i>price;</i>  <math>\varphi</math>- <i>marginal cost.</i></p>	1-0,55	By determining the market share of the network in the conditions of pure competition, it provides an opportunity to assess the stability of the network in the market
2.	Intense competitiveness	$R_i = 3 R_b * R_r * S_r$ <p><math>R_b</math> – intensive competitiveness that takes into account market profitability;  <math>R_r</math> – an indicator of intensive competitiveness that takes into account competitors in the market;  <math>S_r</math> – indicator of intensive competitiveness of product sales.</p>	1-0,55	The company's strategy for determining the level of competitive influence is listed. Marketing management is conducted on its basis.
3.	Intensive competitiveness that takes into account market profitability	$R_b = 1 - R_m$ <p><math>R_m</math> – the share of the product in market competitiveness</p>	0,5≤0,01	It serves to ensure the stability of the product in the market and to determine its elasticity.
4.	Product share in market competitiveness	$R_m = D/V_b$ <p><math>D</math> – market revenue (in currency)  <math>V_b</math> – the size of the market in the value of funds</p>		A summary that serves to determine the product's marketability and marketability.
5.	An indicator of intensive competitiveness that takes into account competitors in the market	$R_r = 1 - n \sum - 2 (1/n) (D_i / 1/n)$ <p><math>n</math> – the number of companies competing in this market;  <math>D_i</math> – <math>i</math>- competitor's market share</p>	$R_b \geq 0,01$	A summary that serves to determine the level of influence of rival companies through their market position.
Innovative improvement of the enterprise				

<sup>100</sup> Lerner index

6.	Product development based on cost (X) and profitability (R) indicators	$T = X (1 - R/ 100)$ X- the cost of producing an innovative product; R- profitability of the product.	$T \geq 0,3$	It serves to control the production of innovative technologies of Korho.
7.	Product quality and demand	$N = \sum Ni / n,$ Ni –i price assessed by an expert; n – number of experts	$N \geq 0,1$	It serves to evaluate the quality of the product and the demand for it by experts.
8.	The marginal rate of the product in strategic marketing	$Nm = Em \cdot Xm \cdot Ji,$ Ep – indicator of usefulness of the product during its service life; Xm – the degree of justification of the cost of a new innovative product; Ji- consumer spending deflation index	$Nm \geq 0,5$	Strategic marketing is a part of planning, which is used to test the product and determine its purchasing power.
Evaluation of financial indicators				
9.	Coverage indicator	$Lj = Sf \cdot Mx$ Mx – mobilization costs (taking into account turnover costs); Sf – short term liabilities.	$Lj \geq 1$	It is used to determine the coverage ratio of the product being designed in product improvement.
10.	Liquidity indicator	$L = Ar \cdot Mx - MTR,$ Ar- turnover rate of funds; MTR- stock of material technical product.	$Lj \geq 0,4$	It is used to determine the liquidity of the designed product.
11.	Coefficient of maneuver application	$Str = K \cdot PF,$ PF – private equity; K – amount of private capital.	$Str \geq 0,3$	In the execution of strategic cases, the main project plan to mitigate the risk is collected and kept confidential.
12.	The turnover ratio of working capital	$Pfi = Pfm \cdot V,$ V– total revenue; Pfm – residual part of working capital.	$Pfi \geq 0,2$ (in 1 year)	It serves in the use of important information about the life cycle of the product and its scope.
Organizational and economic development				
13.	Profitability of the product	$Rq = X \cdot Mf \cdot Eb \cdot 100$ Eb – balance profit without tax liabilities; X – product manufacturing costs; Mf– main fund.	-	It is used to determine the profitability potential of the product being designed
14.	Organizational functional competitiveness in a competitive environment	$(Z) Z = 1,2X1 + 1,4X2 + 3,3X3 + 0,6X4 + 1,0X5,$ X1 – rate of return on current capital;	-	It serves to assess the stability of the organizational economic mechanism.

		X2 – the capital's profitability gap; X3 – profitability of production activity; X4 – debt level; X5 – asset efficiency level.		
15.	Product viability index	$X_u * Q_e + Q_s + Q_e * Q_{ex} * Q_r T \sum = + + 1$ Qe – the utility level of the product; Qs – financial support for product production; Qex – annual exploitation of the product; Qts – technical service cost of product production; Qr – annual provisioning funds; T – the service life of the product.	-	Serves in researching the viability level of the designed product.
Investment development				
16.	Growth rate of investment income for the period under study	$I_s = (I_k - \Delta C K \eta) * 100 / I_p$ I <sub>k</sub> – increase in income from investment in the reporting year; I <sub>p</sub> – the growth of income from investment over the past years;	I <sub>s</sub> ≥ 1	It is used in determining the investment potential and researching its profitability index.
17.	Product competitiveness in the foreign market	$C_f = (C_s - C_p) / C_p$ C <sub>s</sub> – competitiveness of the product in the foreign market in the reporting year; C <sub>p</sub> – competitiveness of the product in the foreign market during the past years;	C <sub>f</sub> ≥ 0,1	After the improvement of the product, the indicator serves to research the possibilities of the product in the foreign and domestic market.
18.	The growth rate of the organization of updated basic funds	$M_c = (M_c - M_n) * 100 / M_l,$ M <sub>n</sub> – update of the main fund in the reporting year; M <sub>l</sub> – update of the main fund in the reporting year.	M <sub>c</sub> ≥ 0,2	Basic funds are studied to improve the organizational and economic mechanism of the enterprise, to strengthen the position of the product in the market.
19.	Net discounted income	$S_d = \sum_{t=1}^T \frac{E_1}{(1+E)^t} - \sum_{t=1}^T \frac{C_t}{(1+E)^t} * 100,$ p <sub>t</sub> – efficiency of calculations in step t; C <sub>t</sub> – costs incurred at step t; T – the scale of the step taken to liquidate the object; E – discount rate.	S <sub>d</sub> ≥ 0,1	It is used in researching the investment potential of the enterprise and its acceptability and profitability level.
20.	Rate of return	$P_s = [(NP + P) / I] * 100$ NP – net profit;	P <sub>s</sub> ≥ 0	The profitability of the investment and the level of the enterprise's ability to accept this investment

		P – value of borrowed funds; I – total investment costs.		
Product cost reduction				
21.	Total update of product cost	$\pm \Delta P_g = \pm \Delta P_m \pm \Delta P_{hr} \pm \Delta P_{pr}$ <p> <math>\Delta \Delta P_m</math> – The level of change/impact of product cost norms and prices, taking into account the costs of mining tools and equipment, auxiliary materials, transport and energy;  <math>\Delta P_{hr}</math> – the rate of change in the cost of labor productivity and wages of workers;  <math>\Delta P_{pr}</math> – the rate of change in product cost due to changes in the scale of production. </p>	$\Delta P_g \geq 0,3$	It is used in the study of the effect of the formation of the cost of the product at the expense of production and organizational-economic factors of the enterprise.
22.	The rate of change/impact of product cost norms and prices, taking into account the costs of mining tools and equipment, auxiliary materials, transport and energy	$\Delta P_m = (J_n \cdot J_N - 1) Mtd \cdot 100$ <p> <math>J_n</math> – normative index of material costs;  <math>J_N</math> – price index of material costs;  <math>Mtd</math> – the share of product cost in energy costs. </p>	$\Delta P_m \geq 0,2$	Normative index of the main costs of the enterprise
23.	The degree of change in the cost of labor productivity and wages of workers	$P_{hr} = (J_s / J_{pf} - 1) Y_{3.n} \cdot 100 \%$ <p> <math>J_s</math> – wage index;  <math>J_{pf}</math> – labor productivity index;  <math>P_{ci}</math> – impact on product cost at the expense of social obligations </p>	$P_{hr} \geq 0,2$	In the study of labor productivity of workers, the compatibility with the cost of production is analyzed.

Source: Author development

The above evaluation system's approach, which had never been applied before, was developed with the intention of helping mining firms become more economically and organizationally efficient. As a result, additional network firms can use this assessment approach to aid in the analysis of the network's and its many elements' researched indicators.

### **References.**

- Zhuravlyov V.V.. Formation of the sustainable development mechanism at enterprises of mining industry as a condition of overcoming crisis. SHS Web of Conferences 35, 01150 (2017) DOI: 10.1051/shsconf/20173501150, 2017 p, 1-5
- Zhuravlyov V.V.. Formation of the sustainable development mechanism at enterprises of mining industry as a condition of overcoming crisis. SHS Web of Conferences 35, 01150 (2017) DOI: 10.1051/shsconf/20173501150, 2017 p, 1-5
- Lane, A. et al. «Трудный выбор, стоящий перед южноафриканской горнодобывающей промышленностью». *Журнал Южноафриканского института горного дела и металлургии* 115 (2015): 471-479.



# CAUSE-EFFECT CRITERIA FOR ALLOCATING OVERHEAD COSTS TO PRODUCTION DEPARTMENTS

Dilfuza Toshnazarova  
Samarkand institute economy and service  
supporting doctoral student of the institute  
dilfuza11122000@mail.ru

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## ABSTRACT:

It is very important for countries that are moving to International Financial Reporting Standards (IFRS), including Uzbekistan, to rapidly introduce IFRS, to study advanced foreign experiences, to develop methodological procedures at the level of accounting policies that are compatible with their countries and meet the requirements of international standards. One of such urgent issues is the improvement of allocation of manufacturing overhead costs (MOH) to cost objects.

In this article, the relevance of the work is based on the analysis of local and international articles. The research work describes the activities of the service departments of the companies, including the technical service department, warehouse and the kitchen. Distribution factors are selected for each of them. Distribution based on an integral indicator is proposed, using the coefficient of importance of several factors that are important in the redistribution of MOH to production departments. The coefficient of importance determines the scope of this factor, i.e. the weight of influence. These proposals are based on practical examples of enterprises in the form of tables. The method of distribution based on linear equations is shown. The application of the given recommendations in practice serves to form true information about the cost and to increase the quality of the decisions being made.

**Key words:** International Standards of Financial Reporting (IFRS), Manufacturing Overhead Costs (MOH), Overhead Costs, Allocation Bases, Product Cost, Cost Objects

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## Introduction

The International Financial Reporting Standards (IFRS) will be completely implemented in New Uzbekistan, it has been decided. On February 24, 2020, the President of the Republic of Uzbekistan issued Decision No. Joint stock companies, commercial banks, insurance companies, and businesses that fall under the category of large tax payers operating in our nation are required to submit their financial reports under PQ-4611, "On Additional Measures for the Transition to International Standards of Financial Reporting."<sup>101</sup> As a result, in-depth examination of financial statements, the creation of analytical procedures at the level of accounting policy, and research into cutting-edge international experiences are all necessary. The establishment of the cost of reserves in accordance with international norms is one of the crucial challenges. Direct labor and overhead costs (DLOC) from the production process are also accounted for in the cost of reserves. Direct labor expenses are added directly to the cost of the product. However, allocation to cost objects is how DLOCs are executed. This in turn necessitates taking into account specific aspects.

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<sup>101</sup> Decision of the President of the Republic of Uzbekistan "On additional measures for the transition to international standards of financial reporting". February 24, 2020. No. PQ-4611. <https://lex.uz/docs/-4746047>

The cost of the product is significantly influenced by overhead production costs. We believe that there are now the following issues with aligning the computation of production overheads with international standards in the nations that are making the transition to international standards of financial reporting. First, "generic production expenses," which differ from one another in terms of substance and composition, are employed in place of the concept of overhead production costs. Therefore, it is necessary to align the production overheads structure with global norms. Second, the volume of made goods is used as the distribution base for the distribution of overhead production costs, or the distribution is carried out based on its contribution to the overall planned expenses. There hasn't been a methodology for allocating resources based on the analysis of allocating bases and allocating factors. Thirdly, the two-stage approach of distribution of DLOCs, which is extensively employed in the context of traditional management today, has not been subjected to a methodical application process. Therefore, for nations that are quickly adopting IFRS, the development, suggestion, and implementation of DLOC's type, composition, distribution bases, distribution rates, distribution methods, and methodological norms for their application, is a crucial issue.

**Literature review.** According to sources from Russian, overhead costs are consequential costs that are "overhead costs (nakladnye raskhody) are additional costs that are not directly related to the creation of a given type of product (offering certain services, executing certain activities)." Since they cannot be applied directly to certain kinds of products (works and services), they are delivered using the methodology of choice. The term "overhead costs" refers to additional expenses. These expenses, in our opinion, cannot be classified as supplementary because they constitute a fundamental component of structural production activity.

"A process for computing the Fixed Overhead Allocation Rate (FOAR) and determining the unallocated and overallocated fixed costs" is provided in the ASSA publications.<sup>102</sup>

E. I. Glebova uses basic wages, selling price, and market value "indicators" in her paper "as a basis for the distribution of overhead expenses, such as direct labor wages, direct labor hours, machine hours, unit of product produced, physical production rates, direct material costs, and indicators."<sup>103</sup> The approach, however, does not suggest a distribution strategy that accounts for the influence of all variables.

According to the chosen distribution basis, "overhead costs," or the "cost component,"<sup>104</sup> are dispersed in T. Kosheleva's article. The amount of a product unit, direct labor hours of key production workers, equipment operating hours, weight and volume of transported goods, primary materials, volume of rendered services, etc. can all be used as a distribution base. This section also uses real-world examples to demonstrate how the two-stage system of allocating overhead production costs is applied.

Instead of using the idea of overhead production costs, the National Accounting Standard No. 21 that is in use in our nation uses the concept of total production costs. This account reflects the costs of a general production nature, including:

- a) on maintenance and use of machines and equipment;
- b) on depreciation allocations of fixed assets and intangible assets related to production;
- c) maintenance costs of fixed assets related to production;
- g) insurance costs of property in production;
- d) costs of heating, lighting, and maintenance of production buildings, according to the standard;
- e) rent payments for production facilities, machinery, and other leased tools and equipment;

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<sup>102</sup> Поглашения накладных расходов ([https://www.accaglobal.com/cis/ru/qualifications/russian-language-advanced-diploma/Learningresources/Introduction to Finance and Business Rus/Technical articles/Fixed overhead absorption.html](https://www.accaglobal.com/cis/ru/qualifications/russian-language-advanced-diploma/Learningresources/Introduction%20to%20Finance%20and%20Business%20Rus/Technical%20articles/Fixed%20overhead%20absorption.html))

<sup>103</sup> Распределение накладных расходов на виды производимой продукции в условиях спада производства //Журнал «Справочник экономиста» №12 2010 / Управление затратам <https://www.profiz.ru/se/demo-number/>

<sup>104</sup> Т. Кошелева, аудитор. РК, СІРА, DІPIFR-РУС (ACCA). Распределение производственных накладных затрат //([https://online.zakon.kz/Document/?doc\\_id=31955754&pos=32;17#pos=32;17](https://online.zakon.kz/Document/?doc_id=31955754&pos=32;17#pos=32;17))

j) salaries of production workers providing production services;  
z) other production-related expenses. The current legal provisions do not, however, address the methodological problems with allocating overtime production costs to cost items.

In his research, Bülend Terzioglu<sup>105</sup> empirically analyzed the composition of costs in a number of nations, noting that today, managers are concerned about the incorrect and insufficiently reliable distribution of costs and the application of AVS analysis in the distribution of costs in service enterprises to eradicate cases of cost distribution avoidance. Overhead costs are currently distributed arbitrarily in the majority of enterprises. offers.

By examining average activity costs and marginal costs based on empirical data, Eric Norin<sup>106</sup> underlines the need for prudence when making judgments based on average costs for each activity. The adoption of the allocation of overhead costs based on causal principles is a hot topic, as these studies demonstrate.

**Result and Discussion.** The manager finds the variable or variables that result in the cost object incurring costs when applying the cause and effect criterion. For instance, because a product's quality inspection expenses are erratic, a manager's quality inspection hours are allotted to it. In most situations, it is appropriate to allocate costs for operational employees using the cause and effect criterion.

When distributing the expenditures of one department to other departments, they must select one of the available techniques. For accounting purposes, we must first make a distinction between production departments and service departments.

The element that guarantees the direct creation and growth of the value of goods and services sold to clients is the production (operational) department. Shops for metal casting, processing, assembly, decoration and painting, and completed product finishing are a few examples of production divisions.

The department that provides services to other departments (production and service) is the one that indirectly influences the value of goods and services. We all know how crucial service department activities is to the smooth operation of manufacturing. These divisions may also be known as service divisions. These divisions may consist of the material and technical supply department (warehouses), the technical service division, the information technology division (computer management division), the kitchen division, the inventory division, the equipment division, the medical division, the administrative division, the management division in the factory, and other divisions.

Each department offers a certain set of services.

Other departments can utilise the warehouse services provided by the material equipment supply department. Based on departmental orders, continuous delivery on time, exchange for the required one, and other deliveries, the warehouse department provides service services for the supply of supplies and raw materials to production departments and service departments. In actuality, the choice of one of these cost allocation bases leads to the introduction of the practice of allocation to departments. The following indicators can be used as allocation grounds, for instance: the number of employees, the cost of manufactured goods, the cost of raw materials and items taken out of the warehouse, and other variables.

Our opinion is that all distribution bases should be used instead of just one, and the coefficients should be calculated based on the degree of reliance (importance) between each one. The warehouse service depends not only on the

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<sup>105</sup> Bülend Terzioglu. Intricacies of overhead cost allocations and distortion in costing: A synthesis of the literature : November 2018. <https://www.researchgate.net/publication/329182045>

<sup>106</sup> Eric Norin. Are overhead costs strictly proportional to activity?: Evidence from hospital departments Volume 17, Issues 1–2  
Pages 1-278 (January 1994) <https://www.sciencedirect.com/journal/journal-of-accounting-and-economics>

stated work hours but also, to some extent, on other criteria because a single allocation base does not take other factors into account. These coefficients should indicate each factor's relative weight, or how much overhead expenses vary depending on the chosen distribution basis. Let's say, for instance, that specialists' assessments indicate that the cost of labor hours, the number of employees, the value of the commodities removed from the warehouse, and the number of orders all influence the cost of warehouse services. In that instance, the distribution rates will be as follows after accounting for all factors (Table 1

**Table 1**

**The procedure for calculating the uniform distribution rates of overhead production costs corresponding to the warehouse in the enterprise “Shakhzod tekst invest” LLC, a velvet producer**

Distribution bases	Significance coefficient	Service departments			Manufacturing departments		Total
		Warehouse	Technical service	Kitchen	Weaving shop	Painting workshop	
1. Labor hours budget Contribution			432	760	3680	3768	8640
Contribution, taking into account the coefficient	0.60		5	8.8	42.6	43.6	100
2. Number of employees Contribution			16	12	45	58	131
Contribution, taking into account the coefficient	0.10		12.2	9.2	34.3	44.3	100
3. Cost of materials removed from the warehouse (thousand soums) Contribution			38400,	22400,	295800	310480	667083
Contribution, taking into account the coefficient	0.20		8	8	.9	.9	,4
			5.76	3.36	44.34	46.54	100
			1.15	0.67	8.87	9.31	20
4. Number of orders Contribution			15	35	40	45	135
Contribution, taking into account the coefficient	0.10		11.11	25.93	29.63	33.33	100
			1.11	2.59	2.97	3.33	10
<b>5. Distribution rate</b>			<b>6.48</b>	<b>9.48</b>	<b>40.77</b>	<b>43.27</b>	<b>100</b>

We will analyze the method for figuring out the distribution rates for the technical service department in the same sequence. Other manufacturing and service departments receive technical support from the technical service department. Technical service includes lubrication, cleaning, part replacement, and oil changes. It also refers to the maintenance of the working capacity and proper operation of production equipment during technical operation, storage and transportation, technical inspection, adjustment in case of breakdown, and technical service. We comprehend comprehensive works and services. In order to guarantee the long-term performance of the machinery, proper operation, and labor productivity, technical maintenance is essential. Regular maintenance will be required. Technical support department expenses are largely included in overhead expenses. The technical service department offers technological support. Spare parts, components, lubricants, technical oils, inventories, depreciation of equipment used by the technical department, labor costs for

technicians and staff members, and overproduction costs of other service departments in the process of redistribution are all included in this department's overhead costs. The following indications can be produced as distribution indicators when spreading the costs of maintenance departments: the budget of the working hours of maintenance workers, the cost of spare parts used during maintenance, the quantity of orders, and other indicators. The method for estimating the distribution rate is shown below. It is based on the estimation of the significant coefficients in Table 2.

**Table 2**

**The procedure for calculating the uniform distribution rates of overtime production costs incurred by the technical service department at the enterprise "Shakhzod tekst invest" LLC, a velvet producer**

Distribution bases	Significance coefficient	Service departments			Manufacturing departments		Total
		Technical service	Warehouse	Kitchen	Weaving shop	Painting workshop	
1. Labor hours budget	0.60		88	58	2750	2864	5760
Contribution			1,53	1,01	47,74	49,72	100
Contribution, taking into account the coefficient			0,92	0,61	28,64	29,83	60
2. The cost of the equipment being serviced	0.25						
Contribution			15045	14820	58042	65024	152933
Contribution, taking into account the coefficient			8,8	0,3	5.9	5,4	0,4
			9.84	9.69	37.95	42.52	100
			2,46	2,42	9,49	10,63	25
3. The cost of spare parts used during maintenance	0.10		5450,0	2470,0	45784,8	56780,9	110485,7
Contribution			4,93	2,24	41,44	51.39	100
Contribution, taking into account the coefficient			0,49	0,22	4,15	5,14	10
4. Number of orders	0.05		8	5	48	55	116
Contribution			6,89	4,31	41,38	47.41	100
Contribution, taking into account the coefficient			0,34	0,22	2,07	2,37	5
<b>5. Distribution rate</b>			<b>4,21</b>	<b>3,47</b>	<b>44,35</b>	<b>47.97</b>	<b>100</b>

The company's kitchen is the next area of service. This department offers other departments lunch, dinner for nighttime shift workers, hot water, tea, and other catering services. For its employees, modern businesses provide lunches. This benefits the business. As a result of the employees' time being saved, it is possible to increase the number of hours spent on production. Furthermore, the provision of light, high-quality food improves worker health while giving manufacturing workers the kilocalorie energy they need to do their jobs. As a result, labor productivity is ensured. the cost of food and other ingredients used to prepare meals, wages for kitchen staff and employees, depreciation on kitchen equipment, the cost of dishes and inventory, drinking water, tea, coffee, sugar, napkins, cleaning and sanitary products, as well as wages paid to other service departments are all included in this department's overhead costs. It is fair to divide the expenditures of this department in accordance with the number of employees because it provides services to employees. You can take this indicator's significance coefficient to be 1. due to the fact that catering services are solely dependent on the workforce. Other factors won't affect it at all. The method for estimating the rate of distribution of the kitchen department's overhead expenditures to departments is presented in Table 3:

**Table 3**

**The procedure for calculating the uniform distribution rates of overtime production costs incurred by the catering department at the enterprise "Shakhzod tekst invest" LLC, a velvet producer**

Distribution bases	Significance coefficient	Service departments			Manufacturing departments		Total
		Kitchen	Technical service	Ware house	Weaving shop	Painting workshop	
2. Number of employees	1		16	12	45	58	131
Contribution			12,2	9,2	34,3	44,3	100
Contribution, taking into account the coefficient				12,2	9,2	34,3	44,3
<b>Distribution rate</b>			<b>12,2</b>	<b>9,2</b>	<b>34,3</b>	<b>44,3</b>	<b>100</b>

The service departments work in tandem with the primary production departments, as seen by the statistics in the tables listed above. The process of cost allocation becomes challenging in such circumstances. As a result, the costs of other departments that utilize the services of the service departments accumulate and must be reallocated. because the ultimate cost object product is not produced in the service departments. Production divisions are responsible for creating the product. As a result, overhead costs for the service department are dispersed.

Traditional methods are used to distribute the costs of the service departments in the management account: direct (direct), step-down (step-down), redistribution (step-by-step), and linear equation system (reciprocal).

Using the distribution rates established based on the cause-and-effect criterion, we distributed the costs of the service departments above using the method of linear equations. (Table 4).

The repeated distribution method has a formula method called the linear equation system (reciprocal) method. To do this, we present the definitions listed below:

**X** – Package costs of the technical service department (which includes the costs of other service departments).

**Y** – Collection costs of the warehouse department (which includes the costs of other service departments).

**Z** – Package costs of the kitchen department (which includes the costs of other service departments)

Then, based on the condition of the problem, it will be possible to create the following system of equations.

$$X = 78348 + 0.0648 y + 0.122 z$$

$$Y = 178490 + 0.0421 x + 0.092 z$$

$$Z = 95487 + 0.0347 x + 0.0948 y$$

If we work through this system of equations, we discover that  $X = 105240$  thousand soums,  $Y = 193731$  thousand soums, and  $Z = 117500$  soums. These numbers represent cost totals that take into account the price of ancillary services provided by the service departments. Now, using the table and the proportions specified in the problem's condition, we divide these cumulative cost sums across the production departments. In Table 4 below, we formalize the distribution results.

**Table 4**

**Allocation of overtime production costs based on uniform distribution rates at "Shakhzod tekst invest" LLC, a velvet producer (thousand soums)**

Distribution bases	Service departments			Manufacturing departments		Total
	Technical service	Warehouse	Kitchen	Weaving shop	Painting workshop	
Budgeted overheads before redistribution	78348	178490	95487	225845	398738	976908
The sum of service departments including costs incurred by other service departments	X = 105240	Y = 193731	Z = 117500			
Maintenance department distribution rate		4,21	3,47	44,35	47,97	100
Amount distributed				46674	50484	
Warehouse department allocation rates	6.48		9.48	40,77	43,27	100

Amount distributed				78984	83828	
Distribution rates of the kitchen department	12.2	9.2		34.3	44.3	100
Amount distributed				40302	52053	
<b>Total</b>				<b>391805</b>	<b>585103</b>	<b>976908</b>

The system of linear equations method was used in this instance to allocate the overhead expenses of the service departments to the production departments. The DLOC s assigned to the production workshop are dispersed in connection to the items created in this workshop in the following stages of allocation. As a basis for distribution, machine hours, labor hours, or other indicators can be used.

The following possibilities and significance can be associated with the methodological technique of grafting based on the cause-and-effect criterion that is above advised.

**First**, the causes of overproduction costs, i.e., their dependence on drivers, are identified in this distribution. **Second**, rather of focusing on just one element, the influence of numerous factors that affect the distribution rates of DLOCs is considered. This guarantees that the indications that are produced are reasonable.

**Third**, generalized indicators are calculated while taking into account the relative relevance of each factor. Thus, a component with a little impact is given less weight than a factor with a high impact, ensuring that the influence of the latter is adequately balanced.

Applying the distribution methodology based on the proposed cause-and-effect criterion will produce accurate costing data and a fair allocation of costs. In the end, it helps to accurately and impartially determine the product's cost.

**Conclusion and Recommendation.** We can draw the following findings from the study done on the calculation of overhead production costs:

There are now issues with calculating additional production costs in the nations that are IFRS -introducing for the first time. These include the lack of a definition for the concept of DLOCs and its composition in accordance with IFRS s, the inadequate consideration given to the choice of distribution bases, and the lack of methodical procedures for the practical implementation of the two-stage DLOCs system, which is commonly used in foreign experiments.

The review of the literature reveals that the majority of sources cover the composition of DLOCs based on the process in the regulatory law documents of this nation. The allocation of DLOCs to cost items is not described methodologically in local literature. The distribution of DLOCs by businesses nowadays is done randomly, mistakes are made, and attention should be used when making judgments, it is stressed in the articles in the reputable international magazines.

The research work proposed a methodical process for redistributing the DLOCs of companies' service departments, including technical service departments, canteens, and canteens to production departments, based not on a single distribution base but on an integral indicator, using the coefficient of importance of several factors. This makes it possible to account for the influence of a factor that affects outcomes in a greater degree than other factors.

The suggested approach aims to distribute DLOCs in an objective manner, leading ultimately to the development of accurate information about the cost object.



## References

- Decision of the President of the Republic of Uzbekistan "On additional measures for the transition to international standards of financial reporting". February 24, 2020. No. PQ-4611. <https://lex.uz/docs/-4746047>
- Накладные расходы: понятие, состав и распределение <https://glavkniga.ru/situations/s505418>)
- Поглощения накладных расходов ([https://www.accaglobal.com/cis/ru/qualifications/russian-language-advanced-diploma/Learningresources/Introduction\\_to\\_Finance\\_and\\_Business\\_Rus/Technical\\_articles/Fixed\\_overhead\\_absorption.html](https://www.accaglobal.com/cis/ru/qualifications/russian-language-advanced-diploma/Learningresources/Introduction_to_Finance_and_Business_Rus/Technical_articles/Fixed_overhead_absorption.html))
- Распределение накладных расходов на виды производимой продукции в условиях спада производства //Журнал «Справочник экономиста» №12 2010 / Управление затратам <https://www.profiz.ru/se/demo-number/>
- Т. Кошелева, аудитор. РК, CIPA, DIPIFR-РУС (АССА). Распределение производственных накладных затрат //( [https://online.zakon.kz/Document/?doc\\_id=31955754&pos=32;17#pos=32;17](https://online.zakon.kz/Document/?doc_id=31955754&pos=32;17#pos=32;17))
- 21-СОНЛИ БҲМС Хўжалик юритувчи субъектлар молиявий-хўжалик фаолиятининг бухгалтерия ҳисоби счётлари режаси ва уни қўллаш бўйича ЙЎРИҚНОМА [http://bhms.uz/?page\\_id=20%22](http://bhms.uz/?page_id=20%22)
- Bülend Terzioglu. Intricacies of overhead cost allocations and distortion in costing: A synthesis of the literature : November 2018. <https://www.researchgate.net/publication/329182045>
- Eric Norin. Are overhead costs strictly proportional to activity?: Evidence from hospital departments Volume 17, Issues 1–2 Pages 1-278 (January 1994) <https://www.sciencedirect.com/journal/journal-of-accounting-and-economics>

# IMPROVING ACCOUNTING FOR LONG-TERM TANGIBLE ASSETS.

Djumaeva Guzal Akhtamovna,  
Assistant trainee of the department "Accounting" of the  
Samarkand Institute of Economics and Service

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## ABSTRACT:

In the production and economic activities of each enterprise, a huge role belongs to long-term assets. The economic activity of an industrial enterprise consists of three continuous interrelated economic processes: supply (procurement and acquisition of material and technical resources), production and its marketing (sales). These processes are carried out simultaneously, for which the labor of workers, non-current and current assets are used. Consequently, the most important objects of accounting in an industrial enterprise are fixed and working capital in their movement. The significance of fixed assets in social production is determined by the place that instruments of labor occupy in the development of productive forces and production relations.

**Keywords:** enterprise, long-term tangible assets, production, accounting, working capital, buildings, structures, equipment.

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## Introduction

**Relevance of the topic:** In the conditions of a modern market economy, the role of accounting and control over the rational use of all resources, including long-term assets, is increasing. Long-term assets are the tool that enables the company to conduct business, making multiple turnovers of current assets. Long-term assets include fixed assets (buildings, structures, equipment, etc.), intangible assets (software, registered trademarks, rights to use inventions, etc.), long-term financial investments, and others.

Fixed assets and intangible assets need periodic modernization and replacement. The release of new products, the development of new markets, the expansion of the enterprise's activities require investments in long-term assets. Of course, if a completely new direction of activity is created, or even a new direction is allocated to a newly created subsidiary, investments must be made not only in long-term, but also in current assets of the new enterprise. However, for an enterprise investing in the authorized capital of a subsidiary, these investments are long-term financial investments, i.e. long term assets.

An enterprise always has several ways of development. Given the well-known thesis that we live in a world of limited resources, an enterprise must make a difficult choice between possible areas of investment. Methods of economic analysis are used to make decisions in the field of long-term asset management.

**The purpose of the study** is to take into account and analyze the effectiveness of the use of long-term assets, namely: fixed assets and intangible assets of the enterprise under study, and develop proposals for their improvement.

In accordance with the goal, the following **tasks** were set in the work:

- To study in a theoretical aspect the basics of accounting, analysis of fixed assets and intangible assets;
- Present the organizational and economic characteristics of the enterprise;
- Consider the organization of accounting for fixed assets and intangible assets at the enterprise under study;
- Analyze the effectiveness of the use of fixed assets and intangible assets of the enterprise;

- Develop proposals for improving accounting and increasing the economic efficiency of fixed assets and intangible assets.

**The object of research** is a manufacturing enterprise.

**The subject of the study** is fixed assets and intangible assets used by a commercial organization in the production process.

**The degree of development of the problem.**

At present, such researchers from the CIS countries as V.P. Astakhov, P.S. Bezrukikh, N.G. Volkov, A.S. Bakaev, K. Gogolev, V.V. Grigoriev, V.B. Ivashkevich, M.I. Israilov, V.V. Kovalev, N.P. Kondrakov, E.I. Kuznetsova, M.I. Kuter, A.D. Larionov, J.G. Leontieva, E.A. Markaryan, E.A. Mizikovskiy, O.A. Mironova, T. Morozova, S.A. Nikolaev, V.D. Novodvorsky, V.F. Paly, V.A. Pipko, V.I. Petrova, Z.Rahman, G.Savitskaya, Ya.V. Sokolov, V.Ya. Sokolov, M.M.Tulakhodzhaeva, A.N.Khorin, A.A. Shaposhnikov, A.D. Sheremet, L.Z. Shneidman, and others.

Foreign experience of the conceptual foundations for accounting for long-term tangible assets is considered in the fundamental works of well-known foreign scientists: L.A. Bernstein, J. Bethge, D. Blake, O. Amat, A. Calmes, D. Mildton, M.S. Matthews, M.H.B. Perera, B. Needles, H. Anderson, D. Caldwell, B. Penndorf, J. Richard, J. Friedman, G. Harrison, E.S. Hendriksen, M.F. Van Breda, R. Anthony, J. Rees, S. J. Gray, N. Ordway, J. K. Eckert and others.

The study of literary sources shows that in recent years accounting science has been steadily developing along the path of integration with world economic thought, international accounting systems. At the same time, there are no works containing a systematic, conceptual approach to the methodology of accounting for long-term tangible assets in the new conditions of the development of a market economy in the Republic of Uzbekistan.

**The theoretical and methodological basis of the study** was the scientific works of leading domestic and foreign authors on the problems of improving accounting, legislative and regulatory acts, methodological documents and materials of the main provisions on accounting of the Republic of Uzbekistan, EEC directives, International Financial Reporting Standards (IFRS), American "Generally Accepted principles of accounting and reporting" (GAAR), National Financial Reporting Standards. The research methodology was based on a review of the prevailing economic thoughts of the classics and modern representatives of accounting science, in observation, characterization of data, processing of results, analysis of the results obtained, establishment and practical implementation of the findings, patterns, foresight, trends. At the same time, methods were used: graphic, comparison, detailing and generalization, grouping, analysis, and others.

**The scientific novelty of the research** lies in the development of a scientifically based concept of accounting for long-term tangible assets on a new methodological basis, which is a comprehensive, systematic approach and reflects diverse accounting aspects.

**The practical significance of the study.**

The results of the study can be used:

- when developing individual documents of the regulatory system of accounting of the Republic of Uzbekistan - national accounting standards and methodological recommendations for them;
- when improving, amending and supplementing the basic provisions and rules for organizing accounting for an enterprise based on international financial reporting standards;
- in the formation of the accounting policy of organizations in terms of long-term tangible assets;
- with the right choice of investment and depreciation policy of enterprises;
- in the practice of enterprises, audit and consulting firms, independent professional institutions and organizations of accountants, auditors, appraisers, consultants;
- in the system of training, certification and advanced training of audit and accounting personnel;
- when reading training courses, conducting practical exercises, solving situational problems and training in the disciplines of basic and major components of economic specialties in higher educational institutions;
- in the preparation of educational and methodological materials for students of economic specialties and

undergraduates in the direction of "Accounting and Audit".

According to international financial reporting standards, the problem of asset accounting is considered mainly in 3 positions: their definition, recognition and evaluation.

The importance of the "definition" position is explained by the fact that this characteristic, from the point of view of preparing financial statements, makes it possible to distinguish assets from non-assets, and "recognition" - to correctly choose the criteria for their inclusion in financial statements. The materiality of the "assessment" position is characterized by the fact that accounting reports must provide both qualitative and quantitative information about all components of the financial position of an economic entity.

Therefore, it is necessary to conduct research on the economic essence of assets in order to obtain a more objective definition of their constituent elements, and to distinguish between many names of the same ones in terms of their content.

The modern interpretation of the concept of "assets", in addition to economic benefits, also highlights the ability of economic entities to control such benefits. This approach undoubtedly makes it more reliable in assessing the ability of economic entities to enjoy potential income or future economic benefits.

We consider assets to be the totality of an entity's economic resources that are capable of generating future economic benefits, owned or wholly controlled by the entity, arising from transactions and other events in the past. Therefore, each element of the assets must meet their definitions and provide the company (enterprises) with economic benefits, which is consistent with the requirements of a market economy.

In foreign accounting practice, the category "fixed assets" is often used, which is understood as fixed assets or fixed capital. This term is more common in the British accounting system than the American one, and means non-expendable assets: land, buildings, equipment. It seems to us that the category of "fixed assets" used in our accounting practice is largely borrowed in form (externally) from the "British", and in content (internally) from the "Americans".

The development of the concept of accounting for long-term tangible assets is based on the study of their economic essence as an object of accounting. It should be noted that the definition and recognition of long-term tangible assets in accounting is hampered by the problems of studying the essence of the organization's assets in the broadest sense. In domestic accounting of both past years and the present, assets are interpreted as a set of economic assets (or property) owned by the organization.

### **Conclusion.**

We consider assets to be the totality of an entity's economic resources that are capable of generating future economic benefits, owned or wholly controlled by the entity, resulting from transactions and other events in the past. Therefore, each element of the assets must meet their definitions and provide the company (enterprises) with economic benefits, which is consistent with the requirements of a market economy.

### **List of used literature.**

- Law of the Republic of Uzbekistan dated April 13, 2016 LRU No.-404
- National Accounting Standard of the Republic of Uzbekistan (NAS No. 5) Law on Approval of "Fixed Assets".
- International Financial Reporting Standard (IFRS) 16.
- On the essence and significance of innovative renewal of fixed capital in market conditions // Journal of the taxpayer of the Republic of Uzbekistan. - Tashkent, 2010. - No. 1 (03). - P. 30-33.
- Analysis of the economic activity of the enterprise [Electronic resource]. Access mode: [http://ahdp.ucoz.ru/publ/finansovyj\\_analiz/finansovye\\_koefficienty/koefficienty\\_li\\_kvivnosti/7-1-0-49](http://ahdp.ucoz.ru/publ/finansovyj_analiz/finansovye_koefficienty/koefficienty_li_kvivnosti/7-1-0-49) (Accessed 11/29/2017)
- Methodology for the analysis of current assets of a commercial organization [Electronic resource]. Access mode: <http://1fin.ru/?id=460> (Accessed 11/29/2017)

- Savitskaya G.V. Theoretical foundations of the analysis of economic activity: study guide / G.V. Savitskaya. - 3rd edition, revision and addition - M.: INFRA-M, 2018. - 217 p.
- [https://studbooks.net/45796/buhgalterskiy\\_uchet\\_i\\_audit/uchet\\_dolgosrochnyh\\_aktivov#11](https://studbooks.net/45796/buhgalterskiy_uchet_i_audit/uchet_dolgosrochnyh_aktivov#11)
- [https://www.yaneuch.ru/cat\\_81/uchet-dolgosrochnyh-materialnyh-aktivov-teoriya/54725.1326911.page3.html](https://www.yaneuch.ru/cat_81/uchet-dolgosrochnyh-materialnyh-aktivov-teoriya/54725.1326911.page3.html)

# GROWTH OF HUMAN CAPITAL, AS A PART OF INTELLECTUAL CAPITAL IN THE AGE OF ECONOMY DIGITALIZATION

Karimova Latofat Sadullaevna,  
PhD candidate at Tashkent State University of Economics

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## ABSTRACT:

Theoretical approaches to the definition of «human capital» and «human potential» are considered. The analysis of the directions of its development in the framework of the formation of the digital economy is carried out. The problematic aspects of the growth of human capital in the conditions of modern trends in the development of electronic educational environment are highlighted. It is shown that an important aspect of the functioning of the digital economy is the growth of human capital and ensuring economic security. Conclusions are made about the level of growth in the digital economy and assumptions are made about what factors can ensure the growth of human capital and increase the level of economic security of the state.

**Keywords:** human capital, human potential, economic security, digital economy.

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## Introduction

In modern conditions, human capital has become a decisive factor in the growth of the economy, its transition to the path of innovative development. High-quality human capital helps to increase labor productivity, reduce unit costs and increase production efficiency.

All this requires the creation of favorable conditions for reproduction of human capital, improvement of its quality and continuous increase of income while increasing labor productivity. An important condition for ensuring the constant reproduction of human capital is the economic relations arising from the acceleration of this process and obtaining a high beneficial effect from it in the form of the accumulated quality of this capital. In this regard, there is a great need to develop the theory of human capital. It is one of the most sought-after categories of economic science, developed to justify the theoretical rules that help to successfully solve practical issues of human capital renewal and improvement of its quality.

## Principal part:

The study of the phenomenon of "human capital" in modern science is associated with the possibility of making a forecast of the future development of both an individual and the development of an organization or the economy as a whole. The scientific and technological revolution and the transition from an extensive to an intensive path of economic development is impossible without investment in the development of human capital. In the context of increased competition, there is an increase in the value of human intellectual work, unique abilities and professional competencies.

Thus, special attention should be paid to the growth of human capital. The concept of "human capital" is widely used today in scientific works. This concept entered the scientific circulation in the middle of the 20th century. The founders of human capital include T. Schultz, who in his article "Education as a source of capital formation" (1960) introduced this concept, as well as G. Becker, who developed the concept of human capital, substantiating the effectiveness of investments in human capital, and formulated the economic approach to human behavior in Investing in Human Capital (1961). Interest in the problem of human capital was associated with the transition of

the most developed countries from an industrial society to a post-industrial society based on the "knowledge economy".

The peculiarity of the "knowledge economy" is that in this case the role of highly skilled labor increases. A person with his knowledge and abilities is one of the factors of successful economic development of organizations in a post-industrial society. In economic theory, the concept of "human capital" is interpreted as a combination of knowledge and skills that are used to meet the various needs of an individual and society as a whole. Therefore, the further development, prosperity or decline of this country depends on the knowledge, skills and abilities of the population of the country, on basic needs of a person and society of a particular country as a whole [6, p. 68].

Human capital is different from physical capital. Thus, human capital is a long-term benefit, but with a limited service life, since knowledge can quickly become obsolete, professional skills are lost because development of digital technologies, not all employees have time to improve their professional skills. In addition, human capital becomes obsolete faster than physical capital. Its value can rise and fall depending on changes in the supply of complementary factors of production and in the demand for their joint products [7, p. 110-123]. Analysis of the structure of total capital, including physical and human capital, conducted by A.S. Matveev, showed that over the course of three centuries the ratio of physical and human capital has changed dramatically. The problem of the relationship between the growth of human capital and the level of economic security has become particularly relevant in recent years.

This is confirmed by the setting of tasks and the definition of the main areas of activity of state authorities at various levels (including law enforcement agencies) to ensure economic security. Educational organizations are one of the forges of human capital. According to the theory of human capital, education is not a product of final consumption, but a means of further production of added value, and, therefore, an important factor in national and global macroeconomic growth. [4, p. 107]. The problem of converting human capital into material indicators that are significant at the macro level and described in economic terms seems to be insufficiently developed, which makes the present study quite relevant. In the work of I.A. Korshunov "Education and education of adults in the context of the economic development of regions", a study was made of the relationship between the GRP of 63 regions and the coverage of the adult population with formal and additional education. According to the data received, the value of the linear correlation coefficient was 0.8. This indicates that there is a fairly close direct relationship between education and GRP. [4, p. 110].

In our study, an analysis was made of the relationship between GDP, as one of the indicators of economic security, and the number of university graduates. According to the results studies, the linear correlation coefficient had a negative value and amounted to 0.77. On the one hand, this may indicate that as the number of higher education graduates increases, GDP is declining. But, on the other hand, the previous study dealt with the training of the adult population with professional experience. Thus, it can be assumed that graduates having experience in practical work, do not contribute to the growth of labor productivity. The level of development of human capital in the country reflects the integration factor. The integration factor is the process of merging regional and global labor and intellectual resources, ensuring the convergence of people

The level of development of human capital in the country reflects the integration factor. The integration factor is the process of merging regional and global labor and intellectual resources, which ensures the rapprochement of people while maintaining their national identity. The main indicator that allows you to give a quantitative assessment of the integration factor and allowing to observe the integration of knowledge and professionalism of employees is the Human Development Index (HDI). The spatial aspect makes it possible to take into account the geographical factor of mobility, which takes into account the transfer of knowledge, skills, and professional experience of an employee to regional or international level. As a result of the processes of globalization and digitalization of society, there is a tendency to merge the human capital of different countries.

The structure of the future workforce of a region or state allows us to design a socio-demographic factor that reflects the level of human development and its role in modern production. Socio-demographic factor involves the study and analysis of changes in the population, occupation and level of education. reflects. When analyzing

the socio-demographic component of human capital, special attention should be paid to the gender composition, since there is an increase in the number of women who replenish the economically active population and acquiring traditional male professions. In addition, it is necessary to analyze the dynamics of the aging of the workforce, since human capital decreases with age due to such reasons as health, lack of modern professional competencies. This is especially true in connection with the digitalization of our society. For the growth of human capital, investment in it is necessary.

Thus, the factors aimed at the formation of human capital include the socio-material factor. In addition, economic growth and economic security of the state is impossible without serious investments in human capital. Investing in human capital is a direct impact on education that improves qualifications and abilities and thus the productivity of people. Expenditures that increase labor productivity can be viewed as investments, since the expenditures are made with the aim that these expenses will be compensated many times over by an increased income stream in the future. The impact of human capital on economic security is determined by the economic factor. It can be influenced by: the level of economic development of the state, the features of the current economic policy, the state of the financial system of the state.

The concept of "human potential" is closely related to the concept of "human capital". Human capital is a concrete manifestation of human potential. Leading scientists in defining human potential are based on its three components: education level, health care level and real per capita income level [1]. At the same time, investing in education is only a possible benefit for the future. The term "potential" refers to the realm of the possible. Unlike human capital, the concept of human potential refers to the combination of natural and acquired human abilities, information, skills and experience gained by a particular country. In the course of scientific research, it turns out that in order to understand the phenomenon of human potential, not only a quantitatively calculated value is important, but also a mandatory assessment of the quality of life, the conditions for the realization of human potential.

Only in such conditions can human potential be realized in the form of human capital of a proper quality, which brings a certain personal income and social progress. As a rule, competent managers skillfully use human potential and develop it into human capital. But it's in a company where the civilian population receives his income (salary). In a household (in a family), human capital is also inextricably linked with a person. After all, you cannot sell or share skills and abilities, but here human capital remains capital on the one hand, because a person performs certain actions for the benefit of himself and his family. On the other hand, human capital (professional skills and abilities) turns into human potential. And we return to the conclusion that human potential can be regarded as labor potential, because a person, as it were, rents.

**Conclusion.** Conceptual foundations of the theory of human capital The development of science, the development and adoption of high technologies, the formation of the information society, as well as the informatization of production processes, the main purpose of which is to increase the efficiency of social production, brought human capital to the first place. as a complex intensive factor of economic development. Undoubtedly, the core of human capital is its carrier - a knowledgeable person with deep, comprehensive knowledge, skills and qualifications. In modern conditions, man and his abilities occupy the most important place in economic sciences. However, until the early 1960s, human creativity had not yet played a decisive role in economic development in the

Twentieth Century. The rapid renewal of the material and technical base of production associated with the industrial technical revolution created the illusion of the superiority of physical capital in ensuring economic growth, hiding the problems of developing human production abilities. As a result, human abilities have long been considered as one of the quantitative factors of production. The task was only to successfully combine labor, fixed and working capital. In the second half of the 20th century, the attitude towards human capital changed dramatically. Interest in the role of human capital in the economy has increased due to the following reasons: the transition to a new path of socio-economic development, in which human capital has acquired a qualitatively new meaning. Radical socio-economic changes created new conditions for understanding the labor process and labor relations. And the main focus of the research was on the study of human capital issues. The activation of labor as an



economic resource requires a category that includes the vision of human abilities that are used in labor and reflect its final result. It is precisely this role that is intended for human capital as an economic category. In the modern conditions of globalization of the world economy, countries with high-quality human capital have enormous advantages.

That is, with an educated population and world-class specialists who are competitive in various types of economic activity. It is human capital that determines economic growth and overall economic efficiency. Therefore, research in the field of human capital has become more and more relevant in recent years. The concept of human capital originated in the 17th-19th centuries. In the Western economy. At each stage of the development of this concept, an approach was formed that reflected the system of views typical of the scientific economic schools that existed at that time.

### Reference

- Balakireva O. V., Frolkova E. A. Improvement of the control system personnel in the organization [Electronic resource]. Access mode: <http://management61.ru/index.php?do=static&page=balakirevastat2>
- Galkin A. Internal personnel marketing: a step-by-step algorithm for implementation and implementation [Electronic resource]. Access mode: <http://www.gd.ru/articles/3771-vnutrenniymarketing-personala>
- Kobzistaya Yu. G. Human capital: concept and features / Yu. G. Kobzistaya // Fundamental research. 2018. No. 2. S. 118-122.
- Korshunov I. A. Teaching and education of adults in the context of economic development of regions / I. A. Korshunov, O. S. Gaponova, N. S. Gaponova // Economics of the region. 2019. Vol. 15, no. 1. S. 107-120.
- Matveev A. S. Transformation of the economy of the northern regions of Russia to modern stage: monograph / A. S. Matveev, O. A. Matveev. Moscow: Modern economics i pravo, 2007. 344 p.
- Smirnov B. M. Personnel innovations in the personnel management system / B. M. Smirnova / B. M. Smirnov. M.: Varyag, 2016. S. 68.
- Shobanov A. V. Human capital management: theory and practice / A. V. Shobanov, O. N. Pokusaev // Stage: economic theory, analysis, practice. 2010. No. 2. S. 110-123. V. Shkurko, D. Kazakov.
- Bakhronovna R. D. Teamwork as an Effective Way to Achieve Goals // Journal INX. – C. 710-713.
- Rasulova D. B. LIFELONG LEARNING: NEW PARADIGMS AND SUSTAINABLE PERSPECTIVES // INTEGRATION OF SCIENCE, EDUCATION AND PRACTICE. SCIENTIFIC-METHODICAL JOURNAL. – 2022. – C. 27-30.
- Rasulova D. B. TEACHING IN THE DIGITAL AGE // Spanish Journal of Innovation and Integrity. – 2022. – C. 9-112.
- Rasulova D. Emotional intelligence and its influence on executive performance // South Asian Journal of Marketing & Management Research. – 2020. – T. 10. – №. 4. – C. 28-32.
- Rasulova D. B. INTERPRETATION OF TURKISH MEDICAL ISSUES ON FRENCH SOURCES // 湖南大学学报 (自然科学版). – 2021. – T. 48. – №. 12.

# THEORETICAL BASICS OF ALTERNATIVE FINANCING OF INVESTMENT ACTIVITIES

**Bobokulov Akmal Muborakbekovich**  
Chief Accountant of Kibray District State Center for  
Sanitary Epidemiological Surveillance

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## ABSTRACT:

This article envisages the development of discussions and conclusions based on the specifics of improving investment activities on the formation of the theoretical bases of investment financing.

**Keywords:** investment, investor, investment activities, venyordi finance, impinemed lending, security, franchise, factoring.

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## Introduction

There are many ways to carry out business, and it is necessary to explore unlimited options with this limit, on the contrary, there are different ways to control and store enterprises as an independent unity. In addition, there is a concept of alternative funding sources of alternative funding, taking into account the economic situation in the world. The study and implementation of alternative financing sources such as leasing, venic financing, synchaning and credentials, is one of the most pressing issues of the economy of the republic. Businesses are increasingly easy and are becoming more and more use of these sources to expose the most complex process of attracting investment.

Involvement of investments for the construction and reconstruction of new enterprises equipped with modern techniques and high technologies are very important. This allows for solving important socio-economic problems such as employment and income of the population. It is also developing the formation of alternative funding sources of alternative investment projects and creating the necessary conditions today.

### *Analysis of literature on the topic*

In our country, special attention is paid to improving the efficiency of investments in enterprises and their effective work. But by the President of the Republic of Uzbekistan, by the President of the Republic of Uzbekistan Sh. Mirziyoyev, the «high rates of economic growth and growing demand for investment resources is not harmonious. The involvement of foreign investment to the territory of the country remains in a very unsatisfactory situation».

Many economists in the field of improving alternative methods of investment activities have been scientific research.

American economists J.U.Fee, N.Len, S. Prauz, P.D. Johnson explained to Venchur capital-financing of small business-financed enterprises financing the share capital.

Dj.Frmstrong specializes in the Canadian Bank Monetary and Financial Analyzes Design Supplier: «This provides such instruments of lending, ie the participants of the financial market the opportunity to properly forecast credit risks.»

F.Sh. Karimov «seleng is a type of leasing, the application of which is determined by the rules developed by the United European leasing society. Seleng is a two-way process, a special way of responsibility.»

E.A. And by Panova, the categories of philanthropy and crowdfunding from crowdfunding were analyzed by representatives of small businesses. With crowdfunding's strengths and weaknesses identified and taking into account international experience, the prospects for developing the crowdfunding market have been explored.

U. A. Haydarov, Islamic banking has provided new opportunities for traditional banks in areas where demand is high. However, banks that want to open Islamic windows are owned by an independent Shariah committee that includes scholars/experts in Islamic jurisprudence, Islamic finance and law, and banking experts.

In the scientific works of these economists scientists some aspects of improvement of scientific-theoretical and methodological bases of development of financing of investment activities in the Republic through non-traditional methods are covered. All this requires in-depth research on the research of the ways of development of the national economy through the non-traditional methods of investment activities on the basis of factors affecting the sources of financing and improvement of the scientific-theoretical and methodological foundations of their financial provision, the need to accelerate the processes of formation of sources of financing.

### ***Research methodology***

In this article, scientific works of economists of Uzbekistan and foreign countries devoted to the theoretical aspects of sources of alternative financing of investments and investment activities were studied. Comparative analysis of literature and hypothesis justification methods were used as research methodology.

### ***Analysis and results***

Today, due to various object and sub-factors, banks have remained in the top position in the accumulation and redistribution of financial resources. One of the leading market institutions capable of competing with banks in the financial sector is the capital market. Despite the transitional reforms of about thirty years in our country, the capital market has not yet developed. As a result, companies and investors have no choice but to take advantage of alternative and competitive sources of business financing and to work with a monopolized banking system. Effectively operating capital markets allow and facilitate the attraction of financial resources by combining those who have the means to invest with those who need capital for innovation and growth.

The most important thing is that capital markets develop good corporate governance among the issuers on their list by encouraging transparency, accountability and respect for shareholders' rights. In this regard, financial services such as leasing, Franchising and factoring, venture financing, syndicated credit, crowdfunding and crowdinvesting will soon attract the special attention of local entrepreneurs. All over the world, these services are a common denominator of attracting capital to fixed and working capital.

The franchise for our economy is currently a relatively new method of financing, which has been used in developed countries for these centuries as a means of satisfying the needs of society for a variety of goods and services.

There are three main types of franchising: brand, production and business franchising or business format franchising.

As a business concept, franchising always brings a lot of benefits to both the franchise and the franchisor. But there are also disadvantages. When you go to the franchise, you need to take into account both advantages and disadvantages. Here it is necessary to pay attention to both sides.

Factoring is a risky but highly profitable banking operation, in which the settlement process is combined with the lending process in the form of an adequate market economy. Thanks to this, the bank creates conditions that constantly monitor the financial situation of suppliers and the solvency of customers.

Factoring can be open or closed. Given the high level of Risk-management operations, the Department decides to conclude a service contract by examining the financial situation of the potential client and its prospects. If one of the parties is a legal person of another state, then the factoring is called external.

In our republic, venture financing is carried out in accordance with the decision of the Cabinet of Ministers № 414 "On approval of the regulation on the activities of investment and management companies" dated May 17,

2019. This regulation defines the objectives, functions, functions, criteria, type of activity of investment and management companies, including the procedure for monitoring investment and management companies in the implementation of venture financing, and also regulates their relationship.

In accordance with the Resolution No. 684 of the Cabinet of Ministers of the Republic of Uzbekistan “On measures to organize the activities of the UzVC National Venture Fund” on November 3, 2020 “UzVC” National Venture Fund was established in order to create innovative ideas and infrastructure to support the startup-ecosystem.

The main tasks of “UzVC” National Venture Fund:

- Develop the Venchur investment market;
- Improvement of the regulatory and legal framework of the venture ecosystem;
- Acting as a liaison agent between the private sector and the state;
- Business incubation and acceleration system development;
- Increase financial literacy on venture capital;

One of the alternative methods of financing investment activities is considered one of the Islamic financial instruments “sukuk”. Access to the Sukuk market can help improve the capital structure and liquidity profile of the joint venture companies of the countries of Asia and the Gulf.

Sukuk is Islamic bonds or certificates of investment, which provide the owner with the beneficiary's right of ownership, in accordance with the sharia, with material assets.

This means that sukuk owners receive part of the revenue from the proportional share in sukuk's assets.

Sukuk, which is structured as another type of corporate bonds, which are considered an interest-bearing instrument, is not allowed in accordance with Islamic financing laws.

In the case of ordinary bonds, there is a contractual obligation to pay the holders of bonds interest and principal on certain dates specified in the issuer. In the Sukuk structure, on the contrary, every sukuk owner has the right of Indivisible beneficiary ownership of tanyach assets.

Sukuk appears as a new source of liquidity and an alternative source of funding. The peculiarity of selling Islamic sukuk is its participation in the financing and / or issuance of Real Assets. Access to the Sukuk market can help improve the profile of the capital structure and liquidity of the companies of the cooperation Union of the countries of Asia and the Gulf, especially those with sectors that can enter capital, such as infrastructure. He can give the long-term financing needed to similar companies from another source. This resource is becoming more globalized and more liquid than the level of crossing the border.

**Table 1**

**COMPARISON OF SUKUK AND TRADITIONAL BONDS**

	<b>Traditional bonds</b>	<b>Sukuk</b>
<b>Ownership of bonds</b>	Bonds refer to the investor not the share of ownership of the asset or project, but the debt obligation before the holders of the issuer's bonds.	Sukuk provides the investor with partial ownership of the asset or project that forms the basis of sukuk.
<b>Investment criteria</b>	Bonds can be used to finance any asset, project or business.	The asset that forms the basis of Sukuk should be in accordance with Sharia.
<b>Extraction unit</b>	Each bond constitutes a share of the debt.	Each sukuk constitutes a share of the base asset.

<b>Release price</b>	The nominal value of the bond depends on the issuer's ability to repay the loan (including its rating).	The nominal value of sukuk is based on the market value of the underlying asset.
<b>Benefits and risks from investments</b>	Bond holders receive interest payments regularly during the period of validity of the bonds with a planned (in most cases with the established rate) interest, and their principal is guaranteed to be returned until the date of payment of the bonds	Sukuk holders receive a percentage of the profit from the base asset (and also receive a percentage of any losses seen).
<b>Effect of value</b>	Bond holders usually do not suffer from the costs associated with the asset, project or business they support. The effectiveness of the underlying asset does not affect the reward of the investor.	Sukuk custodians are affected by the costs associated with the underlying asset. Relatively high costs can lead to a reduction in investors income and vice versa.

The support of enterprises and organizations carrying out foreign economic activities is especially important at a time when many economic entities are suffering from the development of the coronavirus epidemic around the world. In addition, these funds will be retained in jobs on account of. This is effective both for the population and for the economy.

Kraudfunding is derived from the English word «crowdfunding», meaning «crowd»-public, «funding»-financing, that is, public financing. The term was first cited in an article published in Wired magazine in 2006 by American journalist Djef haue (Howe, 2006). Thus, it is understood that kraudfunding is the mobilization of its financial resources to other people or projects in cooperation with different people for one purpose. Of course, kraudfunding is not a new phenomenon, in Europe at the beginning of the XVIII century, when writers collected money for the publication of subscription books, money was also collected by the people for the construction of the statue of Liberty in New York<sup>107</sup>.

There are two ways in which business projects are mainly financed externally, these are behind the bank and investment funds. The map has the same drawback as the two, they are rarely oriented towards innovation ideas. While applying innovative ideas, the risk level is high. It will also face a number of challenges to achieve financing through these organizations. Any creditor or investor, along with the consideration of the projects of familiar business owners of a narrow circle, will invest in areas that bring the main profit they believe in.

Therefore, for the application of business projects in US must be financed through kraudfunding. This practice, in our opinion, protects the interests of all parties equally. The role of the digital economy in financing through Kraudfunding is high. Because, the most important means of sharing information about kraudfunding projects are social networks, which help to convert social capital into financial capital and reduce the role of intermediaries.

Traditional intermediaries tend to be cautious about kraudfunding because they see it as a potential threat. However, kraudfunding is also a useful tool for them. After all, with this, they can observe innovative ideas and, using "crowd wisdom", evaluate the potential success of the project with the aim of creating a clone or investing in it in a traditional way. Kraudfunding is an instructor who can come to your aid while in the process.

<sup>107</sup> Crowdfunding [Electronic resource]. URL: <http://crowdsourcing.ru/> (accessed: 06.05.2015).

The presence of state property in the economy is one of the main factors provoking the middle gap in the financing of the bank and the capital market. This shows that the state supports financing through banking and banking because the underlying assets in the banking sector belong to the state. In many developed countries, companies with state participation have a wide range of opportunities to obtain financial support due to the guarantee of the government or some other type of support.

### **Summary and suggestions**

In conclusion, it should be noted that the validity of the transfer channels depends on a number of factors, such as the competitive environment in the banking and finance sector, the availability of alternative sources of financing, the level and effectiveness of the development of financial markets, the quality and coverage of financial intermediary services, the exchange rate regime, the movement of capital, the It is also important to develop investment strategies taking into account alternative financing opportunities in the development of sources of financing of investment activities in the Republic. Because the placement of production capacities taking into account the opportunities of the available resources, infrastructure, labor force in the Republic increases the efficiency of the use of investments and ultimately ensures the competitiveness of the products produced. Therefore, structural restructuring of alternative financing opportunities in the development of the national economy is of particular importance in studying the regional aspects, which include the structure and nature of economic reforms.

In the formation of alternative sources of financing of investment activities, the use of the following recommendations is of great importance in ensuring the quality of financing and their successful implementation:

- it is necessary to seek ways to increase the convenience of the capital market for investors of all categories by actively integrating with the international financial markets, using a wide range of modern information and communication technologies and using advanced approaches successfully tested abroad;

- financial structures are important in the emergence and development of any form of financing (bank and capital market), but one economic structure should not limit the development of another. Therefore, we can say that no matter what kind of financing system has a high priority in the financial system of the country, the base of normative legal acts regulating the sphere is necessary to create conditions for fair and equitable competition between the bank and the capital market.

In Uzbekistan, the system of financing through a bank is relatively developed, where it is necessary to create a base of normative legal acts that ensure honest competition between various financial institutions. As for the financial instruments, we can see that there are significant differences between debt and capital evasion financing systems and it is worthwhile to take this into account when coordinating the financing in the banking hamdakapital market;

- it is necessary to provide and inform the population of the Republic about the business with venture capital, to develop the system of training specialists in this direction and professional development of specialists in the educational system;

- In our country, we need to develop regulatory documents in the field of kraudfunding, as well as organize the receipt of these funds under the control of kraudfunding companies, the government, which will serve as an important factor for the trust of investors.

The fact that the above tasks will be solved as quickly and efficiently as possible, will serve not only to assess the value of alternative sources of financing of investment activities, but also to further improve the socio-economic development of the state and the comfortable way of life of the population.

## Reference

- Mirziyoyev G. M. Criticism of analysis, acute order-discipline and personal zhavobgarlik-any conductor of a work-factor approach. - Tashkent: "Uzbekistan", 2017. 104 b.
- Strategic development of small business and forms of support for individual entrepreneurship [Electronic resource]: monograph. Nizhny Novogorod: NOO "Professional Science", 2018. - Access mode: <http://scipro.Ru/Conf/monographbusiness>.
- Armstrong J. The syndicated Loan Market: Dewelopments is in the North American Context.// Bank of Kanada Working Paper 2003-15, June 2003.
- F. Sh. Karimov. "Fancy business". Lesson. T.: Timi, 2010. 210 V.
- Panova E. A. Crowdfunding as an alternative tool for financing small and medium-sized businesses // Finance and credit. - 2018. - Vol. 24, No. 4 – - p. 238-250.
- Norov, A. R. ., Haydarov, O. A. ., Saipnazarov, S. S. ., & Saidaxmedova, A. M. . (2022). Mechanisms to Ensure the Stability of the National Currency in the Republic of Uzbekistan. Spanish Journal of Innovation and Integrity, 5, 393-400. Retrieved from <http://sjii.indexedresearch.org/index.php/sjii/article/view/157>
- Toymuxamedov, I. R. ., Norov, A. R. ., Abdurakhmanova M. M. ., Kamilova, I. X. ., & Bazarova, N. R. . (2022). The Role of Bank Investment Loans in Increasing the Export Potential of Uzbekistan Enterprises. Spanish Journal of Innovation and Integrity, 5, 356-361. Retrieved from <http://sjii.indexedresearch.org/index.php/sjii/article/view/148>  
Ў.А. Ҳайдаров. Тижорат банкларида ислом молия тизимидан фойдаланиш йўллари  
такомиллаштириш. [https://doi.org/10.55439/ECED/vol23\\_iss2/a6](https://doi.org/10.55439/ECED/vol23_iss2/a6)
- 9. Akmal Ruzimatovich Norov, Nodir Muratovich Shamsiyev, Anvar Ruzimatovich Norov, Fayozjon Farxod ugli Rakhmatullaev, & Muzrof Yusup ugli Xolbozorov. (2022). Issues of Improving the Operations of Commercial Banks in the Securities Market . Indonesian Journal of Innovation Studies, 18. <https://doi.org/10.21070/ijins.v18i.645>
- 10. Norov, A. R. ., Haydarov, O. A. ., Saipnazarov, S. S. ., & Saidaxmedova, A. M. . (2022). Mechanisms to Ensure the Stability of the National Currency in the Republic of Uzbekistan. Spanish Journal of Innovation and Integrity, 5, 393-400. Retrieved from <http://sjii.indexedresearch.org/index.php/sjii/article/view/157>

# PROSPECTS FOR THE DEVELOPMENT OF MULTI-BRANCH FOOD INDUSTRY ENTERPRISES (ON THE EXAMPLE OF ENTERPRISES IN ANDIJAN REGION)

Abdumuminov Akhrorjon Akhatjonovich  
Andijan mashine building institute, PhD student  
e-mail: [ahror\\_st@mail.ru](mailto:ahror_st@mail.ru)

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## ABSTRACT:

This article analyzes the diversification status of grain processing enterprises in Andijan region. The Herfindahl-Hirschman index (HHI) was used to evaluate the level of diversification. Diversification factors, directions and goals are also defined. Opinions are given on the possibilities and benefits of diversifying the activities of enterprises.

**Key words:** Diversification, horizontal diversification, vertical diversification, efficiency, financial independence, Herfindahl-Hirschman index.

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## Introduction

Today, the global food market is developing rapidly with high growth rates. In such conditions, diversification of the activities of food industry enterprises expands market opportunities for enterprises to lead the market and obtain additional income.

Diversification of the activities of industrial enterprises is usually carried out in vertical and horizontal direction. Vertical diversification involves expanding a firm's operations up or down an industry's value chain to secure access to critical resources and to challenge the bargaining power of suppliers and consumers. This form of diversification is aimed at improving the company's competitive position in the field in which it operates. Horizontal diversification, on the other hand, means that the enterprise is already present in similar stages of the value chain, but in a different field. In horizontal diversification, another difference can be distinguished according to the degree of interdependence of the main activity and the newly added activity.

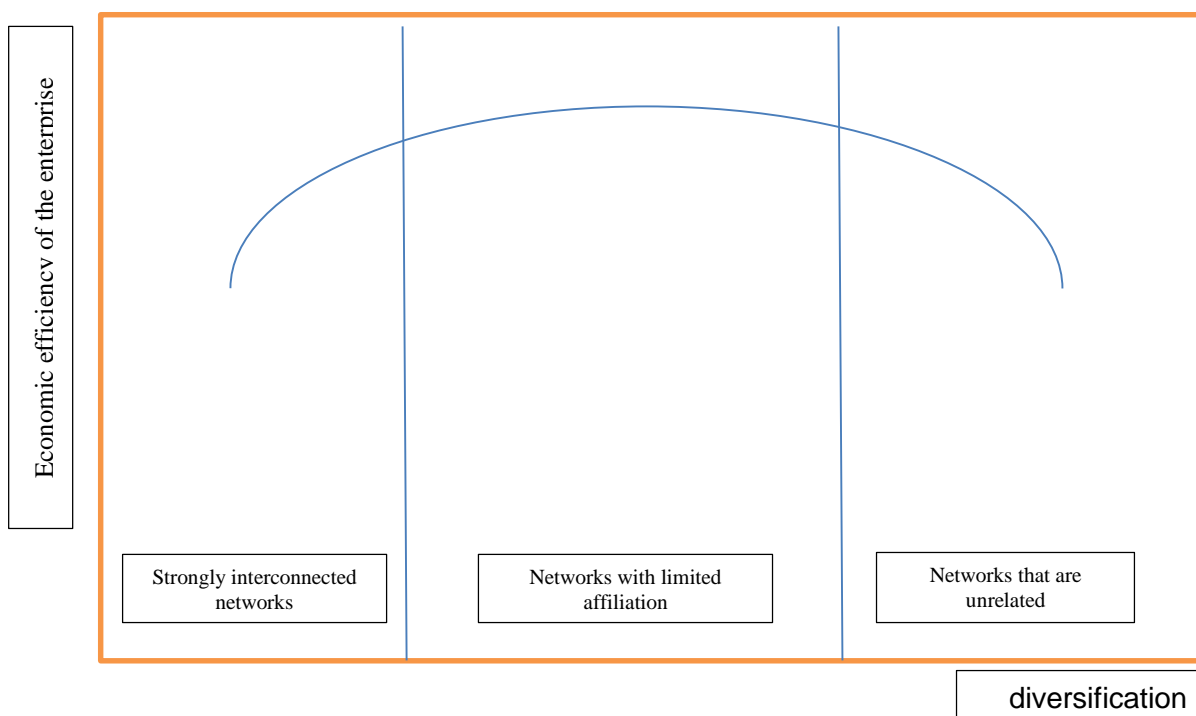
Although extensive research has been conducted on the relationship between diversification and firm performance, the results are not uniform.

However, some recognition of the curvilinear relationship between diversification and firm performance emerged as the dominant paradigm over the years. According to this concept, the efficiency of the company increases in the conditions of appropriate diversification and decreases with a decrease in the degree of interdependence between the main and target sectors<sup>108</sup> (1-fig).

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<sup>108</sup> See: Сангхун Ким “Введение в вопросы диверсификации: пример Кореи”. Доклад на семинаре по диверсификации экономики в регионе ЦАРЭС. 16–17 мая 2019 г., Улан-Батор, Монголия.





**Figure 1. The relationship between diversification and economic efficiency.**

Today, private and state-owned grain processing enterprises in our republic have diversified their activities to different levels. An example of this is the activity of “Andijan-un” LLC, a grain processing enterprise in Andijan region. Although the main activity of this enterprise is the production of flour, it has been able to successfully expand its activities by establishing the production and sale of marinades, fruit preserves, jams and spices under the brand “Pikolla”.

In the same way, the enterprises "Andijan Cereal Products" JSC, "Kurgontepa Cereal Products" JSC and "Asaka Cereal Products" JSC were able to effectively organize the production of seed wheat, production of animal feed and production of mold bread along with flour production. To assess the level of diversification of these enterprises, it is necessary to determine the composition and share of goods in their total income.

**1-Table.**

**Commodity composition of the total income of "Andijan grain products" JSC<sup>109</sup>**

№	Product name	Share of total revenue (in percent)		
		2019	2021	Change in 2021 compared to 2019
1	Processed wheat seed	34,37	27,27	-7,1
2	Soft wheat and spelled flour	45,83	51,85	6,02
3	Bran, waste and other waste from the processing of grain crops	7,59	6,02	-1,57

<sup>109</sup> It was compiled based on the data of Andijan region statistics department.

4	Ready-made fodder for cattle	12,21	14,17	1,96
5	Bread with a mold	0	0,69	0,69
	TOTAL	100	100	

Most of the income of "Andijan Grain Products" JSC is contributed by the production of flour and preparation of wheat seeds, and they make up almost 80% of the income. The main activity of the enterprise is the production of flour, and the preparation of fodder with the addition of additional nutrients to the waste and bran generated during the production of flour is established as an additional activity. Also, the enterprise has established the production of mold bread as a subsidiary. The income from the preparation of dry fodder and the production of moldy bread is 12-15% of the total income of the enterprise.

**2-Table**

**Commodity composition of the total income of  
"Kurgontepa grain products" JSC<sup>110</sup>**

№	Product name	Share of total revenue (in percent)		
		2019	2021	Change in 2021 compared to 2019
1	Processed wheat seed	28,32	15,38	-12,94
2	Soft wheat and spelled flour	51,98	59,68	7,7
3	Bran, waste and other waste from the processing of grain crops	5,99	6,84	0,85
4	Ready-made fodder for cattle	12,93	17,55	4,62
5	Semi or fully polished or milled rice	0,78	0,37	-0,41
6	Bread with a mold	0	0,18	0,18
	TOTAL	100	100	

It should be noted that in the last three years, the share of production of flour and mixed fodder in the total income of "Kurgontepa grain products" JSC has been increasing. The enterprise also receives wheat for seed from district farms attached to it, and prepares and stores seeds for the next year's harvest. The income of the enterprise from this activity is 15.38% of the total income.

"Kurgontepa Cereal Products" JSC is also the founder of "Korgontepa Warm Non" LLC, a mold bread manufacturer, but the income from this activity is a very small part of the total income. Also, the enterprise earns from the sale of bran, waste and other waste from the processing of grain crops.

Thus, "Kurgontepa grain products" JSC can be considered a multi-disciplinary enterprise specializing in the production of flour and seed wheat products, as well as soft feed and mold bread.

"Asaka grain products" JSC has successfully expanded its activities.

<sup>110</sup> It was compiled based on the data of Andijan region statistics department.

**3-Table.****Commodity composition of the total income of "Asaka grain products" JSC<sup>111</sup>**

№	Product name	Share of total revenue (in percent)		
		2019	2021	Change in 2021 compared to 2019
1	Treated wheat germ	27,47	13,44	-14,03
2	Soft wheat and spelled flour	51,14	59,85	8,71
3	Bran, waste and other waste from the processing of grain crops	6,12	6,87	0,75
4	Ready-made fodder for cattle	13,93	18,29	4,36
5	Semi or fully polished or milled rice	1,34	0,61	-0,73
6	Bread with a mold	0	0,93	0,93
	TOTAL	100	100	

In the last three years, there have been changes in the income structure of "Asaka grain products" JSC in the above-mentioned enterprises. That is, the share of income from the production of seed wheat has decreased, and the share of income from the production of flour and fodder has increased. These two activities provide 78% of the total income and are the main activities of the enterprise. The enterprise's income from the production and storage of seed wheat makes 13.44% of the total income. Also, although the enterprise includes the production of mold bread, its share in the total income is only 0.93 percent. Thus, JSC "Asaka grain products" can be considered a multi-branch enterprise, whose activities are strongly interconnected.

One of the indicators that generally evaluates the level of diversification of enterprises' activities is the Herfindahl-Hirschman index (HHI), which is widely used in practice. This indicator is calculated according to the following formula:

$$HHI = \sum_{i=1}^n S_i^2 \quad (3.1)$$

Here, HHI is the Herfindahl-Hirschman index, and  $S_i$  is the share of product  $i$  in total revenue.

In theory, the Herfindahl-Hirschman index takes values between 0 and 1. The smaller the value of the index, the more diversified the company is. We calculate the Herfindahl-Hirschman index to assess the level of diversification of the activities of the enterprises under study (Table 4).

According to the results of 2021, the level of diversification of the activities of "Andijan Cereal Products" JSC was higher compared to "Asaka Cereal Products" JSC and "Kurgontepa Cereal Products" JSC. The level of diversification of the activities of "Asaka grain products" JSC and "Kurgontepa grain products" JSC is equal to each other, and the Herfindahl-Hirschman index of both enterprises is equal to 0.415.

<sup>111</sup> It was compiled based on the data of Andijan region statistics department.

The level of diversification in companies<sup>112</sup>

Company name	Herfindahl-Hirschman Index (2021)
"Andijan grain products" JSC	0,367
"Kurgontepa grain products" JSC	0,415
"Asaka Cereal Products" JSC	0,415

In our opinion, it is necessary to develop vertical diversification in food industry enterprises, which includes the cultivation, processing and sale of finished products. This is desirable both for the formation of the domestic price and for influencing the prices of the general food market. The use of such a strategy makes it possible to obtain high-quality, low-cost raw materials at the same time as reducing the cost of the final product.

The current level of diversification of the activities of the enterprises under study does not allow to increase the income to an acceptable level. This opinion can be justified by the fact that the coefficient of financial independence, the coefficient of liquidity and the level of profitability of enterprises are much lower than the norm. Therefore, it is necessary for enterprises to further expand their activities and find new sources of income. In this case, it is appropriate for enterprises to develop diversification strategies based on the principles of systematicity and complexity.

Currently, due to the monopoly status, the fodder produced by grain processing enterprises is offered at much lower prices in stock exchanges. In order for this situation to be evaluated as an opportunity rather than an obstacle for the development of the enterprise, it is necessary for them to add fishing or poultry farming activities to their activities. Such diversification leads to a more complete and perfect formation of the value chain in the enterprise.

Today, the analysis of the market of flour consumers in the region shows that mold bread producers and rural households are the main consumers of flour produced by large enterprises in the region from local wheat. Bakeries, which are another major group of flour consumers, use durum wheat flour for closed bread. Durum wheat flour is brought to our province mainly from the regions of Tashkent region and Tashkent city. Also, durum wheat flour is imported from Russia and Kazakhstan. It should also be noted that the demand for high-quality flour is increasing as a result of the increase in incomes of the population, urbanization and the development of confectionery. Such a trend in the market of flour consumers determines the increase of the assortment of flour products as a promising direction of diversification for grain processing enterprises. More precisely, the current situation in the market of flour consumers requires that grain processing enterprises in the region offer to the market not only the first-grade flour obtained from local wheat, but also high-quality flour varieties produced from durum wheat raw materials imported at the expense of imports.

Market needs also lead to a type of diversification, such as the production of complementary goods in addition to the main product. While this diversification allows enterprises to stabilize their financial income, it also increases the risks of choosing a business type where the returns and risks from diversification are disproportionate. The cost of taking on this type of business can be high compared to the marginal increase in equity value of a diversified venture. Therefore, investors in some cases choose to buy shares or bonds of other companies rather than to diversify their activities to reduce risk.

Another direction of diversification is the expansion of production and sales markets by region. Such diversification also provides an opportunity for enterprises to stabilize income and provide competitive advantage. An example of this is the activities of flour factories such as "Melek", "Motabar", "Alo don". Currently, these enterprises have penetrated all regions of the republic with their products.

The desire of companies to reduce the tax burden can also be a reason for diversification. In this regard, many enterprises of the food industry, as well as other sectors of the economy, reinvest profits and change their

<sup>112</sup> Based on the author's calculations.

production structures. The most common reason for diversification is to take advantage of synergies that occur between different types of businesses or between single businesses and corporations.

Synergy effect occurs as a result of the operation of separate business units in one company, and due to cost reduction, common resources, availability of skills etc., the enterprise has competitive advantages.

In the food industry, there are a number of factors that positively influence the diversification of their activities:

- attractiveness of the food industry: large market capacity, low barriers to entry, relatively high growth rates, competitive market, high profitability of some product markets, innovative opportunities for deepening technological and processing;

- relatively low valuation of the assets of agricultural enterprises and the presence of financial difficulties in them;

- formation of market institutions, development of contractual relations, creation of regulatory and legal frameworks; фан-техника тараққиёти.

The advantage of large integrated structures is that they ensure stability due to their sales, independence from suppliers of raw materials, ability to finance less profitable activities at the expense of more profitable ones. The disadvantages of such structures are the size of the corporate management system and high indirect costs. Thus, enterprises at the beginning and in the middle of the production chain will not be in market conditions, they will be guaranteed sales and supply of raw materials. Therefore, the construction of a management system for such enterprises should be done especially carefully.

Conclusion Vertical diversification in the food industry implies the establishment of a closed production cycle, which includes the cultivation, processing and sale of finished products. This is appropriate both for the formation of the domestic price and for influencing the pricing of the general food market. Using such a strategy helps reduce the risk of not getting high-quality cheap raw materials at the same time as reducing the cost of the final product.

Separated enterprises will have limited opportunities in the production and sales process on their own. However, in the process of integration, these opportunities will expand and competitive advantages will begin to be created, doors of new opportunities will be opened.

## References

- Sanghun Kim "Introduction to Voprosy Diversification: Primer Korea". Report on seminars and economic diversification in the TsARES region. May 16-17, 2019, Ulaanbaatar, Mongolia.
- Umarov I.Yu. New forms of business activity and changes in them. // Business-Expert, - Tashkent, 2019. No. 1, pp. 8-12.
- Abdumo'minov A.A. Analysis of the competitiveness of grain processing enterprises in Andijan region // Mechanical Engineering Scientific and Technical Journal, - Andijan, 2022. #2. web.andmiedu..uz

# KASHKADARYA PROVINCE ACTIVITY OF ECONOMIC SUBJECTS ECONOMETRIC MODELING OF INTER-TERRITORIAL CLUSTERING

Mukhitdinov Khudayar Suyunovich  
Institute of Karshi-engineering economics, professor  
xsmukhitdinov@gmail.com

Rahimov Odil Berdievich  
Senior lecturer of the Karshi branch of the Tashkent University  
of Information Technologies named after Muhammad al-Khorazmi  
Odilrahimov@gmail.com

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## ABSTRACT:

Kashkadarya region activities of economic entities interregional clustering an econometric analysis and the theoretical foundations of econometric model construction and forecasting mechanisms have been improved using economic mathematical methods. In the clustering of the subjects of the outbreak effective use of the main production resources, or more generally, methods of forecasting production through econometric modeling are shown.

**Keywords:** economic entities, interregional clustering, econometric modeling, digital technology, empirical model, econometric model, potential, relative model, forecast results, information system, endogenous variables, exogenous variables.

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## Introduction

Factors affecting the activity of economic entities and determining the priorities of production development and management necessarily require knowing the level and direction of the influence of these factors. This is done on the basis of deep econometric analysis. Econometric analyzes are carried out using special analysis methods (correlation, harmonic, spectral, cluster, etc.).

The diversity of activities of economic entities and their participation in one process has a general effect on the production result. However, their effectiveness is different, and their differentiation from the general indicator is carried out by evaluating the effects of the dependence of the structural indicators.

In this article, taking into account the provision of food security of the population, we chose econometric modeling of clustering of economic entities engaged in the production of agricultural products.

To ensure the sustainable development of economic entities in the world, to determine the optimal ratio of efficient use of resources, to have optimal solutions using econometric methods in the development of product production and organization of management, to ensure food security of the population based on the development of future forecast indicators of product production in entities special importance is given to research works.

## Research methods

In the world experience, a number of issues have been systematically studied in the process of econometric modeling of the development and management of agricultural production [6]. In this case, the issue of optimization related to reducing resource consumption, increasing production volume, efficient use of land, ensuring product

quality, as the main component of the food security system, the issue of ensuring the stability of the agricultural food system with the help of building dynamic models of the cyclical development of agriculture, network in determining the prospective directions of development, the issue of multi-factor modeling based on the processing of information sources of the indicators of existing systemic laws, using comparison methods with the help of multivariate econometric models of agricultural development,

Econometrician Guan Zhengfei [7], in his scientific research, presents his scientific conclusions on the importance and necessity of econometric modeling in the agricultural sector. According to him, agriculture is an economic sector and, of course, its development is closely related to econometric modeling.

In econometrics, the concept of relative model depends on gross product (Y) consumption of resources in the enterprise ( $x_1, x_2, \dots, x_n$ ) and it is written in the form  $Y=F(x_1, \dots, x_n)$ . [8] Here ( $x_1, x_2, \dots, x_n$ ) factors are called free variables or exogenous. If in the relative model the influencing factors are selected according to the consumption of resources, and the model structure is multiplicative, then this represents the production function. But factors affecting economic growth are not limited to resource consumption. There are sectors of the economy in which it is necessary to give a relative model with a wide range of factors.

The issue of optimizing the production of agricultural products is presented in scientific research [9] as setting criteria for reducing resource consumption and increasing production volume in relation to the situation of resource limitations. Mathematical programming is used to solve the problem.

Issues such as increasing the efficiency of the use of land resources in agriculture, minimizing the cost of limited resources are brought to the simplex method, technical and technological means supply issues are brought to the issue of transport [10]. Thus, the issue of optimizing agricultural production is reflected here in the sense of creating an optimal production plan.

The most common harmonic analysis and less commonly used spectral analysis methods can be used to conclude the sustainable development of agriculture based on the observation of a certain periodical repetition of the reality occurring in the field [11]. Harmonic and spectral analysis is one of the methods of researching technological processes, and it is used to determine the quality of the system pulse signal, and to determine the periodic or non-periodic signals of the complex dynamic system. The signals we receive are time-separated statistics that form a time series.

*Harmonic analysis* means spreading the resulting factor values into a Fourier series for further analysis. In this case, the time series composed of periodic fluctuations and a random component, maintaining the trend formed under the influence factors, is as follows.

$$Y = (y_0, \dots, y_t, \dots, y_n)$$

Here  $y_t$  is the level of the series ( $0 \leq t \leq n$ ). Then we can write the arbitrary economic time series as follows:

$$Y' = Y^{tr} + \sum_{k=1}^K Y_k^{garm} + \varepsilon(1)$$

Here  $Y^{tr}$  - trend,  $Y_k^{garm}$  - part of the general trend (harmonics),  $\varepsilon$  - a random variable. If the average of the change

value of the resulting factor for a long period  $\bar{Y}$  assuming that formula (1) is expressed in the following form.

$$Y' = \bar{Y} + \sum_{i=1}^K a_k \cos \frac{2\pi kt}{n} + \sum_{i=1}^K b_k \sin \frac{2\pi kt}{n} (2)$$

Here,  $a_k$  and  $b_k$  are quantities representing the presence of annual recurring fluctuations and are defined as follows:

$$a_k = \frac{2}{n} \sum_{i=1}^K Y' \cos \frac{2\pi kt}{n}, \quad (3) \quad b_k = \frac{2}{n} \sum_{i=1}^K Y' \sin \frac{2\pi kt}{n}$$

Ferret coefficients are determined by the formula (2). In order to exclude insignificant coefficients from the model, they are checked by Student's test.

To apply spectral analysis, we determine the trend in formula (1) in a linear structure. Also here we get the following representation of the harmonic represented by the cosine.

$$Y_k^{\text{garm}} = A_k \cos\left(\frac{2\pi kt}{n} - \varphi_{0t}\right).$$

Here  $A_k$  - vibration amplitude:  $A_k = \sqrt{a_k^2 + b_k^2}$ ,  $\varphi_{0t}$  - is the initial phase of oscillations and is defined as the Fourier coefficients in formula (2). As a result, formula (1) can be written as follows.

$$Y' = a + bt + \sum_{k=1}^K \cos\left(\frac{2\pi kt}{n} - \varphi_{0t}\right) + \varepsilon(4)$$

The presence of a trend in a time series can be checked using the series criteria, and the presence of a monotonic trend can be checked using the inversion criterion.

The process of separating significant harmonics, that is, separating a high-frequency signal from a low-frequency signal, is based on the estimation of the spectral power density of the process using the following discrete-time Fourier autocorrelation sequence:

$$S_y(e^{iw}) = \sigma \left| \frac{1}{1 + \sum_{n=1}^P a_n e^{-inw}} \right|^2.$$

Here  $a_1, a_2, \dots, a_p, \sigma$  - are parameters of the autoregression model, which are calculated using the Yule-Walker equation of order  $P + 1$ .

The important aspect of the econometric model built on the basis of the time series trend of the output factor and the fluctuation dynamics of independent factors in forecasting the future indicators of agricultural production is that the source of model construction is multi-year statistical information and the trend of an arbitrary single factor (which is highly correlated with the output factor) determination is sufficient.

Russian economist A.F. According to Patskalev[12], the concept of production potential should include the maximum possible final result of the development of the agro-industrial complex and its structural links. It can be concluded from this opinion, that is, taking into account the nature of the influence of resources on the volume of production, the production potential of agricultural production is determined not by a mechanical set of individual resources, but by their system, in which the interdependence of all elements is clearly manifested. Therefore, the relationship between the volume of the produced product and the amount of resources used is described by the kinetic production function. Also, it is necessary to estimate the resource and production potential in determining the production potential. It uses probabilistic and statistical modeling methods. Based on foreign experience[13], we suggest using a linear regression equation to estimate resource potential.

Economic and social efficiency of clusters and their members:

- new manufacturers from other industries develop their R&D activities and strategies to retain new ones, so they accelerate development;
- mutual free exchange of information appears, news spreads between consumers and suppliers through channels;
- mutual competition creates new opportunities;
- new opportunities for human capital, scientific ideas are introduced into development and production[14].

Relying on foreign experience is one of the main sources for evaluating modern production parameters. When it comes to the use of digital technologies in the economic sectors of developed countries, its efficiency indicators can be taken as information, not only in agriculture, but also in various sectors of the economy. Because digital technologies simultaneously serve for the comprehensive development of all economic sectors and determine the state of general development. In this sense, when connecting the level of economic growth with digital technologies, in the research works of many world leading scientific research centers, research institutes, a certain sector of the economy was not limited to the analysis of the results related to this sector [15].



Theoretical and practical issues of effective use of land and other resources of production in agriculture rely on several field knowledge. An agrarian approach alone does not offer any solution. Max Weber[16], a research scientist who conducted scientific research in the agricultural field, believes that in the future, it will not be possible to achieve results only by improving the quality of land resources and increasing the efficiency of labor resources, but it will be possible to increase the production volume only by using intellectual technologies. Dutch researcher Jaap Jan Schröder[17] emphasizes the increasing role of the chemical industry in agricultural production. Researcher Dunstan Gabriel Msuya[18] in his scientific research on the Canadian agricultural system to create varieties resistant to the environmental environment, The development of genetic engineering will become one of the main factors determining the development of agriculture. Russian economist Yugay A.M. [19] In his studies, he notes that repeated cropping and crop rotation in the Russian Federation had a great impact on the volume of production. Also, by the scientists of our country, the efficiency of land use in regions [20], and the use of econometric modeling in assessing the value of land resources were considered.

### **Result and discussion**

The study of the dynamics of the production process in agriculture allows to determine its unique significant aspects, laws, and their quantitative assessment based on the past and present conditions. To analyze the change of the components involved in the economic process in a certain period of time, explanatory indicators and methods are used [21]. In this case, the concept of time series is often used in practice. In different sources, the concept of time series is given basically the same short definitions. In the works of econometrician B.B. Berkinov, this concept is expressed as follows: "A time series is a series of numerical indicators located in sequence over time, which describe the state and degree of change of an event or process" [22].

The fact that a large share of economic entities in Kashkadarya is directed directly to agriculture requires the production of food products as its component. The subtle aspect of the matter is that the realization of the manufactured products as a commodity requires compliance with certain standard requirements. The econometric modeling apparatus makes it possible to determine the laws of stability of the product in the market economy based on quantitative changes and to determine the necessary quality changes in advance[23].

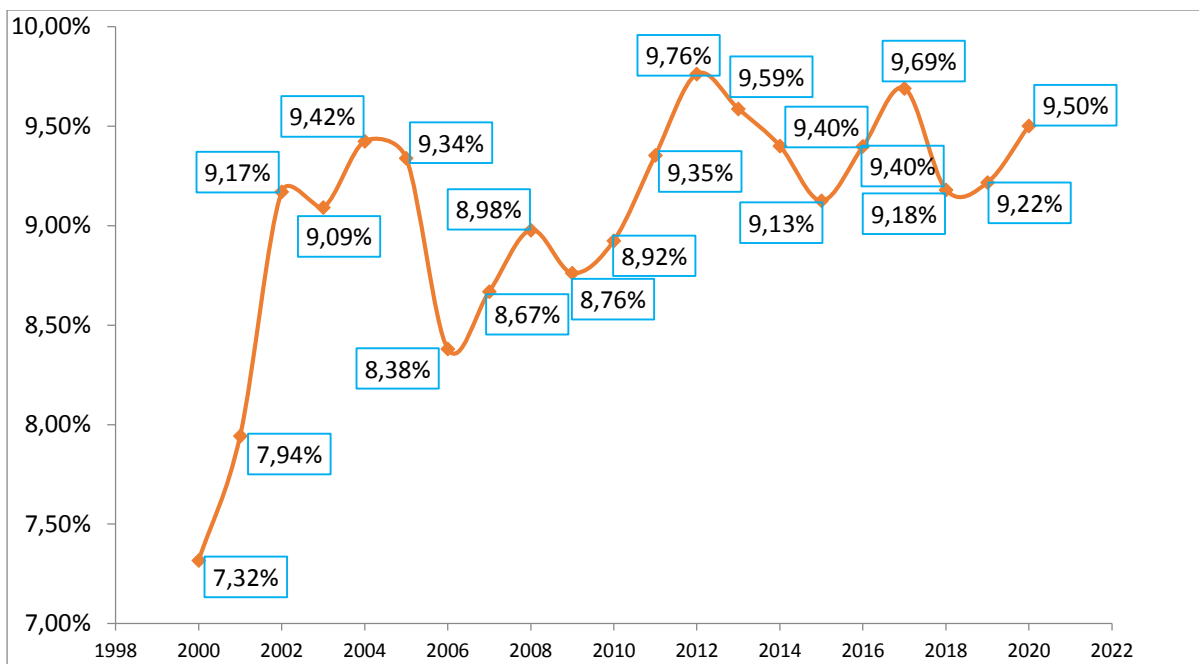
Time series consists of components, the main component of which is the trend. The concept of a trend is a continuous trend in a time series without usually hidden fluctuations, and in the interpretation of the Russian economist and econometrician I.I. Eliseevoy, it is a stable trend that is freed from random deviations in the time series to a certain extent [24].

At present, promising projects of economic entities are implemented more in the system of agricultural clustering. Clusters are becoming the main production entities that develop the agriculture of our country. This is considered as one of the serious steps in the reform of agriculture in the new Uzbekistan. If we pay attention to the numbers, 651 agroclusters are operating in all directions. 100 percent of cotton and grain production, and more than 40 percent of fruit and vegetable production, which are the main areas of agriculture, are accounted for by cluster enterprises. Production activities of the clusters are carried out on 2.2 million hectares of agricultural land. The scientific basis for the advantages of the cluster system is presented in the scientific works of academician Clayton Christensen[25]. He enriches the cluster system and innovation theory in his scientific researches in entrepreneurship and investor activity. Describes the principles of cluster implementation in the production system.

There are specific indicators in the agricultural economy, which are the main means of analyzing the patterns of agricultural development of the region. The development prospects of the network can be assessed by the curve of stable trends of these indicators. In other words, the laws underlying the agricultural development of the region are evaluated using trend models of the main indicators[26]. Below we will analyze the laws of development of such indicators using trend models.

The production potential of the region is determined based on the share of the production volume of a certain type of products in the volume of the same type of products produced on the republic scale. Also, this indicator is observed in certain periods. Therefore, when evaluating the potential of production of agricultural products of Kashkadarya region, we are based on the amount of shares of the volume of agricultural products produced in the

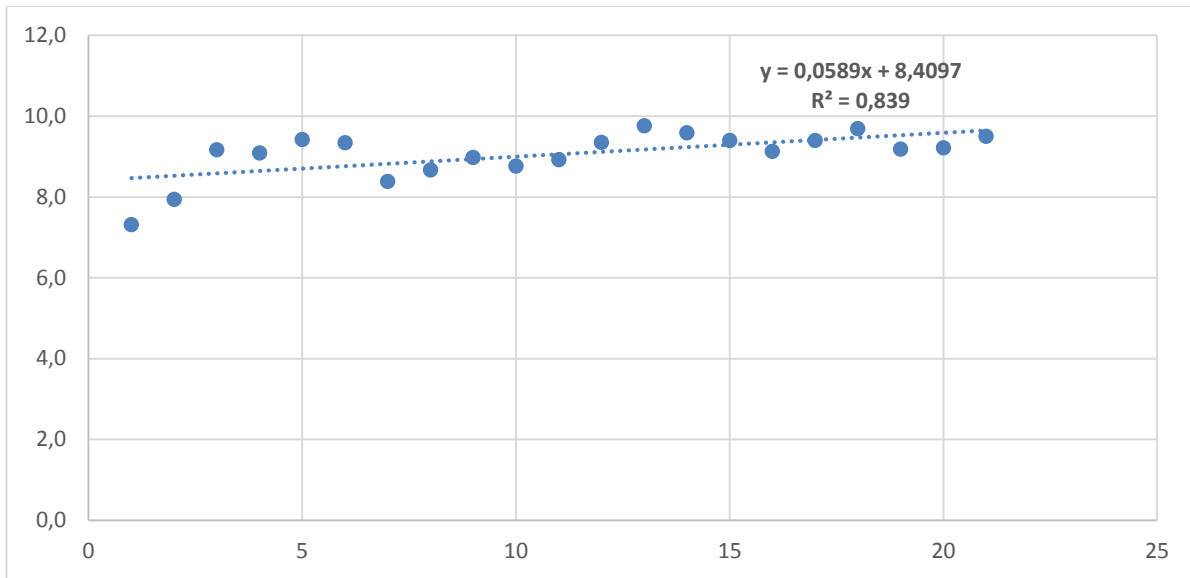
period in the volume of agricultural products produced on the national scale in the corresponding periods (Fig. 1).[27]



**Figure 1. The share of the volume of agricultural products produced in Kashkadarya region by republic (in percent)**

The historical share indicator provides an indication of the region's achieved production potential, but it does not reflect the future situation. For this, it is necessary to know according to which law the line of development continues, based on the current principles, priorities, mechanisms of action introduced into production. The fact that these laws have a dynamic nature means that they are expressed in dynamic models. For this reason, we used trend models to evaluate the potential of the region's QXMICH in the next steps.[28]

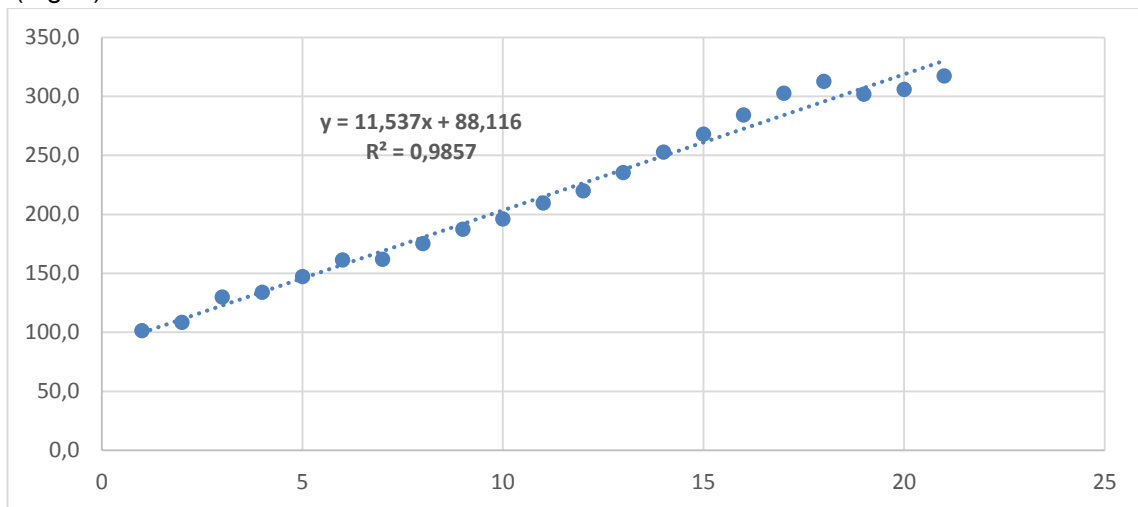
The trend of the share of the volume of regional GDP in relation to the total agricultural products of the republic in the last twenty years is estimated using the trend model (Fig. 2). According to the results of the developed model, the share of the region has a growing tendency, and it was found that 38 percent of the total change in it is due to time, and the rest is caused by other factors.



**Figure 2.2.2. Trend models of the assessment of the potential of the KSHMICH of the Kashkadarya region**

Theoretically, it is known that time series consists of trends, seasonal and periodic fluctuations, and random variables. It can be seen that the remaining 62 percent of the change in the share of agricultural products of the region is due to periodic fluctuations.

We have developed a trend model of production of agricultural products in Kashkadarya region. For this, the data of 2000-2020 were used, and the data were transferred to real values. As a result, it was determined that the production of agricultural products in the region has a stable growth trend, and the following model was developed (Fig. 2).



**Figure 3. Trend model of production of agricultural products of Kashkadarya region**

From the results of the model presented above, we can see that 99 percent of the change in the volume of agricultural products produced in the region is a time-dependent trend. Also, the graph shows that in the next period, periodic fluctuations arising under the influence of external factors have increased. General results are presented in Appendix 5, which show that the model is adequate on all criteria and can be used to draw conclusions. This model shows that the real value of production of agricultural products in Kashkadarya region has increased by 11.5 billion soums per year.

It will be necessary to pay special attention to the issue of increasing the volume of production of agricultural

products, ensuring the correct and appropriate direction in the effective use of available resources and opportunities. In particular, it was observed that the share of the main agricultural sectors, i.e. agriculture and animal husbandry, in the production of agricultural products in the region was changing and rather unstable (Table 1).

**Table 1.**

**Relative indicators of agricultural and animal husbandry production volume in Kashkadarya region**

Years	Share of agricultural products	Livestock product share	share of livestock/share of agriculture (ratio)
2010	0.50	0.50	1.01
2011	0.48	0.52	1.07
2012	0.48	0.52	1.07
2013	0.48	0.52	1.07
2014	0.48	0.52	1.08
2015	0.48	0.52	1.09
2016	0.47	0.53	1.12
2017	0.45	0.54	1.19
2018	0.42	0.58	1.38
2019	0.42	0.58	1.37
2020	0.43	0.57	1.34

The given data were calculated on the basis of real indicators, and it was observed that the share of livestock in the region increased in the following period, as a result, the share of agriculture decreased accordingly. In 2010, the share of both sectors was equal, and the ratio was 1:1, but by 2020, the share of animal husbandry was 1.34 times higher than that of agriculture.

A sharp increase in the share of livestock from 2016 to 2018 is ensured, from 1.12 times to 1.38 percent. It was 1.34 times by 2020, with a slight decrease in the next two years. We evaluated the relationship between the yield per hectare and the ratio determined in order to study the effect of these changes on the production volume.

$$y = 6,14 * Sh + 0.8 * D \quad (1)$$

Here: *y* is the real value of agricultural products produced per hectare (in millions of soums); *sh* - the share of livestock/the share of agriculture (ratio); *D* is a dummy variable used to represent change after 2016.

According to the results of the performed regression analysis, the relationship between the indicators was as shown above. Also, it can be seen that all the coefficients are adequate according to the criteria (Table 2).

**Table 2.**

**Regression analysis results of linear model**

Model 4: OLS, using observations 2010-2019 (T = 10)

Dependent variable: PCPR

	Coefficient	Std. Error	t-ratio	p-value	
D	0.806682	0.399718	2.018	0.0783	*
ChDeh	6.14360	0.219283	28.02	<0.0001	***
There is a mean dependent	7.377685		SD dependent	1.193679	
Sum squared resid	2.643064		SE of regression	0.574789	
Uncentered R-squared	0.995256		Centered R-squared	0.793894	
F(2, 8)	839.1522		P-value(F)	5.07e-10	

Log-likelihood	-7.536153	Akaike criterion	19.07231
Schwarz criterion	19.67748	Hannan-Quinn	18.40844
rho	0.405549	Durbin-Watson	1.038330

The coefficients of this model show that the increase of the ratio in both areas to livestock farming by 0.01 units will increase the real value of agricultural products by 6.14 million soums per hectare. This ratio is valid only for 2010-2015. The dummy included in the model indicates that the adequacy of the ratio before the turner is increased in the subsequent period. That is, in the period after 2016, the increase of the ratio to the contribution of livestock by 0.01 unit ensures an increase in the real value of agricultural products per hectare by 6.94 (6.14 + 0.8) million soums. It can be seen that the development of cattle breeding in the region is one of the promising areas. However, this does not lead to the conclusion that farming should be reduced and it is required to ensure the development of both sectors in optimal proportions.

**Table 3**

**Correlation analysis results**

	X1	X2	X3	X4	X5
X1	1.00				
X2	-0.50	1.00			
X3	-0.13	0.91	1.00		
X4	-0.65	0.98	0.81	1.00	
X5	-0.68	0.97	0.80	1.00	1.00

Here: X1 - cultivated area in hectares; X2 – Manufactured qagricultural products at 2010 prices (billion soums); X3 - Produced agricultural products at 2010 prices (billion soums); X4 - Livestock productionproducts at 2010 prices (billion soums); X5 - Real value of the product per hectare of land in million soums.

The correlation coefficients between the produced agricultural product and the production of farming and animal husbandry are 0.91 and 0.98, respectively, justifying that the influence of animal husbandry is much higher. The inverse relationship between the cultivated area and the products produced confirms that the growth in agriculture is supported by intensification.

In order to forecast the proportions of livestock and agriculture in the next period, their trend models were developed (Table 4).

**Table 4**

**Trend models of livestock and agricultural products production**

No	Model	T-statistics	Coefficient of determination
1.	$X_3 = 1274,06 + 80,06t - 367,98 * D$	b0=49.73 b1=15.86 b2=-10.27	R2=97
2.	$X_4 = 1301,43 + 105,41t$	b0=41.97 b1=23.05	R2=98

Here: *t* represents the trend, *D* is a dummy variable

The real value of the production of agricultural products decreased sharply in 2018, and had a tendency to increase again in the following years. Therefore, a dummy variable representing this change was used in the trend model, and it can be seen that its coefficient is adequate according to Student's criterion. Taking into account the adequacy of the above-mentioned trend models, we develop forecast indicators for the next period using them (Table 5).

Table 5

## Forecast indicators of production of agricultural and livestock products

Years	agricultural product	livestock product	Share of agricultural products	Livestock product share	share of livestock/share of agriculture (ratio)
2020	1776.6	2378.1	42.8	57.2	1.3
Forecast indicators					
2021	1866.8	2566.4	42.1	57.9	1.4
2022	1946.8	2671.8	42.2	57.8	1.4
2023	2026.9	2777.2	42.2	57.8	1.4
2024	2106.9	2882.6	42.2	57.8	1.4
2025	2187.0	2988.0	42.3	57.7	1.4

According to the results of the implemented forecast, it was found that the share of production of agricultural and animal husbandry products will not have any change in the next period. It can be seen that the current volume and ratio of production in both areas have reached the optimal level and maintaining this ratio in the next years will ensure stable growth of agriculture in the region.

Nevertheless, in some respects, statistics are formed mainly on the republican scale and are not well defined in the regions. We introduce the following definitions:  $X_{31}$  - the number of producers of agricultural products of all categories where digitization has been introduced in the region (ta);  $X_{32}$  - changes in the volume of imports in seed production (percentage);  $X_{33}$  - volume of intensively produced agricultural products (billion soums);  $X_{34}$  - agricultural land area irrigated based on new technologies in the region (thousand ha). Based on the statistical data of these factors (Table 6), we will conduct a correlational analysis.

Table 6

Statistical indicators of influence factors obtained by group of science and innovation factors<sup>113</sup>

Years	The number of producers of all categories of agricultural products where digitalization has been introduced in the region (the)	Changes in the volume of imports in seed production (percentage)	Volume of production of agricultural products by intensive method (billion soums)	Area of agricultural land irrigated based on new technologies in the region (thousand ha)
2001	4	68.4	2.5	1.02
2002	11	72.5	5.4	1.23
2003	28	74.1	8.9	1.35
2004	32	74.8	10.4	1.47
2005	45	75.2	13.9	2.05
2006	51	74.6	18.3	2.24
2007	68	76.4	25	2.34
2008	71	76.9	32.5	3.05
2009	88	78.9	40.6	3.24
2010	102	79.2	101.9	3.38

<sup>113</sup>It was compiled by the author based on the data of the Kashkadarya Regional Statistics Department and the Regional Agricultural Department

2011	115	79.8	190.6	3.56
2012	134	79.5	261.2	3.59
2013	142	82.4	337.5	3.61
2014	168	83.7	453.9	3.67
2015	172	86.4	618.1	3.78
2016	182	87.4	749.6	4.01
2017	191	88.9	1019.6	4.05
2018	195	86.7	1238.9	4.09
2019	198	84.5	1455.2	4.25
2020	202	86.3	1759.6	4.32

**Table 7**

**Correlation analysis results**

	<b>X31</b>	<b>X32</b>	<b>X33</b>	<b>X34</b>	<b>Y1</b>	<b>Y2</b>	<b>Y12</b>
<b>X31</b>	1.00						
<b>X32</b>	0.97	1.00					
<b>X33</b>	0.85	0.80	1.00				
<b>X34</b>	0.96	0.92	0.74	1.00			
<b>Y1</b>	0.90	0.85	0.99	0.80	1.00		
<b>Y2</b>	0.87	0.81	1.00	0.76	0.99	1.00	
<b>Y12</b>	0.88	0.82	1.00	0.78	1.00	1.00	1.00

The results of the correlation analysis show that although there is a strong relationship between all the predictors and the outcome factors, the correlation of the predictors means that they cannot be selected simultaneously for the empirical model. Here, the 3rd-order factor has the highest correlation with the resulting factors (0.99), and the correlation density with the 4th-order independent factor is relatively low (0.74).

The correlation coefficients between the 4th order factor and the resulting factors are higher than 0.76. This means that factors located in the 3rd-4th order can be used simultaneously. The remaining independent factors can be included in the model separately. However, the correlation coefficient of 0.74 is high enough to suggest that these factors should not be included as variables in the model at the same time.

In the group of social factors, we can rely on statistical data on the change of the total area of the regional housing fund, the number of people, the number of jobs in agriculture, the growth rate of the population's income, and the average salary. Statistics on these voluntary factors are available and reliable. We introduce the following definitions.

$x_{41}$  - the total area of the regional housing fund (sq.m);  $x_{42}$  - the number of inhabitants of the region (thousands of people);  $x_{43}$  - the number of employees in regional agriculture (thousands of people);  $x_{44}$  - the average salary of the population in the region (thousand soums),  $x_{45}$  - income of the population in the region (million soums). We will conduct a correlational analysis based on the statistical data of the selected factors of the 4th group (Table 8).

Table 8

Statistical indicators of influence factors obtained by group of social factors<sup>114</sup>

Years	The total area of the regional housing fund (sq.m)	population of the region (thousand people)	number of jobs in regional agriculture (thousand people)	the average salary of the population in the region (thousand soums)	population income in the region (million soums)
2001	18245120	2253.7	247.8	12,986	242185.10
2002	19450230	2294.7	236.64	15,486	334564.00
2003	20130455	2336.4	236.35	21,686	473310,10
2004	21358454	2378.5	242.99	56,718	541700.20
2005	22345782	2420.4	244.99	91,822	653475.00
2006	24360157	2462.2	234.78	178,348	850300.30
2007	28354120	2509.4	243.76	230,474	989450.50
2008	32145874	2563.6	248.43	345,240	1150635.40
2009	34568794	2616.1	248.67	528,192	1278440.70
2010	38 234 664	2722.9	261.61	734,265	1315286.30
2011	39,802,370	2777.8	272.29	905,105	1516320.40
2012	40 288 861	2831.3	288.89	1008,560	1612452.20
2013	41 235 117	2895.3	302.95	1175,510	1713412.60
2014	41 533 408	2958.9	324.27	1275,370	1815012.70
2015	44 432 501	3025.6	337.31	1586,310	1899487.10
2016	46,809,444	3088.8	344.92	1687,170	1913630.20
2017	50 373 290	3148.4	342.86	1836,400	2045225.50
2018	53 137 064	3213.1	302.25	2308,000	2187460.40
2019	54 953 364	3280.4	302.03	2450,240	2214325.30
2020	55 202 976	3314.2	311.63	2822,500	2347821.40

Table 9

## Correlation analysis results

	X41	X42	X43	X44	X45	Y1	Y2	Y12
X41	1.00							
X42	0.99	1.00						
X43	0.84	0.88	1.00					
X44	0.96	0.98	0.83	1.00				
X45	0.99	0.99	0.86	0.95	1.00			
Y1	0.91	0.94	0.79	0.98	0.89	1.00		
Y2	0.89	0.92	0.73	0.97	0.86	0.99	1.00	
Y12	0.90	0.93	0.76	0.98	0.87	1.00	1.00	1.00

As a result of correlation analysis, all voluntary factors have a strong correlation relationship with the resulting output factors. The smallest of these indicators is observed in the 3rd independent factor (correlation coefficient equal to 0.73). According to the results, the correlation between the 1st and 3rd independent factors is

<sup>114</sup>It was compiled by the author based on the data of the Statistics Department of Kashkadarya Region



relatively low and is 0.84. It seems that none of these factors can be included in the model at the same time, that is, they can be selected when building a separate empirical model.

Supply factors include capital supply, electricity, specialist, water, fuel, chemicals, medicines, and labor supplies.

Capital supply is formed on the basis of the republican budget, funds of enterprises and organizations, commercial banks and other debt funds, foreign investments and loans, and other sources of financing. In addition to capital supply, development and implementation of measures to solve the problems of saving resources and energy, effective use of land resources in agriculture in the conditions of unfavorable ecological situation and water shortage is of significant socio-economic importance. Solving these problems in Uzbekistan will ensure a higher rate of further development of agriculture and an increase in the standard of living of the population. We make the following determinations of supply factors.

$X_{51}$  - capital investments (billion soums);  $X_{52}$  - consumption of electricity in regional agriculture (million kWh);  $X_{53}$  - Mineral fertilization of agricultural lands of the Republic of Kazakhstan (thousand tons);  $X_{54}$  - supply of agricultural specialists in the region (percentage),  $X_{55}$  - water consumption for agricultural land in the region (million cubic meters). We will conduct a correlational analysis based on the statistical data of selected factors for group 5 (Table 10).

As a result of the correlation analysis, it can be seen that there is a weak correlation between all voluntary influence factors. We found that only the correlation between the 1st and 3rd order factor is strong and has a positive value. 1st and 3rd order factors have a strong correlation with the resulting output factors. The correlation index of these two factors with the resulting factors is not less than 0.93. The rest of the factors have a weak and inverse relationship. Also, the correlation index of these independent factors is not greater than 0.41. Therefore, the independent factors that can simultaneously participate in the structure of the empirical model are the 1st and 3rd independent factors.

**Table 11**

**Correlation analysis results**

	X51	X52	X53	X54	X55	Y1	Y2	Y12
X51	1.00							
X52	0.15	1.00						
X53	0.90	0.04	1.00					
X54	-0.47	0.31	-0.64	1.00				
X55	-0.39	0.61	-0.56	0.65	1.00			
Y1	0.96	0.00	0.93	-0.53	-0.45	1.00		
Y2	0.97	0.08	0.93	-0.49	-0.41	0.99	1.00	
Y12	0.97	0.05	0.93	-0.51	-0.43	1.00	1.00	1.00

Service factors include public services, transport services, telecommunication services, agricultural advisory services, banking and credit services, etc.

Our government is paying special attention to effective use of resources with the introduction of digital technologies in agriculture. In particular, the installation of automated devices in water reservoirs, regional and inter-district irrigation systems, district irrigation systems is set to increase from 269 to 400 units in the next two years. It is intended to increase the share of satellite navigation technologies in the management of agricultural machinery from 10% to 50% in 2021-2022[3].

**Conclusion**

To summarize, the most important need for econometric modeling in the clustering of economic entities is this: simplifying and researching a complex system as a model, determining stability conditions based on demand

and supply models, forecasting reserve need indicators, determining the degree of interdependence of factors, comparing the efficiency of production methods to quantitative changes in economic indicators according to determination, expression of economic laws of security conditions, optimization of resource allocation, assessment of efficiency of use, assessment of economic activity of all categories of producers, optimal planning, reliable forecasting of economic growth, ensuring correct decision-making, development of efficiency criteria of application and use, based on the possibilities of evaluating the factors of minimization of supply costs.

### References and sources

- Appendix 1 of the Decree of the President of the Republic of Uzbekistan No. 4947 of February 7, 2017 "Strategy of Actions in Five Priority Areas of Development of the Republic of Uzbekistan in 2017-2021". Lex.uz
- PF-6079 State program "Development strategies of the Republic of Uzbekistan until 2035" 5.10.2020
- Decree of the President of the Republic of Uzbekistan "On approval of the Digital Uzbekistan - 2030" strategy and measures for its effective implementation. Tashkent city, October 5, 2020, No. PF-6079
- PROGRAM of digital transformation of Kashkadarya region for 2020-2022 within the framework of "Digital Uzbekistan - 2030" strategy. Appendix 13 to the Decree of the President of the Republic of Uzbekistan dated October 5, 2020 No. PF-6079. <https://lex.uz/ru/docs/5030957>
- Compiled by the author based on the data of the Kashkadarya Regional Statistics Department and the Regional Agricultural Department
- Afanasev V.N. Razvitie sistemy metodov statisticheskogo issledovaniya vremennykh ryadov // Vestnik NGUEU. 2012. #1. P.10–24.
- Guan Zhengfei. Econometric analysis of agricultural production: New primal perspectives. Integrating Agronomic Principles. American Journal of Agricultural Economics 88 (2006), in press. <https://edepot.wur.nl/121734>
- A. Ishnazarov, Sh. Nurullaeva, M. Muminova, N. Rozmetova. Fundamentals of econometrics. Study guide. - Tashkent: Economy, 2019, 258 pages
- Pluto V. Comparative multivariate analysis and econometric modeling. - M.: Finance and statistics, 1989. - 175 p.; Petrenko I. Ya. Ekonomika selkohozyaystvennogo proizvodstva. - Alma-Ata: Kaynar, 1992. - 560 p.; Gordeev A.V. Priority of agrarian policy and prospective development of krupnykh selkohozyaystvennykh predpriyatiy Rossii // Ekonomika selkohozyaystvennykh i pererabatyvayushchikh predpriyatiy, 2001. - No. 4. - S. 8-12.
- Safaeva Q. Mathematical programming. Textbook. "Ibn Sino" .T.: -2004, 324 b; Raisov M. Mathematical programming. Study guide. "Voriz" publishing house. T.: - 2009. - 176 pages
- V. S. Vazhenina, E.A. Pakhomova, D.A. Pisareva. Primenenie harmonicheskogo i spektralnogo analiza dlya vyyavleniya osnovnykh tsiklov razvitiya sotsialno-ekonomicheskoy sistemy (na primere selkogo hozyaystva). National interest: priority and safety. No. 11(2016) str. 4–14
- Patskalev A.F. Proizvodstvennyy potencial APK, ego otsenka i effektivnost / A.F. Patskalev // Problemy sovershenstvovaniya khozyaystvennogo mekhanizm v sisteme APK: Materialy Vseros. nauch.-prakt. conf. - M.: 1990. - ch. 1.
- Vasilenko Yu.V. Proizvodstvennyy potencial selkohozyaystvennykh predpriyatiy / Yu.V. Vasilenko. - M.: Agropromizdat, 1989. – 152s; Kim Dj.-O. Factor analysis: statistical methods and practical questions / Dj.-O. Kim, Ch.U. Müller // Factor, discriminant and cluster analysis / Dj.-O. Kim, Ch.U. Müller, U.R. Klecka and Dr. - M.: Finance and statistics, 1989. - S. 5-77

- Ergashev R., Beglaev U. The Ways Of Fishing Farms Management And Developing The Production Activity. International journal of scientific & technological research. Volume 9, Issue 02, February 2020, ISSN 2277-8616919 ijstr©2020.p-92
- Garifullin B.M., Zyabrikov V.V. Digital transformation business: model and algorithm. Journal kreativnaya ekonomika. Volume-12, No. 9, 09.2018, 1345-1358
- Weber M., The Agrarian History of the Ancient World / Weber. - Moscow: Canon C-Press, 2001. P. 429
- Jaap Jan Schröder. The Position of Mineral Nitrogen Fertilizer in Efficient Use of Nitrogen and Land: A Review // Natural Resources Vol.05 No.15(2014), 12 pages
- Dunstan Gabriel Msuya. Farming systems and crop-livestock land use consensus. // Open Journal of Ecology. Vol.3 No.7 (2013), 9 p
- Yugai A.M. Sovremennye otnosheniya zemelnoy sobstvennosti v Rossii. //Ekonomika selskogo khozyaystva Rossii.- No. 10 - 1997. - p. 17-21.
- Tashmatov R. Analysis of the efficiency of land resource use in the regions. Scientific electronic magazine "Economy and innovative technologies". No. 4, July-August, 2017
- Mukhitdinov Kh. S, Juraev FDMethods of Macroeconomic Modeling. International Journal of Trend in Scientific Research and Development (IJTSRD) Special Issue on International Research Development and Scientific Excellence in Academic Life Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470
- B. B. Berkinov. Econometrics: a study guide. - T.: "Science and Technology", 2015, 184 pages (88 p)
- Mukhitdinov Kh. S., Rakhimov AN EMPIRICAL MODELS WHICH WERE BUILT FOR EACH SECTOR OF THE SERVICE SECTOR TO THE POPULATION OF THE REGION. South Asian Journal of Marketing & Management Research (SAJMMR)<https://saarj.com>
- Farrux Qodirov / Econometric modeling of medical services in the territories / International Conference on Information Science and Communications Technologies ICISCT 2022 Applications, Trends and Opportunities 28th, 29th and 30th of September 2022, Tashkent, Uzbekistan.
- Qodirov Farrux Ergash o'g'li. Econometric modeling of the development of medical services to the population of the region / Berlin Studies Transnational Journal of Science and Humanities. 2022/5/9. 1.1 Economical sciences.
- Qodirov Farrux Ergash o'g'li. Sonli qatorlar. (musbat hadli qatorlarning yaqinlashish teoremlari. leybnis teoremasi, absolyut va shartli yaqinlashish.) 2022/2/17. Ta'lim va rivojlanish tahlili onlayn ilmiy jurnali страницы 137-151.
- Ф.Э.Кодиров, О.Д.Дониёров. Эффективные модели развития медицинского обслуживания населения кашакадъинской области. 2022. Журнал Символ науки номер 7-2. страницы 15-17.
- Farrux Qodirov, Xudayar Muhitdinov. Features that increase efficiency in the provision of medical services and factors affecting them. 2022/7/30 журнал Ta'lim va rivojlanish tahlili onlayn ilmiy jurnali 2 Том, 7 Номер страницы 192-199.

# METHODS OF ANALYSIS OF MARKETING ACTIVITY OF RETAIL TRADE ENTERPRISE

Khaydarova Malika, Anvarova Lobar  
Teacher of the Department of Economics of the Karshi State University

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## ABSTRACT:

The current state of the domestic market is characterized by a high degree of dynamism, and volatility of conditions, and requires enterprises to apply management concepts that will allow them to successfully compete and realize their potential. This management concept is marketing, providing an integrated approach to enterprise management. But Uzbek practice shows that at the level of small and medium-sized enterprises there are serious problems related to the inefficiency of marketing, primarily due to the level of training in marketing of small enterprises. At the same time, there is a meaningful management commitment to improve the quality of marketing management. One of the most important elements of management is the analysis of marketing activities. But the most «narrow» place of analysis is the selection of methods of analysis of marketing activities, without which it is impossible to assess the degree of compliance of the strategy and tactics of marketing with the state of the competitive environment. Therefore, despite the diversity of methods of analysis of marketing activities, there is a problem of direction and method of analysis of marketing activities, especially for small enterprises. One of the possible ways to solve this problem is to develop a method of selection and evaluation of the use of methods of analysis of the marketing activity of an enterprise.

### Key words

Marketing, marketing analysis, marketing research, 4P analysis, 4C analysis, Porter matrix, SWOT analysis, BCG analysis, ABC analysis, XYZ analysis, competitor analysis, PEST analysis, demand forecasting method

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## Introduction

Marketing management in an enterprise includes four main elements of management: analysis, planning, motivation and control. The article focuses on analysis as the basic element of marketing activity management.

First of all, it is necessary to consider the basic definitions included in the title of the work.

**Table 1 Directions and methods of 4P analysis**

Directions of the analysis	Methods of analysis
<b>1 Market analysis:</b> <b>™ prospects, the attractiveness of the market;</b> <b>ř market capacity estimate;</b> <b>ř study of the commodity structure of the market;</b> <b>™ a general analysis of the main market players;</b> <b>: assessment of market demand and supply;</b> <b>ř segmentation and niche allocation in the market;</b> <b>ř building a model of market development and sales forecasting.</b>	GE matrix; Capacity forecasting method; Method of expert evaluations «Delphi»; formation of a «portrait» of the commodity market; comparative analysis; Methods of statistical analysis; SWOT-analysis; PEST-analysis; Demand forecasting method; flexible segmentation method;

	Method of component segmentation; method of time series analysis and forecasting.
<b>2 Analysis of competitors:</b> <b>Identification of market leaders;</b> <b>Study of advantages and disadvantages of competitors;</b> <b>comparative analysis of the marketing complex and business processes of competitors;</b> <b>Identification of economic drivers in the industry (size, rate of market growth, profitability in the industry, number of competitors and consumers, ease of entry)</b>	Porter matrix; Mapping of strategic groups; benchmarking; analysis of checks of competitors; Comparative evaluation method; SWOT-analysis of main competitors; factor analysis of competitiveness of goods and enterprises.
<b>3 Analysis of product policy:</b> <b>Total sales dynamics;</b> <b>Product range research;</b> <b>Definition of the HVT phase;</b> <b>Positioning of goods or services;</b> <b>research of brand image among competitors;</b> <b>Study of the market value of the brand;</b> <b>consumer satisfaction and loyalty;</b> <b>customer service quality.</b>	BCG matrix; ABC analysis; XYZ-analysis; Creation of a positioning map; Hall test; The method of free association; consumer surveys; brand strength method.
<b>4 Price policy analysis:</b> <b>Market analysis;</b> <b>Assessment of the market price level;</b> <b>Price elasticity measurement;</b> <b>Analysis of satisfaction with the price offered.</b>	Methods for calculating average price; Arc elasticity method; Point elasticity method; Survey interview
<b>5 Analysis of marketing policy:</b> <b>market analysis;</b> <b>Supplier analysis</b> <b>transport policy analysis.</b>	Market segmentation Supplier benchmarking mathematic and statistical methods of optimization of storage and transportation costs.
<b>6 Analysis of communication policy:</b> <b>Efficiency of promotions, advertising campaigns;</b> <b>Marketing experiments (product testing, packaging concepts, advertising ideas and forms).</b>	analysis of the relationship of communications costs and profits; Trial purchases Hall test; poll

### Literature review

Modern marketing theory notes that it is the traders that most corresponds to the concept of 4C: Customer needs & wants, Customer Cost, Convenience, Communication. According to V. V. Nikishkin, this is a more progressive approach to the formation of a special trade offer, so the marketing manager of the retail business should base the development of marketing activities on the concept of 4C.

Table 2 presents the classification of methods of analysis of marketing activity according to directions 4C, such as: consumer analysis, analysis of costs of the client, analysis of convenience for consumers, analysis of communications.[28]

**Table 2 Directions and methods of 4C analysis**

Directions of the analysis	Methods of analysis
<b>1 Market analysis:</b> prospects, attractiveness of the market; Assessment of market capacity; Product structure study; a general analysis of the main market participants; Assessment of market demand and supply; segmentation and allocation of niches in the market; Building a model of market development and sales forecasting.	GE matrix; Capacity forecasting method; Method of expert evaluations «Delphi»; formation of «portrait» of the commodity market; comparative analysis; Methods of statistical analysis; SWOT-analysis; PEST-analysis; Demand forecasting method; flexible segmentation method; Method of component segmentation; time series forecasting method.
<b>2 Analysis of competitors:</b> Identification of market leaders; Study of advantages and disadvantages of competitors; comparative analysis of the marketing complex and business processes of competitors; Identification of economic drivers of the industry (size, growth rate of the market, profitability in the industry, number of competitors and consumers, ease of entry).	Porter matrix; Mapping of strategic groups; benchmarking; analysis of checks of competitors; Comparative evaluation method; SWOT-analysis of main competitors; factor analysis of competitiveness of goods and enterprises.
<b>3 Consumer analysis:</b> Identification of consumer preferences; Building a «portrait» of consumers; analysis of consumer complaints; consumer satisfaction, loyalty and quality of customer service.	Survey Observation; Interview focus group; Yandex.Metric, Google Analytics.
<b>4 Client cost analysis:</b> Price analysis enterprise location analysis	Methods for calculating average price; Survey Interview
<b>5 Analysis of consumer convenience:</b> Location analysis Schedule analysis Parking; Transport links Analysis of additional product functions.	Comparative characteristics of trade zones; Survey Interview focus group.
<b>6 Analysis of communications:</b> personnel analysis.	Mystery Shopping; poll.

Despite the fact that for a retailer it is necessary to study consumers as the main factor influencing the activity of the enterprise, do not forget about the traditional concept of 4P marketing, Because the resource potential of an enterprise may not correspond to the possibility of developing a new market segment or introducing new products.

## Research methodology

In the work we proposed combining the directions in accordance with the concepts of 4P and 4C. Table 3 highlights the areas of analysis and the corresponding methods of analysis by combining the 4P and 4C concepts.[30]

**Table 3. Directions and methods of marketing analysis**

Directions of the analysis	Methods of analysis
<b>1 Market analysis:</b> <b>prospects, attractiveness of the market;</b> <b>Assessment of market capacity;</b> <b>Product structure study;</b> <b>a general analysis of the main market participants;</b> <b>Assessment of market demand and supply;</b> <b>segmentation and allocation of niches in the market;</b> <b>Building a model of market development and sales forecasting.</b>	<ul style="list-style-type: none"> <li>• GE matrix;</li> <li>• Capacity forecasting method;</li> <li>• Method of expert evaluations «Delphi»;</li> <li>• formation of «portrait» of the commodity market;</li> <li>• comparative analysis;</li> <li>• Methods of statistical analysis;</li> <li>• SWOT-analysis;</li> <li>• PEST-analysis;</li> <li>• Demand forecasting method;</li> <li>• flexible segmentation method;</li> <li>• Method of component segmentation;</li> <li>• method of time series analysis and forecasting.</li> </ul>
<b>2 Analysis of competitors:</b> <b>Identification of market leaders;</b> <b>Study of advantages and disadvantages of competitors;</b> <b>comparative analysis of the marketing complex and business processes of competitors;</b> <b>Identification of economic drivers of the industry (size, growth rate of the market, profitability in the industry, number of competitors and consumers, ease of entry).</b>	<ul style="list-style-type: none"> <li>• Porter matrix;</li> <li>• Mapping of strategic groups;</li> <li>• benchmarking;</li> <li>• analysis of checks of competitors;</li> <li>• Comparative evaluation method;</li> <li>• SWOT-analysis of main competitors;</li> <li>• factor analysis of competitiveness of goods and enterprises.</li> </ul>
<b>3 Consumer analysis:</b> <b>Identification of consumer preferences;</b> <b>Building a «portrait» of consumers;</b> <b>analysis of consumer complaints;</b> <b>Quality of customer service;</b> <b>consumer loyalty;</b> <b>consumer satisfaction (costs, convenience, communications).</b>	<ul style="list-style-type: none"> <li>• Survey</li> <li>• Observation;</li> <li>• Interview</li> <li>• focus group;</li> <li>• Yandex.Metric, Google Analytics;</li> <li>• Comparative characteristics of trade zones;</li> <li>• Mystery Shopping.</li> </ul>
<b>4 Analysis of product policy:</b> <b>Total sales dynamics;</b> <b>Product range research;</b> <b>Definition of the HVT phase;</b>	<ul style="list-style-type: none"> <li>• BCG matrix;</li> <li>• ABC analysis;</li> <li>• XYZ-analysis;</li> <li>• ADL matrix;</li> </ul>

<b>Positioning of products (goods) and services;</b> <b>research of brand image among competitors;</b> <b>market value studies.</b>	<ul style="list-style-type: none"> <li>• Creation of a positioning map;</li> <li>• Hall test;</li> <li>• The method of free association;</li> <li>• Brand Strength method;</li> <li>• poll.</li> </ul>
<b>5 Price policy analysis:</b> <b>market analysis</b> <b>Assessment of the market price level;</b> <b>price elasticity measurement.</b>	<ul style="list-style-type: none"> <li>• Methods for calculating average price;</li> <li>• Arc elasticity method;</li> <li>• point elasticity method.</li> </ul>
<b>6 Analysis of marketing policy:</b> <b>market analysis;</b> <b>Supplier analysis</b> <b>transport policy analysis.</b>	<ul style="list-style-type: none"> <li>• Market segmentation</li> <li>• Supplier benchmarking</li> <li>• mathematic and statistical methods of optimization of storage and transport passages.</li> </ul>
<b>7 Analysis of communication policy:</b> <b>Efficiency of promotions, advertising campaigns;</b> <b>marketing experiments (product testing, packaging, advertising ideas and forms).</b>	<ul style="list-style-type: none"> <li>• analysis of the relationship of communications costs and profits;</li> <li>• Trial purchases</li> <li>• Hall test;</li> <li>• poll.</li> </ul>

The next methodological task, which is facing the management of the enterprise, is to select a specific method from the above. To do this, it is necessary to highlight the criteria for evaluating the method of analysis. There are different quantitative and qualitative criteria, but for small enterprises the criteria should be simple, intuitive, applicable to all methods of analysis.[31] The most important criterion should be the relevance of the purpose of the analysis. The definition of the goal is an important initial stage of any kind of activity. The goal becomes the criterion by which performance is measured, that is, the effectiveness of the method of analysis used is determined by the success in achieving the objectives. Thus, a number of criteria have been identified by which the method of analysis of marketing activities of small retailers can be assessed:

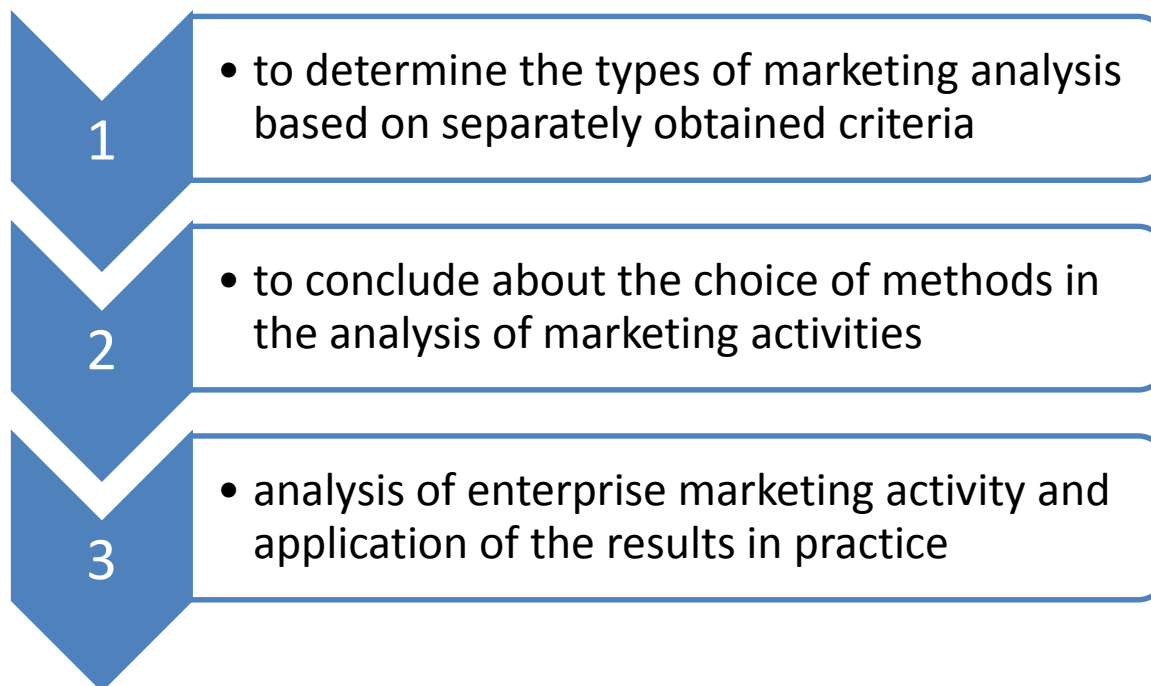
- Compliance with the purpose of the analysis;
- Compliance with resource capabilities;
- Level of reliability of information;
- cost of the method;
- completeness of information.

Also, in order to evaluate the method of analysis, a scale for converting qualitative assessments into quantitative ones is needed, in this paper I propose the following scale:

- absolute compliance with the evaluation criterion of the method - «5»;
- incomplete compliance with the evaluation criterion of the method - «4»;
- partial compliance with the evaluation criterion of the method - «3»;
- complete non-compliance with the evaluation criterion of the method - «2».

The result of the study is a proposal of the algorithm of selection of methods of analysis of marketing activity for a small enterprise, which is presented in Figure 1.





**Figure 1. Algorithm of selection and evaluation of methods of analysis of marketing activity**

In order to select a method of analyzing marketing activity, the enterprise must evaluate the methods of analysis that are used by the enterprise at present. Evaluation of the methods used is carried out according to several criteria (compliance with the purpose of analysis, compliance with resource possibilities, cost of the method, level of reliability of the information, and completeness of information) through expert assessments. If the evaluation shows that the methods used do not achieve the purpose for which the analysis was conducted, are expensive to use, and provide insufficient information or information whose credibility may be challenged, It is necessary to decide on the selection of other methods of marketing analysis.[32] In order to draw up a set of methods of analysis of marketing activity, it is necessary, firstly, to highlight the most problematic areas of marketing activity, secondly, on the basis of table 1 to draw up alternative sets of methods of analysis of marketing activity, Third, evaluate each of the sets of methods of analysis on the selected criteria and choose a set of methods of analysis of marketing activities. The next stage – is the analysis of the marketing activity of the enterprise and the introduction of the results of the analysis into the activity of the enterprise. As already noted above, the correct selection of methods for the analysis of marketing activity depends on the conclusions about the state of the external and internal environment of the enterprise, and therefore management decisions aimed at the management of marketing of the enterprise.

#### **Analysis and results**

Use of the proposed method of selection and evaluation of methods of analysis of marketing activity on the example of LLC «Davr»

«Davr» is a retail business that sells billiard accessories, lamps for the house, as well as household furniture. The company is also represented on the Internet in the form of an online store.

In order to select the necessary methods of analyzing marketing activities, it is first necessary to evaluate the methods of analyzing marketing activities currently used.

This enterprise currently uses only one direction of analysis - consumer analysis and one method of analysis of marketing activity - Yandex.Metrics. helps analyze only consumers, their visits, what pages they visit, what pages they view.

Let's assess the use of Yandex.Metrics on the basis of selected criteria.

**Table 4. - Qualitative evaluation of Yandex. Metric analysis**

Evaluation criteria of the analysis method	Qualitative estimation	Expert assessment
<b>Meeting the purpose of analysis</b>	As this enterprise often updates the product range, due to the lack of market stability, the objectives of the analysis should be: Identification of consumer preferences; competitive research; assortment survey. In this case, the chosen method only provides the opportunity to create a portrait of the consumer and choose methods of communication impact on the consumer, that is, does not match the purpose of the analysis.	2
<b>Resourcing</b>	Yandex.Metric is a fairly simple method of analysis, only the presence of a computer and access to the network is required. For its use you do not need to have special skills, in case of problems when using there are sections «Help» and «Questions and Answers». That is, the method absolutely corresponds to resource possibilities.	5
<b>Method cost</b>	Yandex.Metric is a free resource, which is a great advantage in estimating cost.	5
<b>Level of confidence</b>	Since there is a probability of error of both the meter and the accidental hit of the page, the information obtained in Yandex.Metric can not be completely true.	4
<b>Completeness of the information</b>	In this case, the completeness of the information is related to the purpose of the analysis, if the aim was only to study consumer behavior and site attendance, the information would be quite complete. Although, Yandex.Metric does not provide information about consumer preferences and opinions, it would be possible to conduct a survey on the site. But for the purposes of analysis, the completeness of the information reaches only a partial level of compliance.	3

Thus, this table shows that this method of analysis does not require a cost and corresponds to the resource capabilities of the enterprise, but it absolutely does not correspond to the purpose of analysis, which is the most important factor.

Since the used method of analysis does not provide full information for making informed managerial decisions, it was decided to change the set of methods of analysis of marketing activity of «Davr» LLC.

Table 3 highlighted 7 main areas of analysis - market analysis, competitor analysis, consumer analysis, commodity policy analysis, price policy analysis, marketing policy analysis, communication policy analysis.

Specific conditions of enterprise activity in the market require the choice of only four directions of analysis of marketing activity: analysis of consumers, analysis of suppliers, analysis of competitors, analysis of product policy.

As the management of the enterprise decides on the expansion of the range only on the basis of existing suppliers and established relations with them, the analysis of the activities of suppliers can be excluded.[33]

Analysis of consumer behaviour and compilation of consumer portraits are conducted using Yandex.Metrics, but it is also necessary to analyze consumer preferences.

The objectives of the analysis are therefore:

- Identification of consumer preferences;
- competitive research;
- assortment survey.

For selection of specific methods of analysis we will make a set of alternatives on use of methods of analysis of marketing activity of «Davr» LLC. The sets are evaluated according to the earlier highlighted criteria.

This table shows that the most suitable is set 3, because it has the maximum rating, that is, most fully meets the requirements and capabilities of the enterprise.

**Table 5. - A set of alternatives for the use of methods for analyzing the marketing activity of «Davr» LLC**

The direction of analysis	1 <sup>st</sup> step		2 <sup>nd</sup> step		3 <sup>rd</sup> step	
	Method of analysis	Method assessment	Method of analysis	Method assessment	Method of analysis	Method assessment
Analysis of consumer needs	Observation	4	Interview	3	Poll	5
Competitor analysis	Porter Matrix	3	Swot-analysis	3	Strategic competitor group map	5
Assortment analysis	BKG analysis	3	XYZ analysis	4	ABC analysis	5
<b>Total</b>		<b>10</b>		<b>10</b>		<b>15</b>

Thus, to identify consumer preferences, we will use the survey as it is the most cost-effective method presented, especially if it will be conducted on the website of the enterprise.

For the analysis of competitors we will use the method of analysis such as the construction of a map of strategic groups of competitors, because of all the listed methods of analysis, presented in table 3, this method allows to analyze all activities at once, in our case, these are three directions - lamps for the house, household furniture and billiard accessories.

The third purpose of the analysis is to examine the product range. This analysis can be performed using three methods - BCG matrix, XYZ analysis and ABC analysis. We cannot be sure of the reliability of the information when calculating the market share of the main competitor, so we exclude the BCG matrix. XYZ analysis is more suitable for optimizing inventory. Therefore, we will use ABC analysis.

Thus, having determined the necessary directions of analysis and having selected specific methods of analysis, the analysis of marketing activity of «Davr» LLC was conducted on the basis of the compiled set of methods of analysis of marketing activity.

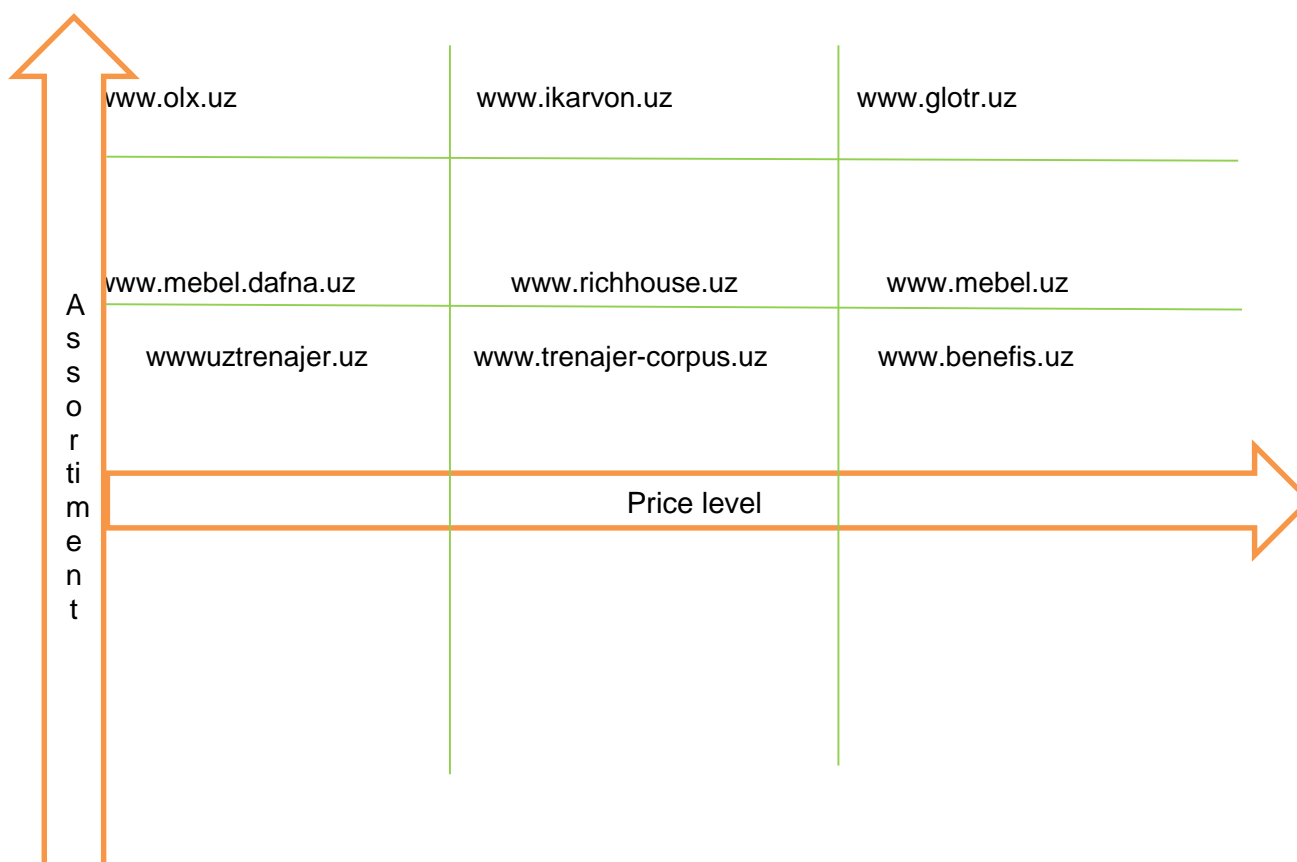
First, in order to check the correctness of introduction to the assortment of such commodity category as furniture, ABC-analysis was carried out.

**Table 6. - Results of ABC analysis**

ABC group	Predicted balance	Real balance	Naming of commodity groups
A	80%/20%	78,5%/54,5%	Pool tables and lighting, table accessories, furniture
B	15%/30%	15,5%/27,3%	Billiard balls and other accessories
C	5%/50%	6%/18,2%	Timers and other sporting goods

ABC analysis confirmed the management's intuitive decision since the furniture is in group A.

Secondly, to determine the development prospects of «Davr» LLC a map of strategic groups of competitors was built. This method of analysis led to the conclusion that the enterprise can try to occupy the segment of furniture with low prices, as there is only one direct competitor. We will build a map of strategic groups of competitors for «Davr» LLC (Figure 2).



**Figure 2. - Map of strategic rival groups**

Thus, this method of analysis led to the conclusion that the enterprise can try to occupy the segment of furniture with low prices, as there is only one direct competitor.

Third, an analysis of consumer preferences was conducted, which showed that consumers are interested in summer and garden furniture, sofas and beds at low and average prices.

The compiled set of methods of analysis of marketing activities in three directions allows us to conclude that

it is necessary to reach the segment with low prices with the offer of sofas, beds and dacha and garden furniture.

Thus, the proposed method of selection and evaluation of methods of analysis of marketing activity allows to increase the quality of marketing activity of small enterprise due to more accurate and complete analysis of external and internal environment of enterprise.[34]

### **Conclusion**

The theoretical bases of analysis of marketing activity are considered and criteria for evaluation of methods of analysis of marketing activity of retail trade enterprise are allocated. One of the main tasks of the marketing department is, no doubt, the analysis of marketing activities. The quality of marketing analysis depends on the methods of analysis. Finding the right method of analysis is a very important and serious task, because it depends on the results of analysis, on the basis of which all further decisions on the management of marketing activities of the enterprise are made. Marketing analysis means gathering information about the activity of an enterprise, studying it in the main directions, using the results obtained to choose the directions of business development in general and its individual components.[35]

Currently, there is a large number of tools of marketing analysis, so the enterprise may have a problem to find the most suitable method of analyzing marketing activities. For this purpose the article offers a method of selection and assessment of methods of analysis of marketing activity.

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In order to select a method of analyzing marketing activity, the enterprise must evaluate the methods of analysis that are used by the enterprise at present. Evaluation of the methods used is carried out according to several criteria (compliance with the purpose of analysis, compliance with resource possibilities, cost of the method, level of reliability of information, completeness of information) through expert assessments. On the basis of the evaluation, a decision is made on the need to change the set of methods of marketing analysis. In order to draw up a set of methods of analysis of marketing activity, it is necessary, firstly, to highlight the most problematic areas of marketing activity, secondly, on the basis of table 1 to draw up alternative sets of methods of analysis of marketing activity, Third, evaluate each of the sets of methods of analysis on the selected criteria and choose a set of methods of analysis of marketing activities.

On the correctness of the selection of methods of analysis of marketing activity depend conclusions about the state of the external and internal environment of the enterprise, and therefore managerial decisions aimed at management of marketing of the enterprise.

On the basis of the proposed methodology the article conducts selection and assessment of methods of analysis of marketing activity for small enterprise of retail trade LLC «Davr».

Based on the conducted analysis, specific recommendations were given for the implementation of marketing activities of LLC «Davr», that is, the developed method allowed to select methods of analysis, on the basis of which the external environment and capabilities of the enterprise were more fully assessed, which, in turn, led to the adoption of informed marketing decisions, that is, increased the quality of marketing management of the retail business LLC «Davr».

### **References**

- Alekseeva A.I., Vasiliev Y.V. Complex economic analysis of economic activity. - M.: KnoRus, 2006
- Bagiyev I.L. Terminology Dictionary of Marketing. - M.: Economics, 2001
- Missorina M.A. Main directions of marketing research of the enterprise. IV International Student Electronic Scientific Conference «Student Scientific Forum» 15 February - 31 March 2012

- Novashina T.S. Financial analysis. - M.: MFPA, 2005
- Nuraliev S.U., Nuralieva D.S. Marketing: Textbook for bachelors. - M.: Dashkov and K, 2013
- Semyonov N.A. Marketing: Training manual. 1st ed. - Tver: TSTU, 2007
- Federal Law of 08.02.1998 N 14-FZ (ed. dated 29.12.2012) «About limited liability companies»
- Karen Beamish, John Williams CIM Revision Cards Analysis and Evaluation. -GB.: Routledge, 2009
- William Winston, Robert E Stevens, Philip K Sherwood, John Paul Dunn Market Analysis: Assessing Your Business Opportunities. - GB.: Routledge, 2013
- Alekseeva A.I., Vasiliev Yu.V., Complex economic analysis of economic activity. - M.: KnoRus, 2006
- Analoui F., Karami A. Strategic management of small and medium-sized enterprises: Textbook. - M.: Unity-Dana, 2012
- Antipov K.V. Basics of advertising: Textbook. - M.: Dashkov and K, 2012
- Bagiyev I.L. Terminology Dictionary of Marketing. - M.: Economics, 2001
- Vasiliev G.A., Gaidayenko T.A. Marketing: Educational manual for universities. - M.: Unity-Dana, 2012
- Zhukov B.M., Romanov A.A., Basenko V.P. Marketing: Training manual. - M.: Dashkov and K, 2012
- Kent T., Omar O. Retail: Textbook. - M.: Unity-Dana, 2012
- Kotler F. Ten deadly sins of marketing. - M.: Alpina Publisher, 2010
- Kotler F., Berger R., Bichoff N. Strategic management by Kotler: Best techniques and techniques. - M.: Alpina Publisher, 2012
- Koshik A. Web analytics 2.0 in practice. Subtleties and best techniques. - K.: Dialectics, 2011
- Kurakov A., Raicin M. Effective Website Promotion (SEO). - M.: SamIzdat, 2011
- Lukas Y.A. Business intelligence as a component of security and business development: training manual. - M.: FLINTA, 2012
- Lukashevich V.V., Paramonova T.N., Kراسиuk I.N. Marketing of trade enterprise: Textbook for bachelors. - M.: Dashkov and K, 2013
- Maslova T.T., Kovalik L.N. Marketing. Training manual. 1st edition. - SPb.: Peter, 2011
- Melnik M.V., Egorova S.E. Marketing analysis. - M.: Reed Group, 2011
- Minko E.V., Karpova N.V. Marketing: training manual. - M.: Unity-Dana, 2012
- Morozova Yu.V., Grishina V.T. Marketing in industries and spheres of activity: Textbook. - M.: Dashkov and K, 2012
- Novashina T.S. Financial analysis. - M.: MFPA, 2005
- Panov A.I., Korobeynikov I.O., Panov V.A. Strategic management: training manual. - M.: Unity-Dana, 2012
- Farrux Qodirov / Econometric modeling of medical services in the territories / International Conference on Information Science and Communications Technologies ICISCT 2022 Applications, Trends and Opportunities 28th, 29th and 30th of September 2022, Tashkent, Uzbekistan.
- Qodirov Farrux Ergash o'g'li. Econometric modeling of the development of medical services to the population of the region / Berlin Studies Transnational Journal of Science and Humanities. 2022/5/9. 1.1 Economical sciences.
- Qodirov Farrux Ergash o'g'li. Sonli qatorlar. (musbat hadli qatorlarning yaqinlashish teoremlari. leybnis teoremasi, absolyut va shartli yaqinlashish.) 2022/2/17. Ta'lim va rivojlanish tahlili onlayn ilmiy jurnali strаницы 137-151.
- Ф.Э.Кодиров, О.Д.Дониёров. Эффективные модели развития медицинского обслуживания населения кашакадъинской области. 2022. Журнал Символ науки номер 7-2. страницы 15-17.
- Farrux Qodirov, Xudayar Muhitdinov. Features that increase efficiency in the provision of medical services and factors affecting them. 2022/7/30 журнал Ta'lim va rivojlanish tahlili onlayn ilmiy jurnali 2 Том, 7 Номер strаницы 192-199.

- Skrynnikova I.A. Marketing in the service sector: Training manual. - M.: Moscow State University Publishing House, 2012
- Tsakhaev R.K., Murtuzalieva T.V. Marketing: Textbook. - M.: Dashkov and K, 2013
- Cherednichenko Y.V. Marketing on the Internet. Site that earns. - SPb.: Peter, 2011
- Eriashvili N.D., Pichurin I.I., Obukhov O.V. Basics of marketing. Theory and practice: training manual. - M.: Unity-Dana, 2012

# FEATURES OF THE FORMATION OF THE AGRO-TOURISM MARKET IN THE REGION

Amirov Akmal Merojovich,  
Samarkand State University, Uzbekistan.  
E-mail: [akmalamirov75@samdu.uz](mailto:akmalamirov75@samdu.uz)

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## ABSTRACT:

: One of the priority directions of sustainable development of the economy of the regions of Uzbekistan is the strategy of diversification of industries and sectors, which requires the combination of traditional specialization sectors with new sectors. In this regard, the integration of tourism and agrarian sectors according to the symbiotic description is an important factor of modern development. In the system of the current world tourist market, the direction of agrotourism occupies a special place and is becoming one of the leading and actively developing sectors of the tourism market.

The article describes the nature of agrotourism products and the process of formation of demand and supply for agrotourism services. A sociological survey method was studied to assess the conjuncture of the agrotourism market and its condition.

**Keywords:** agrotourism, agrotourism product, agrotourism services, demand and supply of agrotourism services, a social survey of the agrotourism market assessment.

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## Introduction

The rapid development of agrotourism in the world leads to the transformation of all directions of economic activity in the field of tourism as an important factor of social and cultural development that serves to increase the well-being and living standards of the population in rural areas. "In economically developed countries, agrotourism makes up 10-12% to 20-30% of the total income of the tourist industry, and in regions rich in natural and ecological diversity, where agriculture has historically developed based on national traditions, 35-45% of tourists are in rural areas<sup>115</sup>. they prefer to rest." From this point of view, determining the regional characteristics and prospective directions of agro-tourism development in our country is of urgent importance.

Several scientific types of research aimed at determining the demand and supply of agrotourism services, classifying the principles, factors, and stages of agrotourism development, and researching agrotourism development models are being carried out based on the experiences of effective development of agrotourism in the world. Therefore, it is important to research scientific problems such as evaluating the effectiveness of agrotourism enterprises, forming agrotourism infrastructure, improving the quality and competitiveness of services in the field, and improving the methods of agrotourism potential assessment.

Today, special importance is being paid to increasing the quality and competitiveness of agrotourism services, which are considered to be an important factor in the sustainable development of agrotourism, more complete and effective use of existing agrotourism potential in the republic. "One-sided economy will not be sustainable. Therefore, in our country, measures are being taken to develop the economy on a large scale through structural reform. In particular, tourism is designated as one of the driving sectors, and the necessary conditions

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<sup>115</sup> <https://www.unwto.org/news/unwto-invites-applications-for-best-tourism-villages-2022>



are being created."<sup>116</sup> To solve these tasks, it is urgent to deepen scientific research in areas such as evaluating the competitiveness rating of the development of the agro-tourism area, classifying the indicators representing the level of agro-tourism potential according to criteria, forming the agro-tourism image of the regions, and improving the regional agro-tourism development model.

## II. Literature Review

General issues related to tourism, rural tourism, and agro-tourism activities are considered in the works of many foreign scientists, including Philip S., Hunter S. [15], Goeldner Ch.R., Richie Dj.R. [6], Novelli M. [13] and research in the works of others. They proved the need to assess the tourism potential, natural resource potential, and realistic environmental, economic, social, periodicity, and complexity characteristics of the place for the organization and development of tourism.

Researching the development of agrotourism as an object of scientific research requires theoretical determination of its conceptual foundations. When creating the terminological basis of this type of tourism, it should be noted that the legal basis of tourism and agriculture does not contain terms defining the essence of agrotourism. In most scientific literature, agrotourism is considered synonymous with rural tourism, and there is no single interpretation of these concepts. The concept of agrotourism is defined by several modern "Associations". In particular, the International Economic Development Association (IED) gives the following definition: "agrotourism is a sector of the tourist network that uses natural, cultural-historical and other resources in rural areas and its specific features to create a comprehensive tourist product"[20].

Jensen-Verbeke M. [8] "Rural tourism and agritourism, like any economic activity, seeks to offer and provide products and/or services. Rural and agro-tourism product is a complex product, and their simple definition is reflected in the description of their structural elements. Wiatrak A.P. [19] says that "a rural or agro-tourism product can be characterized as a separate product or set of products determined by nature, history, and human activity and demanded by tourists"

. Streifeder T. [17] in his scientific research, he puts forward his theoretical views that "agritourism and other types of tourism in rural areas are specific concepts of being a guest in rural tourism, which differ significantly depending on the authenticity of the offered tourist product and the level of participation in agricultural life". Gladstone Dj., Morris Dj., Jacobidu Dj. [5] according "a functioning farm is the main sign of agrotourism, and tourism is an additional source of income for them". Arroyo, K.G. [3] in his research conducted in the regions of Missouri and North Carolina, he puts forward the idea of agritourism as "agricultural activities carried out for entertainment or educational purposes on a working farm or another agricultural enterprise".

Srisomyong, N. [16] defines agrotourism in his research as follows: "agrotourism is a type of farm diversification that can be developed as a supplement to agriculture. It provides the villagers with an additional secondary occupation and it provides self-employment for a small amount of money. Taiwanese experts Kuo N., Chiu Yu. [12] - "symbiotic relationship between tourism and agriculture (mutually beneficial relationship between sectors) found in agrotourism is considered an important element of environmentally and socially responsible tourism in rural areas. Rural hospitality offers new jobs and income opportunities for the villagers. Also, cultural exchange with agricultural methods, artistic heritage, handicrafts, and culinary traditions find their expression directly in agrotourism.

Based on the scientific-theoretical approaches of different positions above, we define agrotourism. In our opinion, agrotourism is participation in the process of production and processing of agricultural products for recreation, recreation, knowledge, viewing, and learning, as well as the historical, cultural, and ecological environment, noteworthy. is a tourist activity that provides an opportunity to see or enjoy places.

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<sup>116</sup> Report of the meeting of the video selector on measures to further increase the domestic and foreign tourism potential of the country under the chairmanship of the President of the Republic of Uzbekistan. New Uzbekistan. September 19, 2022

## **Methodology.**

The methodological basis of the research is the materials of international scientific conferences of leading scientists dedicated to the problems of sustainable development of regional socio-economic systems and rural areas, modern economic research in the field of agrotourism, and analysis and evaluation of sustainable development. Comparative analysis, sociological survey, and systematic approaches were also used in studying the problem.

## **Analysis and Results**

The need to solve urgent problems in the national market of tourist services is related to the state of its development: insufficient level of supply, on the one hand, and low solvent demand in the domestic market, on the other; relatively high prices and low quality for these services.

At the present stage of agrarian reforms in Uzbekistan, the territorial-sectoral concept of the development of agro-economy is being replaced by a new socially and innovation-oriented development model. The basis of this strategy is the establishment of integrated relationships between agriculture, the social sphere of the village, and other related industries, such as harvesting, processing of agricultural products, etc., which ensure the sustainable development of the region.

In this regard, the question is raised about the interaction of the agricultural and tourist markets, which would not only help to establish agricultural production, increase the income of the villagers, ensure their employment in rural areas, but also solve the problem of the ever-growing demand for new tourist services. Such interaction gives rise to a completely new kind of tourist service - agro-tourist service, and, as a result, a new agro-tourist market.

The developing agro-tourist market should be characterized by an optimal combination of "price-quality" parameters, and a tourist flow of vacationers while fully maintaining the volume of traditional tourist services. In addition, a new range of services is being formed in the agro-tourism business, such as health and fitness programs, fishing and hunting tours, environmental services, sports and entertainment routes, etc. with its regional and intersectoral specificity.

In international practice, the agro-tourist market was formed, first of all, as a means of marketing agricultural products to tourists during the threatening crisis of overproduction. As a result, each national agritourism market has some unique features, which were later called models.

Currently, agrotourism is successfully developing in many countries of the world, including European ones. The most famous of them include Italy, Germany, Austria, Switzerland, France, Spain, and a number of others. In Europe, agricultural tourism received public recognition in the second half of the last century.

It is known that agrotourism abroad has gone through several stages in its development from a small family business in the countryside (stage I) to luxurious rural hotels with 5 stars (stage II) and specialized tourist villages (stage III) [11]. It is assumed that agrotourism in the next fifteen years will also develop in stages. However, along with the development of the first two stages, it is expedient to plan and the third is the creation of regional agro-tourist complexes. Then the investment in such projects should take place on a parity administrative basis, including through the creation of an appropriate state structure, similar to those that have already been created in several countries [18].

Today, the demand for tourism services has changed the very concept of rural tourism in Europe, which ceases to be a side activity for many entrepreneurs and becomes the main one. The World Tourism Organization has defined agro-tourism as one of the promising sectors of the leisure industry, which not only allows vacationers to spend time in picturesque and ecologically clean corners of the countryside but also offers agricultural formations and rural residents a real development alternative [1]. For most countries, the development of the tourism industry has become one of the priority areas of economic activity.

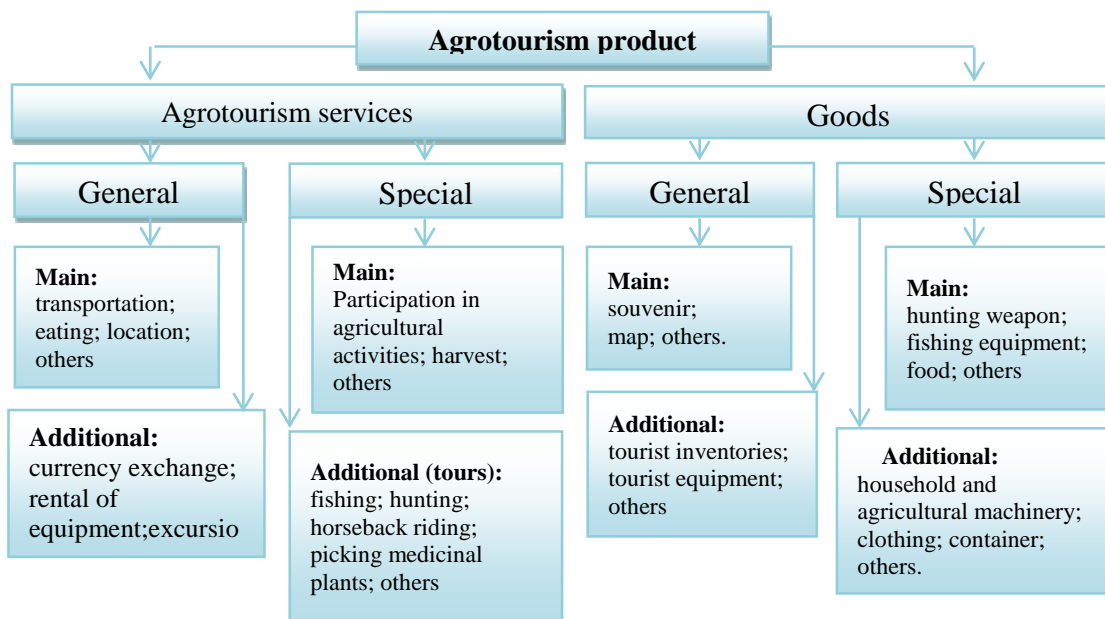
The global agritourism market is estimated to grow at an annualized rate of almost 2% to US\$4.33 billion during the forecast period 2022-2027. "YoY growth rate (YoY) in 2022 is estimated at 0.2%" by the end of 2027[21].

It is known that agrotourism is a new direction in Uzbekistan, and its initial stage of formation began with the attention of our state to the development of tourism in rural areas. The announcement of 2009 as the "Year of Rural Development and Prosperity", 2013 as the "Year of Prosperous Living" in our country, and the adoption of the "Prosperous Village" program in 2018 create great opportunities for the development of tourism in rural areas.

Using these opportunities, agrotourism is developing in the suburbs of Samarkand and the foothills. This, in turn, creates the basis for the increasing flow of tourists (domestic tourism), as well as the formation of an additional source of income for the local population. The advantage of this direction over other types of tourism is that it does not require large investments and, based on the available opportunities, encourages farmers - farms, small business entities, and families to actively engage in this business and create new jobs.

For agrotourism to become a rapidly developing, highly organized, and profitable branch of the modern tourism industry, it is necessary to study the available reserves in the regions. Therefore, it is appropriate to determine the state and level of development of rural areas. According to statistical data, there are more than 80 rural settlements within 14 municipal districts in the Samarkand region. The existence of stratification between the living standards and incomes of urban and rural residents causes the rural population to migrate to urban areas. The fact that most of the rural population is engaged in agriculture does not allow them to expand economic relations and move from the production sector to the service sector. Despite this, the majority of rural citizens are engaged in the production and delivery of ecologically clean food products such as dairy and meat products, vegetables, fruits, and berries, working in sectors such as agricultural production, farming, and animal husbandry.

In the modern world, the use of ecologically clean products in the diet is becoming more and more important. Because in the conditions of strong competition, enterprises are using more artificial and chemical agents, preservatives, and stabilizers in the production of food products, producing cheaper and more competitive products. This, in turn, harms the quality of food of the population. According to scientists, this factor has a greater impact on the population of the capital, metropolis, and large cities. And less for rural people, because the products they consume are environmentally friendly and safe. In such conditions, the direction of agrotourism is considered one of the promising directions for the development of rural areas, it helps the development of tourist destinations and leads to the formation of a new type of activity in rural areas. A set of goods and services in terms of transport, accommodation, and catering services necessary to satisfy the needs of a tourist during his stay in rural areas is called an agro-tourism product. To describe the nature of the agro-tourist product more broadly, we present its structural structure (Figure 1).



### Figure 1. The structure of the constituent elements of the agrotourism product

The mechanism of the market conjuncture is formed based on the law of demand and supply, which ensures the market balance in the interaction between the following factors: price, demand, and supply.

Demand for agrotourism services is an ideal need and a real possibility of purchasing a certain amount of services by the buyer. Demand and consumption are not the same, they differ qualitatively and quantitatively and may not coincide with each other in terms of time and space. Demand functions as a stage of reproduction in the form of market category and exchange of services.

And the offer of agrotourism services is the ideal readiness and real possibility of providing certain services to the market by producers. Supply, like demand, is inconsistent across time and space. Because each agrotourism product must first be produced or processed, and only then put on the market.

We conducted an "online" sociological survey in the Samarkand city and regional districts in January-March 2022 in cooperation with the General Directorate of Tourism of the Samarkand region to study the demand for agrotourism services among its residents to determine the state of the agrotourism market situation in the Samarkand region.

#### 1. Demand for agrotourism services

It is known that the main consumers of the demand for agro-tourism services are considered to be urban residents, including students, workers, intellectuals, pensioners, and other professionals. 300 respondents (208 of them men and 92 women) took part in the survey. 77% of the respondents who took part in the sociological survey noted that they have information about agrotourism and that this direction will occupy a significant place in the tourism industry of our republic in the future. According to the age structure of the respondents, 19-25-year-olds (29%) and 36-45-year-olds (28%) stated that it is desirable to develop agrotourism in rural areas. But respondents aged 26-35 (7%) had a passive attitude towards the need to develop agrotourism. The intelligent part of the population and those engaged in manual labor (80.0%) favored the desirability of agrotourism development in rural areas. According to the results of a sociological survey, the majority of vacationers said that they like to spend their vacations in mountain areas (33% of respondents) and water bodies (38% of respondents).

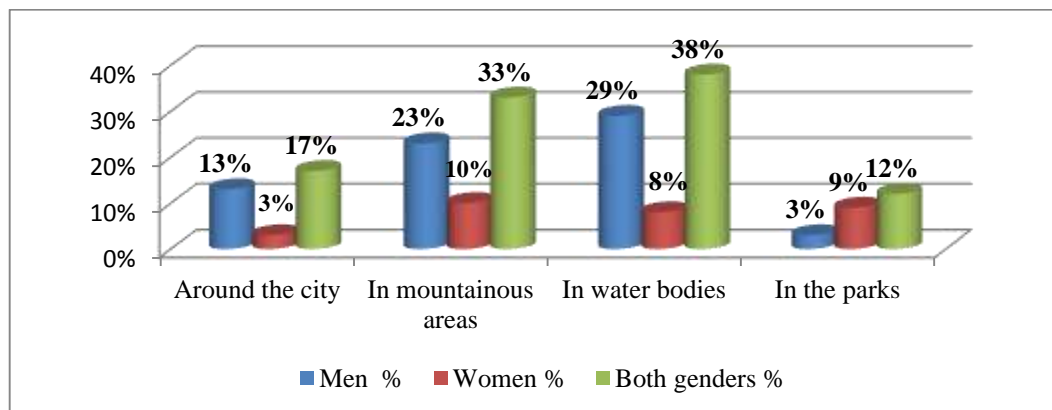


Figure 2. Places where the respondents expressed a desire to relax

Therefore, in our opinion, based on the demand of agrotourism consumers, it is appropriate to strengthen agrotourism services, namely "guest houses", camping, motels, accommodation, catering, and excursion services, near the mountainous regions and water bodies of the region. Such opportunities are available in Kushrabat, Urgut, and Akdarya regions. It is better in Jambay and Nurabad districts. It is important to consider these opportunities in the concepts of socio-economic development of district administrations.

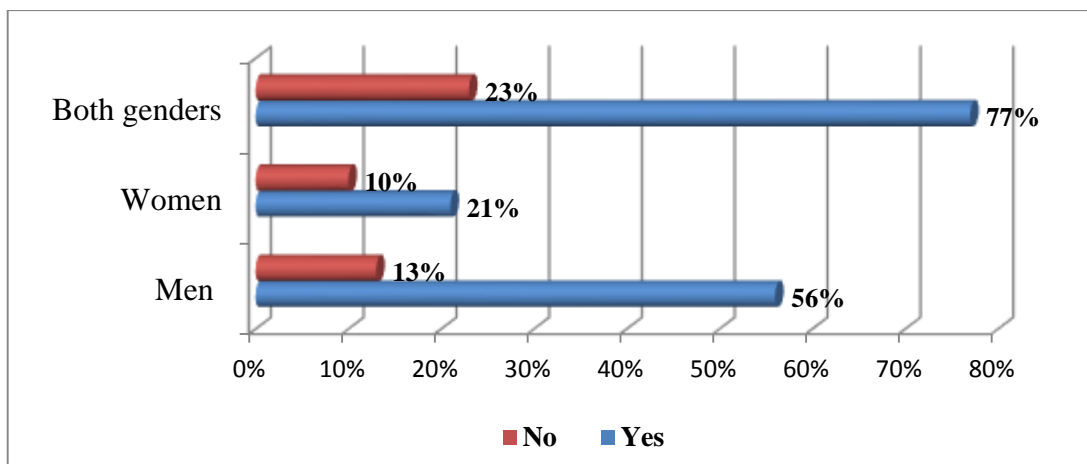
The demand for agrotourism services is mainly formed in the form of "family" or "community". We can see this from the results of the conducted survey. 39.0% of the respondents admitted that they like to relax "with my

family", and 61.0% liked to relax in a group "with friends, acquaintances" (Table 2). From this, we can conclude that touristic companies should take into account the above feature when organizing agrotourism services.

**Table 2. Travel composition of respondents**

Answers	Respondents		
	Men	Women	Both genders
Alone	-	-	-
Me, with my child	-	-	-
with my family	27%	12%	39%
with friends/acquaintances	42%	19%	61%
With an organized tour group	-	-	-

Respondents asked, "have you heard about the agrotourism direction of tourism?" - 77% of them said "yes", 23% said "no". This, in turn, means that the residents of the city are aware of this direction of tourism and that agrotourism occupies an important place in the economy of the region. The results of this question are shown in Figure 3 below.



**Figure 3. Answers to the question "Have you heard of agrotourism"?**

In our opinion, agrotourism is not only a direction of tourism, but it serves to provide employment to rural residents, improve lifestyle and quality, continuously improve the professional skills and qualifications of labor resources, and restore people's mental and physical health. In the questionnaire, "How does agrotourism benefit people?" - the answer of the respondents to the question was as follows: 10.0% - "helps to improve human health", 16.0% "helps to increase working capacity", 27.0% "ensures closeness between man and nature", 31, 0% answered that it "allows consuming ecologically clean and cheap products", 13.0% answered that it "allows getting acquainted with another culture, tradition, and customs." The results of the question are presented in Table 3.

**Table 3. Answers to the question "How does agrotourism benefit people?"**

Answers	Respondents		
	Men	Women	Both genders
helps improve human health	7%	3%	10%

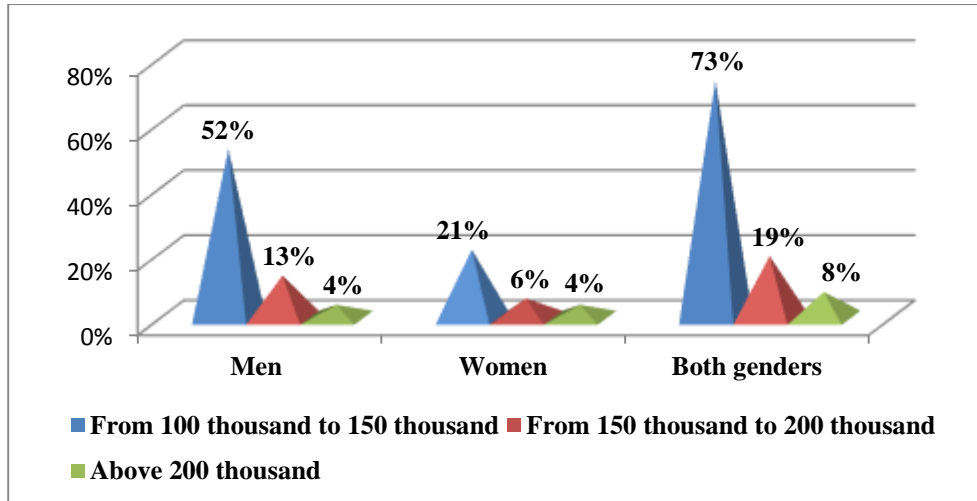
help to increase work ability	10%	6%	16%
provides closeness between man and nature	17%	10%	27%
provides an opportunity to consume environmentally friendly and cheap products	26%	5%	31%
provides an opportunity to get acquainted with other cultures, traditions and customs	7%	6%	13%
I don't think this field is very lucrative	3%	-	3%

"Which of the agrotourism services do you like?" - to the question, their answers were as follows: 32.0% - "eat organically pure products", 33.0% - "poultry, animals, fishing", 23.0% - "ride a horse", 3.0% answered "participation in the cultivation and harvesting of agricultural products", 3.0% "participation in the process of caring for domestic animals" and 6.0% "participation in the process of processing agricultural products". This situation indicates that consumers of agrotourism services mainly focus on active recreation. So, based on the demand for agrotourism, it is appropriate for tourist companies to offer their services. The results of the question are presented in Table 4.

**Table 4. Answers to the question "which of the agrotourism services do you like"?**

Answers	Respondents		
	Men	Women	Both genders
eating organically pure products	23%	9%	32%
poultry, animal, fishing	30%	3%	33%
riding a horse	10%	13%	23%
participation in growing and harvesting agricultural products	-	3%	3%
participation in the process of caring for pets	3%	-	3%
participation in the processing of agricultural products (processing of poultry and livestock products, canning of fruits and vegetables, etc.)	3%	3%	6%

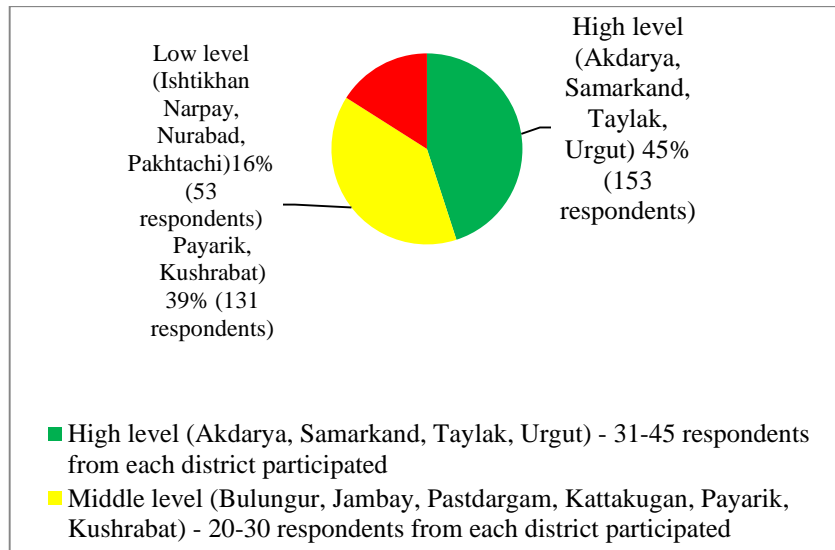
The price of the package of agrotourism services plays an important role in the formation of the demand for agrotourism services. "Which of the prices of agro-tourist services (1-day tour package) is best for you?" the answers to the question were as follows: those who said from 100 thousand to 150 thousand soums - 73.0%, those who said from 150 thousand to 200 thousand soums - 19.0%, and those who said more than 200 thousand soums - 8.0%. It can be concluded from the answers that it is appropriate to form and recommend tour packages that satisfy consumers. The response results are shown in Figure 4.



**Figure 4. Answers to the question “which price of agrotourism services (1-day tour package) is best for you”**

*Offer of agrotourism services*

Providers of agrotourism services are mainly residents of regional districts, and they include farmers, farmers (private farms), entrepreneurs, and other professionals. 390 respondents (337 of them men and 53 women) took part in the survey. According to the results of the sociological survey, we can see that the number of entities offering tourist services (153 respondents) is high (45%) in the Akdarya, Samarkand, Taylak, Urgut districts of the region. In Bulungur, Jambay, Pastdargam, Kattakurgan, Payarik, Kushrabat districts, the number of tourist service providers is relatively small (131 respondents), they make up 39% of tourist service providers at the regional level. In Ishtikhan, Nurabad, Narpay, and Pakhtachi districts, the participation of respondents in offering tourist services is low, it's 16% of the total indicator of the region or 53 people.



**Figure 5. Participation weight of entities offering agrotourism services by region**

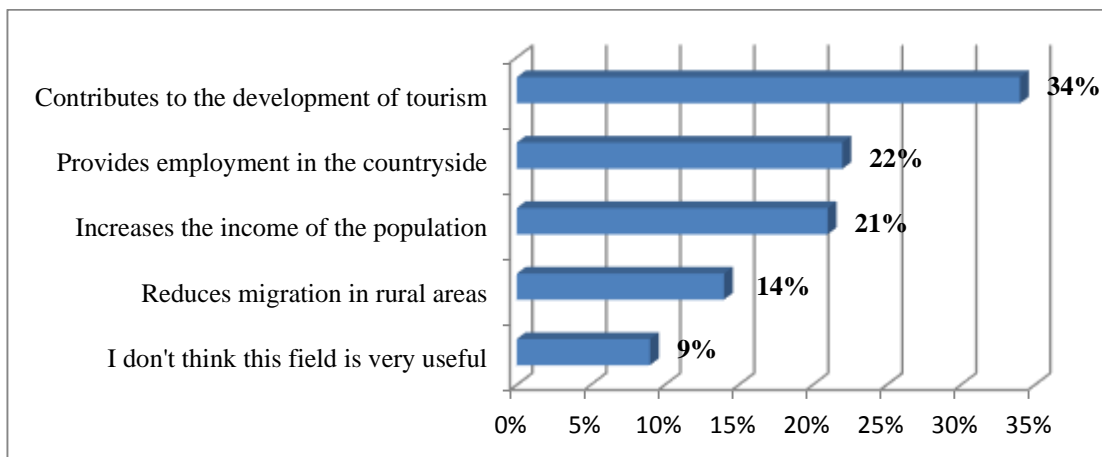
According to the results of the sociological survey, to increase the offer of agro-tourism services, it is necessary to develop and implement special programs for the expansion of agro-tourism services in the districts of Kushrabad, Ishtikhan, Nurabad, which have high agro-tourism potential of the region.

According to the age structure of the respondents, 18-30-year-olds (32%), 31-49-year-olds (51%), and 50-60-year-old respondents (17%) participated in the survey. According to the results of the sociological survey, 37% of the respondents are farmers, 9% are farmers (private auxiliary farms), 31% are entrepreneurs, and 23% are people from other professions was emphasized.

**Table 5. Have you heard about agrotourism (or rural tourism, agrarian tourism), which is one of the directions of tourism?**

Answers	Respondents		
	Men	Women	Both genders
	%	%	%
Yes	69%	10%	79%
No	17%	3%	21%
Total	86%	14%	100%

In the survey, "How do you think the development of agrotourism will benefit the economy of the region?" - the answer of the respondents to the question was as follows: 34.0% "Contributes to the development of tourism", 22.0% "Employs in the village", 21.0% - "Increases the income of the population", 14.0% "The village reduces migration in their territories", 9.0% answered, "I don't think this field is very useful". The results of the question are presented in Figure 6.



**Figure 6. How do you think the development of agrotourism will benefit the economy of the region?**

In our opinion, agrotourism contributes not only to the development of the tourism industry or to the increase of employment and income of the population, but it also serves to increase the efficiency of agricultural production, the formation of new innovative ideas, and experience in economic entities. 82% of the respondents who took part in the sociological survey expressed their desire to engage in agrotourism activities and said that they can offer the following types of agrotourism services: 39.0% - "provide a guest house", 17.0% - "arrange a meal with pure ecological products", 10.0% - "I will ensure participation in the process of growing agricultural products", 10.0% - "I will ensure participation in the process of home care", 8.0% - "I will participate in the process of processing



agricultural products" provide", 7.0% answered "I organize horse riding" and 4.0% answered, "I organize fishing" (Table 6). This situation indicates that a large part of the offer of agro-tourism services is made up of basic services (56%), that is, accommodation and catering services. Therefore, based on the offer of agrotourism services, it is appropriate for regional (local) management bodies and official organizations to take appropriate measures for the effective organization of agrotourism.

**Table 6. If you were engaged in this activity, which of the agritourism services would you provide?**

Answers	Respondents		
	Men	Women	Both genders
I provide a "guest house".	37%	2%	39%
I will arrange meals with pure organic products	14%	3%	17%
I organize fishing	4%		4%
I will organize a horse ride	7%		7%
I provide participation in the process of growing agricultural products (during the harvest season).	8%	2%	10%
I provide participation in the processing of agricultural products	5%	4%	8%
I provide participation in the maintenance process of the house air	7%	3%	10%
Other services	4%		4%

According to the results of the sociological survey conducted above, it can be concluded that there is a demand for agro-tourism services in the region. As a result, it should correspond to the conditions of the main directions that ensure the transition to the sustainable development trajectory of the Samarkand region, the conditions of economic processes that allow for improving the living standards and quality of the population, as well as to preserve and protect the ecology of the region.

### Conclusion

In the long term, agritourism in Uzbekistan should turn into a full-fledged and developed sub-cluster, deeply integrated into both the regional tourism cluster and the international one. Most of the subjects of the region will come out of the shadows and will work legally, providing guests with a variety of tourism services, high-quality products at a reasonable price. Regional and local authorities will actively support rural tourism initiatives and create a favorable business climate (friendly legislation, support programs, and promotions).

The strategic goal of the socio-economic policy for the development of the territory is to ensure an increase in the level and quality of life of the people living on it. The achievement of this strategic goal is ensured by the main goal and objectives of the state policy in the field of agritourism. The main goal of the policy is to create a modern, highly efficient, competitive, and profitable agro-tourism subcluster in the region based on the effective use of available resources in rural areas, subject to their conservation, conservation, and reproduction, as well as attracting maximum additional resources from the environment external to the subcluster.

To improve the situation, rural tourism entities also need to provide the following support:

- to develop a brand and corporate identity for "Agritourism of the Region" and use it in all activities to promote the subcluster of agritourism outside the region and in the domestic market;

- organize public regional competitions aimed at popularizing rural tourism, in particular, holding new authentic event events;
- provide information support for the development of agritourism through the holding and financing of PR events (exhibitions, presentations, test tours, promotions, event events), the release of advertising printing products, the inclusion of information about rural guest houses and "green routes" in regional tourist catalogs, the creation specialized sites offering services in the field of rural tourism, etc.;
- to promote the competent dissemination of information about agritourism services via the Internet using regional, national and international tourism information resources.

## REFERENCES

- Adamova KZ Cluster policy as a tool to increase the competitiveness of the national Adamova KZ Cluster policy as a tool to increase the competitiveness of the national economy / KZ Adamova // Bulletin of the Saratov State Technical University. - 2009.- No.38.- p.172-177.
- Aleksandrova, A.Yu. Tourist clusters: content, boundaries, mechanism of functioning / A. Yu. Aleksandrova // Modern problems of service and tourism. 2007.No.1.
- Arroyo, C. G, Barbieri C., & Rich S. R. (2013). Defining agritourism: A comparative study of stakeholders' perceptions in Missouri and North Carolina. *Tourism Management*, 37(August), p-45.
- Durovich A.P. Fundamentals of marketing: a guide / A.P. Durovich. Minsk: Izdvo Grevtsova, - 2009 – p.96.
- Gladstone, J., & Morris, A. (2000). Farm accommodation and agricultural heritage in Orkney. In F. Brown (Ed.), *Tourism in peripheral areas: Case studies* (p. 91–100).
- Goeldner Ch.R., Ritchie J.R. *Tourism: Principles, Practices, Philosophies*. New Jersey: 2006. p.590;
- Gulyaev V.G., Selivanov I.A. *Tourism: Economics, Management, Sustainable Development / Textbook M: Soviet Sport 2008*.
- Jansen-Verbeke M. (1990): Znaczenie turystyki na terenach wiejskich w Europie. *Probl. Tur.* 47/48, 1/2: p.36-48.
- Katsubo S.P. Some aspects of the development of agro-ecotourism in the Republic of Belarus // Organizational and legal aspects of reforming the agro-industrial complex: Materials of the international scientific and practical conference (Gorki, November 11-12, 2004) / Managing editor V.S.Obukhovich.Gorkm Bel.state.Agricultural Academy, 2005.- Part 1. p. 112-115
- Kleiman A.A. Hotel business in an unstable economy: state and possible development prospects (article) // Bulletin of the National Academy of Tourism: Russian Scientific Journal. - No. 1(13) January-March 2010. p.34-37.
- Krivtsov N.V. Historical guide. Cyprus is the island of gods and saints. - M.: "Veche", 2001.
- Kuo, N., Chiu, Y. (2006): The assessment of agritourism policy based on SEA combination with HIA. *Land Use Policy*, 23:p.560– 570.
- Novelli M. (Ed.) *Niche Tourism: Contemporary Issues, Trends and Cases*. London: 2005. p.264;
- Panyukov, A.I. *Agritourism: an introductory course / A. I. Panyukov, Yu. G. Panyukova*. - M. : Prospect, 2012. - 152 p.9.5.
- Phillip, S., Hunter, C., Blackstock, K. A typology for defining agritourism. *Tourism Management*, 31: NY: 2010.p.754;
- Srisomyong N., *AGRITOURISM, RURAL DEVELOPMENT AND RELATED POLICY INITIATIVES IN THAILAND/ 2010*, p-33
- Streifeneder, T. (2016): Agriculture first: Assessing European policies and scientific typologies to define authentic agritourism and differentiate it from countryside tourism. *Tourism Management Perspectives*, 20: p.51– 264.

- Voronina M.A. On some alternative ways of managing rural areas in the EU countries (the experience of Austria) // Regional problems of sustainable development of rural areas: collection of articles of the IV International NPC. Penza: RIO PGSKhA, 2007.
- Wiatrak A.P. (1998): Rynek i produkt w turystyce wiejskiej. In: Marketing i produkty markowe w turystyce wiejskiej. Konferencja Naukowa, listopada 1998. SGGW, Warszawa. Ed. A.P. Wiatrak. Wyd. Centrum Doradztwa i Edukacji w Rolnictwie, Poznań:p. 7-19.
- Program-targeted approach to the social development of the village: 2003-2009. - M.: FGNU "Rosinformagrotech", 2009. p.112.
- [https://translated.turbopages.org/proxy\\_u/en-ru.ru.97fbeb8d-63070d1a-eab0a925-74722d776562/https/www.marketreportsworld.com/enquiry/request-sample/18246010](https://translated.turbopages.org/proxy_u/en-ru.ru.97fbeb8d-63070d1a-eab0a925-74722d776562/https/www.marketreportsworld.com/enquiry/request-sample/18246010)

# RESTAURANT BUSINESS DEVELOPMENT. THE CASE OF UZBEKISTAN

Ziyavitdinov Habibullo Hamidovich  
Doctoral Student, Bukhara State University, Uzbekistan

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## ABSTRACT:

The scientific article presents a comprehensive study of the system of influence of the restaurant business on the economic development of the country, in particular, in Uzbekistan.

**Keywords:** restaurant business, economy of Uzbekistan, impact assessment, public catering, restaurant business, economic development, economic development of the country.

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## Introduction

The restaurant business is one of the few areas of the domestic economy in which market relations have been fully manifested almost from the very beginning of economic reforms, and today, a decade later, this is the most dynamically developing and highly profitable, and therefore promising for investment and attractive for entrepreneurs market segment services of our country.

Currently, in our country there is an intensive development of the restaurant business. This process affects almost everyone, since the consumers of restaurant services are to a large extent all residents and guests of the city. Modern life is unthinkable without relaxing in a cozy cafe or restaurant. Employees of many enterprises and organizations use the services of restaurants, cafes, buffets during the working day. In recent years, an increasing number of people choose restaurants of various levels and classes as a venue for banquets on the occasion of any special events. New catering establishments are popping up all over the place, varying both in size and in the type of services provided.

## Literature reviews

The theme of the restaurant business is devoted to a fairly large number of publications, both foreign and domestic authors. Among the most significant foreign publications, we should mention the works of J. Walker, B. Marvin, K. Egerton-Thomas, F. Kotler, JI. van der Wagen, M. Palli, the development of the Association of Schools of Hospitality and Catering in Europe (EURHODIP), as well as the work of the authors T. Klyashchitskaya, A. Pikalev, S. Skobin. G. Papiryan and others, devoted to various aspects of this issue: pricing policy, where to start and how to succeed, the restaurateur's ABC, how to increase business profitability, etc.; editorial collections of articles by domestic and foreign authors are presented, declared as a reference book or an encyclopedia of a restaurateur and covering certain aspects of the restaurant business.

The article uses methods of systematic analysis, grouping, induction-deduction, logical and comparative analysis, abstract-logical thinking, statistical and factor analysis. The data of this research was obtained from official sources, and based on the comparative analysis of the scientific theoretical views of well-known economists on the role of services in the development of the economy, the generalization of foreign experiences and the results obtained on the achievements made in our country, it was achieved to study the improvement of the quality and competitiveness of services in restaurants.

## Results

The category "restaurant service" should be understood as a service that brings considerable pleasure and satisfaction not only to a particular client, but also to the service personnel and the state as a whole. After analyzing the scientific and educational literature, it should be noted that the restaurant business is the most important type of activity in the field of catering, which brings income or other personal benefits to the owner, and also has a serious impact on the economic development and improvement of the country as a whole.

A modern restaurant in Uzbekistan, which operates as a specific independent unit or as part of a hotel

complex, produces and offers its visitors certain dishes to best meet their gastronomic needs. The economic task of the type of activity under consideration is to obtain maximum income, and, consequently, profitability and efficiency.

For the successful development of a restaurant organization, the quality of food, the level of service, the menu offered, the atmosphere, prices and management system, as well as the location are very important, since they all affect the economic development of the restaurant, and therefore, the improvement of the domestic market economy as a whole. Among the most important criteria by which a place is chosen for the location of a particular restaurant are the following key types:

- the level of attractiveness, that is, how welcoming the building of the organization in question will seem to visitors or visitors;
- demographics - an indicator that indicates how many people live or come to the area under consideration, that is, the place where the restaurant will be located;
- determination of the average income level of the population;
- considering aspects of whether a particular restaurant location is a developing area or, on the contrary, is in some kind of decline that affects its infrastructure provision;
- maximum accessibility and convenience in terms of transport connection, as well as the organization of car parking for visitors;
- catchiness, that is, an indicator that characterizes how easy it is to distinguish and see a particular restaurant among many other similar establishments;
- location - a criterion that indicates information about how well maintained the buildings closest to the restaurant are.

The restaurant business in Uzbekistan is a modern entrepreneurial activity that performs two key functions or roles, namely economic and social. Let's consider each of them in more detail.

The economic function or role of modern restaurants in the country is that such organizations make a significant contribution to economic development due to the fact that they have a positive impact on the improvement of other branches of economic activity. All restaurants participate in the formation and development of the gross national product, and also help form the country's budget (with the help of income tax and VAT), participate in the country's social protection system (for example, paying social contributions), and also provide various assistance to local authorities. It is also worth noting that new enterprises mean new jobs, and, consequently, a decrease in the unemployment rate in the country

Having studied the data of scientific and educational literature, it should be noted that the restaurants originally created to meet the needs and requirements also reflect the degree and level of economic development of the country. In turn, the level of economic development of the state is reflected in the income of the population, as well as its desire to spend any part of the money on the services offered, including the services of public catering enterprises, which include restaurant organizations.

In addition to important economic functions or roles that affect the economic development of the country, modern domestic restaurant enterprises also perform social roles, since the restaurant business serves the most important interests of society, since it is in it that a culture of public consumption is formed and certain consumer preferences or habits are brought up.

In addition, in a large number of restaurant organizations, a system of good taste, aesthetic and ethical standards is being formed. It should be noted that many Uzbek catering enterprises are very actively involved in various processes of international relations, as their services accompany various diplomatic receptions or international meetings, that is, they influence the development of foreign tourism in the country.

It should be noted that restaurants not only satisfy the physiological needs of the visitor, but also carry a unique original culture, national and historical values, and also form a more complete picture of the tourist's place of stay. The information that almost all restaurant enterprises play an important role in the hospitality system, as well as maintaining fruitful creative relations between organizations and cultural institutions, is indisputable, since they are a place for holding a variety of cultural events that have an impact on the development of the whole country as a whole. The experience of rational work of modern restaurant organizations in the country speaks of the economic feasibility and rationality of investing monetary resources in the effective development of the system under consideration.

To date, it is known that the average turnover of financial resources invested in a restaurant organization is approximately five times faster than, for example, in the development of trade enterprises. The point of any modern business is that the money invested should bring even more money. According to the data in January-March 2022,

in the structure of retail trade turnover, the share of trade turnover of public catering enterprises amounted to 3.1%, reaching 1,857.4 billion soums, and increased by 15.5% compared to the same period in 2021 . Of these, 74.8% of the trade turnover falls on the share of small businesses.

The turnover of public catering in the period under review amounted to 1,857.4 billion soums (against January-March 2021 - 115.5%), by type of ownership: non-state - 1,844.9 billion soums and state - 12.5 billion soums . Compared to the same period last year, the turnover of state-owned public catering enterprises decreased from 3.9% to 0.7%<sup>117</sup>.

Currently, the state, represented by the authorities, carries out a comprehensive regulation of processes in the modern restaurant business using rational economic and legal methods, and also creates a regulatory and legislative framework that corrects the development of restaurant companies and their impact on the country's economic system. As an example of such regulations, one can cite the law "On the Protection of Consumer Rights", GOSTs "public catering", the classification "Terms and definitions" or "Services", etc. - documents that provide rational professional regulation of activities in the field of catering as a unified system of services in Uzbekistan. Summing up, it should be noted that almost all modern domestic enterprises providing a variety of restaurant services are a key part of the market economic system, and therefore affect its development and improvement.

### **Conclusions**

The role that the restaurant business plays in the country's economy is more significant than is usually imagined. Unlike other areas of the service sector of the economy, focused primarily on meeting utilitarian needs, the restaurant business performs an important and socially unusual function - it is designed to evoke in the consumer a feeling that is quite natural and rather scarce for a market economy that dictates a busy pace and lifestyle. pleasure. In this sense, we can talk about the restaurant business as a source from which positive externalities spread throughout the economy. The results themselves led to the following conclusions:

1. The restaurant business is an integral part of the service sector in a market economy, the role, importance, as well as the volume of services provided is continuously increasing with the overall socio-economic development of a country.
2. Unlike other areas of the service sector of the economy, focused primarily on meeting utilitarian needs, the restaurant business performs an important and, from a social point of view, unusual function - it evokes a completely natural and rather scarce feeling in the consumer - a feeling of pleasure.
3. In a market economy, the restaurant business occupies two niches: it exists both independently and being integrated into the hotel business, but its purpose remains unchanged.
4. Unlike other areas of the service sector of the economy, the restaurant business has unlimited growth potential, since the need for pleasure associated with eating is also unlimited. The only deterrent to development is consumer income.
5. The market for restaurant services is highly differentiated, and the typological classification of restaurant business enterprises can be represented as follows: a prestige restaurant is one of the places where the consumer comes to show his respectability and belonging to the corresponding social group; a restaurant to satisfy a utilitarian need - an institution where the consumer comes to eat deliciously; restaurant-show - the main purpose of the visit is entertainment; a restaurant-club is a place where people come not only to have a delicious meal, but also in anticipation of interesting and exciting communication.
6. The above classification of restaurant business enterprises does not claim to be complete, but allows us to talk about the variety of conceptual solutions, approaches to organizing business in this area, leading to success in the market. At the same time, the multiplicity of conceptual solutions does not allow standardizing business processes, including management processes, in order to increase the efficiency of both the restaurant business in general and an individual enterprise in particular.
7. When organizing effective management systems in restaurant business enterprises, specific features should be taken into account, which may include the following: a restaurant product is fundamentally different from other goods and services on the market. It contains material and service components, which imposes specific conditions on its production and consumption; in the restaurant business, the concept of

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<sup>117</sup> stat.uz. Social and economic situation of the Republic of Uzbekistan. 2022

quality as compliance with market requirements is undergoing changes. It is associated directly with the satisfaction of a particular client, that is, it is personified; in the restaurant business, the concept of direct marketing is most implemented; the restaurant business is an area where the turnover of current assets reaches its maximum values.

8. At the present stage of development of the Russian restaurant services market, market research is becoming no less important, and in some cases a higher priority, component of management activities than the management of current operations, which includes a set of measures referred to as tactical or operational marketing.
9. A holistic, harmonious concept of operational marketing in relation to the Russian restaurant market has not yet been formed. There are several reasons for this: firstly, in the pre-crisis period, the supply of restaurant services lagged significantly behind the demand for them, which created objective conditions for the use of passive marketing methods; secondly, the high growth rate of the restaurant market held back the development of competition, which means that, in essence, there was no real struggle for the client. The difficulties faced by the restaurant business in connection with the financial crisis created the prerequisites not only for strategic market analysis and strategic planning, but also for the systematization of operational management methods for the restaurant business.
10. In the restaurant business, management is based on the concept of internal marketing, which implies: the formation of a culture of service as part of the organizational culture; human resource management (personnel policy); formation of an information environment that provides the required awareness of employees; introduction of effective systems of personnel motivation.
11. There are no unambiguous recommendations regarding the development of the concept (strategy) of the restaurant - the solution can be multivariate and mostly depends on the creative potential of the restaurateur.

### **References**

- Restaurant pricing policy. How to make a customer pay your price. M.: "Modern retail and restaurant technologies", 2001
- Restaurateur ABC: Everything you need to know to succeed in the restaurant business. Moscow: Zhigulsky Publishing House, 2003.
- Durovich A.P. Marketing of hotels and restaurants: Proc. allowance. M.: New knowledge, 2005.
- Efimova O.P., Efimova N.A. Economics of hotels and restaurants: Proc. allowance. / Ed. N.I. Kabushkin. M.: New knowledge.
- Restorannyy biznes: upravlyaem professional'no i effektivno : polnoe prakticheskoe rukovodstvo [Restaurant business: we operate professionally and effectively] / V. Siryy [i dr.]. — M. : Eksmo, 2010
- Restaurant manager [Electronic resource]. — Access mode: <http://restoranoved.ru/>. — Access date: 09/05/2018
- EURHODIP. Human resource management in the European hospitality industry. M.: Finance and statistics.2020

# SUSTAINABLE DEVELOPMENT OF REGIONS: ITS ESSENCE AND VALUE

Nazarov Nazirjon Narzilloevich

Doctoral student of the National University of Uzbekistan

e-mail: [nazir\\_n\\_n@mail.ru](mailto:nazir_n_n@mail.ru)

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## ABSTRACT:

In the article, multiple definitions of sustainable development are provided by research scientists, along with an explanation of the significance of regional sustainable development and its role in the growth of the local economy. At this stage, the notion of sustainable development's orientations and the variables affecting its goal development plans were discussed. In the article, there are perspectives about the fact that increasing focus is being placed on human capital in many nations of the globe, taking into account the depletion of natural resources, which are seen as economic capital. There are suggestions that Uzbekistan has set national goals and targets for the years leading up to 2030 that are entirely in line with the UN Sustainable Development Goals.

**Key words:** regional sustainable development, social, economic and environmental norms, regional economic development.

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## Introduction

Sustainable development theories are now seen as a viable alternative to the idea of globalization because of their increased worldwide adoption. The republic's economy continues to grow because it is divided into distinct geographical divisions, each of whose economies are allowed to grow steadily over time. This is the time for the regions to make wise use of the domestic resources that are already available based on their economic potential and to help the republic exert more influence globally.

"On September 6-8, 2000, the UN Millennium Summit was held in New York City, and the Millennium Declaration was adopted."<sup>118</sup> The Millennium Development Goals, which serve as a benchmark for gauging development progress, were overwhelmingly adopted as the summit's main result. This paper outlines the duties that must be met by 2015 in order to eradicate poverty, improve education levels, safeguard the environment, guarantee the equality of all people's rights and freedoms, fight illness, and build peace and security.

"Resolution No. 70 on the "Global Agenda for Sustainable Development," which contains 17 goals to be achieved by 2030 and envisions sustainable development in its economic, social, and environmental components, was adopted at the next historic summit of the UN General Assembly held in September 2015, where the end of the Millennium Goals was taken into consideration. The declaration, which included 232 indicators, 169 tasks, and the goals of sustainable development, was approved."<sup>119</sup>

The world's nations created national policies and concepts for sustainable development in accordance with the UN's advice. These papers, which have been created and accepted in several nations, try to consider the long-term environmental effects of the economic choices that are made today.

Today, it is becoming more and more obvious that any nation or region must do its best to create the right conditions for stable socioeconomic growth. "Achieving sustainable economic growth of the national economy is the key to solving social, economic, and all other problems in society."<sup>120</sup>

The term "sustainable development" has several definitions in the economic literature, and the majority of

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<sup>118</sup> UN Millennium Declaration of 08.09.2000 ([www.undp.org](http://www.undp.org).)

<sup>119</sup>Resolution adopted by the General Assembly on 25 September 2015 // [www.undocs.org/ru/A/RES/70/1](http://www.undocs.org/ru/A/RES/70/1)

<sup>120</sup> Ш.Шодмонов, Р.Х.Алимов, ТТ.Жураев. Иқтисодийёт назарияси Тошкент – “Молия” – 2002, 289 б.



them take ecological principles into account when describing how the economy should evolve. Among these, the Brundtland Commission report's definition best captures the meaning of the term. "Sustainable development" is defined as "development that does not jeopardize the ability of future generations to meet their needs at the expense of meeting the needs of the present."<sup>121</sup>

The notion of sustainable development is widely recognized as a paradigm of civilized growth based on an all-encompassing idea. A complicated, diverse, autonomous notion, sustainable development has been the subject of broad theoretical, methodological, and empirical inquiry by many scientists. There are several definitions of it that have emerged and are still being debated by contemporary science as a result of the growing interest of many academics in the issues surrounding this idea and the greater knowledge of the nature of regional sustainable development.

Many academics and government agencies approach sustainable development from the perspective of ecological balance.

Regional sustainable development, according to H. Liang, "ensures the integrated development of the economy, society, and ecology to build the regional economy, enhance the quality of life for the population, ensure the effective use of resources, and safeguard the environment."<sup>122</sup>

According to economist R. Gogonia from Romania, "Sustainable development means that the relationship between the economy, society, and the environment (ecology) should be acceptable, viable, stable, and equitable."

According to Mr. Gutman "Sustainable development of the region is the condition of the socio-ecological and economic system, in which the prerequisites for progressive development are present, maintaining internal and external balance, ensuring the gradual transformation of the economy from simple events to complex events, thus its quality is to foster quality development."<sup>123</sup>

K. Malli put forward the opinion that "The regional level is often the most important from an economic, social, and environmental point of view to achieve sustainable development."<sup>124</sup>

Consequently, the following are included in the idea of sustainable development in a wide sense:

- economic changes should put the country's (region's) inhabitants, their living standards, and ecological balance first;
- environmental conservation efforts should be made in close coordination with economic growth;
- emphasizes the necessity to provide equal attention to the issues of economic growth, meeting the demand for development, and environmental preservation;
- It should result in a narrowing of the gap between the national living standards of the inhabitants of the various regions and the global living standards of the world's people.

The regional factor, according to D. Khairulloev, "is one of the primary factors impacting steady, safe socio-economic growth in the country." The foundation for guaranteeing the security of the national economy is the region's steady development.<sup>125</sup>

According to E. Gushchina's scientific article, "Stable innovative development of the country is determined

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<sup>121</sup> Современная экономика: Российская модель: Под.ред. Н.Р.Молочникова, М.: Московский психолого-социальный институт:Изд. "Модэк" – 2002, - с.200

<sup>122</sup> X. Liang, D. Si, X. Zhang, Regional Sustainable Development Analysis Based on Information Entropy—Sichuan Province as an Example. *International Journal of Environmental Research and Public Health*, 1219, (2017)

<sup>123</sup> Гутман Г. В., Мироедов А. А., Федин С. В.. Управление региональной экономикой/ - М.: Финансы и статистика, 2002. - 173, [2] с.; ISBN 5-279-02402-3

<sup>124</sup> K. Mally, Regional differences in slovenia from the viewpoint of achieving europe's sustainable development. *Acta geographica Slovenica*, (2), 31-46, (2018)

<sup>125</sup> Хайруллоев Д.С. Устойчивое развитие региона как основа безопасности национальной экономики. // Труды IV Всероссийской научной конференции «Информационные технологии в системе социально-экономической безопасности России и ее регионов». – Казань. 23-26 апреля 2012. КФУ. – С. 41-49.

by the effective functioning of its economic subjects—regions and large cities that provide the flow of investments to the regional budget, thereby ensuring high employment, social stability, and a respectable standard of living. The formulation of long-term territorial plans and strategies, as well as the creation of strategic provisions of documents that guarantee territorial management in this direction, are necessary for the state's creative policy orientation. The achievement of effective changes in the national economy determines the degree of perfection of the regional strategic management methods currently in use."<sup>126</sup>

Shalmuev, A. "The establishment of a regional management model that secures the population's decent well-being and the dynamic equilibrium of the economic system with the environment is a prerequisite for sustainable regional development. The ability to reach a new, higher point in the socioeconomic system's development trajectory or a quicker return to the system's initial state can be considered the most general types of stability."<sup>127</sup>.

In the opinion of M. Marija, "The preservation of wealth and values in a particular region is one of the themes that is of interest, not only within the context of economic sciences but also among other topics. One such topic is regional development. The foundation of growth in nature is one of these ideals."<sup>128</sup>

I. Buzko stated that "regional development is formed under the influence of socioeconomic trends" and that "the availability of human capital, the level and quality of life of the population, the rational use of natural resources, and the ability to reproduce" are what determine a nation's development.<sup>129</sup>

The following definitions are provided by other publications. Two levels of stability exist. Strong stability prevents the value of natural resources from declining and ensures that each fund is not individually depleted. Weak sustainability permits the replacement of natural resources by other types of resources.<sup>130</sup>

"Sustainable development reduces unemployment by utilizing the social resources present in the labor market and is based on sustainable economic growth in ecologically clean sectors."<sup>131</sup>

Along with the growth of wealth and the improvement of environmental circumstances, the idea of sustainable development is considered as a prerequisite for the long-term evolution of humanity. In order to avoid the region transitioning into an unrecoverable condition of ecological decline, the idea of sustainable development envisions the growth of the region through self-organization within the framework of external assistance. This idea suggests a focused, targeted transfer of financial resources from wealthy to impoverished regions, together with a large-scale interchange of environmental expertise and information. As a result, the idea of sustainable development encompasses two distinct orientations. The ecological aspect of sustainability is given the most attention in the first direction in order to ensure the reproducibility of scarce resources, while in the second direction, socio-economic aspects of sustainable development are taken into account.

The World Bank "offered a technique for establishing the index of net savings calculated in the area," claims V. Gorbanev. This technique states that investments in fixed capital for the exploitation of minerals and other natural resources lead to greater harm due to resource depletion and environmental contamination on the one hand, and

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<sup>126</sup> Гущина Е.Г. Стратегическое планирование устойчивого территориального развития // Научное обозрение. Реферативный журнал. – 2016. – № 4. – С. 130-154; URL: <https://abstract.science-review.ru/ru/article/view?id=1802> (дата обращения: 02.10.2022).

<sup>127</sup> Шалмуев А. А. Теоретико-методологические основы устойчиво развития региона. Инновационная деятельность в регионах. Инновации № 3 (90), 2006.

<sup>128</sup> Marija Milenković, Ashok Vaseashta, Dejan Vasović. Strategic Planning of Regional Sustainable Development Using Factor Analysis Method. *Pol. J. Environ. Stud.* Vol. 30, No. 2 (2021), 1317-1323

<sup>129</sup> Iryna Buzko, Olena Vartanova, Iryna Trunina, and Inna Khovrak. Theoretical aspects of regional sustainable development in the EU and Ukraine SHS Web of Conferences 61, 01001 (2019) <https://doi.org/10.1051/shsconf/20196101001>

<sup>130</sup> M. Szabó, M. Csete, T. Pálvölgyi, Resilient Regions from Sustainable Development Perspective. *European Journal of Sustainable Development*, 7(1) 395-411, (2018)

<sup>131</sup> Z. Wysokińska, Implementing the Main Circular Economy Principles within the Concept of Sustainable Development in the Global and European economy, with Particular Emphasis on Central and Eastern Europe – the Case of Poland and the Region of Lodz. *Comparative Economic Research*, (3), 75-93, (2018)

gross accumulation of fixed capital on the other.<sup>132</sup>

Determining the notion of sustainable development's applicable and quantifiable indicators is crucial, especially given that it is frequently viewed as a changing concept. International organizations and scientific communities are both now moving in this direction. These indicators can reflect environmental, economic, social, and psychological (such as how people perceive sustainable development) aspects based on the aforementioned three, thus connecting these three elements.

The UN member states should establish framework conditions that ensure the interdependent, internally balanced functioning of the trinity — nature, population, and economy — at the current stage of the transition to sustainable development.

At the same time, the mechanisms for making decisions should be focused on the pertinent priorities, taking into account the impact of these decisions' implementation on the environment, a thorough analysis of costs, benefits, and risks, and adherence to the following standards:

- if the gain from an economic activity does not outweigh the harm it causes, it cannot be justified;
- Based on economic and social considerations, environmental damage should be as minimal as is practically possible.

"The Uzbek government adopted commitments to carry out the global agenda in the area of sustainable development through 2030 in 2015." "At the national level, an interdepartmental Coordinating Council headed by the Deputy Prime Minister of the Republic of Uzbekistan was established, and an appropriate road map for the implementation of national goals was adopted in October 2018, along with 16 national goals and 125 tasks in the area of sustainable development."<sup>133</sup>

The President of the Republic of Uzbekistan, Sh. Mirziyoyev, delivered a speech at the 75th session of the UN General Assembly held online in September 2020, a number of initiatives have been made in relation to contemporary issues such as strengthening regional and global peace and stability, ensuring sustainable development, supporting the observance of human rights, expanding constructive dialogue, as well as climate change, the issue of food security, and eradicating poverty. These measures are entirely in line with the Sustainable Development Goals of the United Nations and represent the most significant changes that Uzbekistan has made in the political, social, and economic domains as well as the Action Strategy that has been constantly carried out.

The judicious use of the region's economic potential is necessary to improve the social situation of the people, ensure the dynamic growth of macroindicators, maintain a stable supply and demand balance in the market, and allocate money for the ongoing reproduction of the region's eco-system. In this context, it is sense to pinpoint and investigate the variables influencing the regional economy's sustainable growth. Exogenous and endogenous factors may be classified into two main categories that have a significant impact on the sustainable growth of the local economy.

The exogenous set of factors includes those that externally influence the regional economy's sustainable development. The set of variables directly impacting them includes the following:

- international investments that make sure new technology and foreign management are introduced into the region's economy;
- Money provided by foreign banks and international financial institutions, including the International Monetary Fund, the European and Asian Bank for Reconstruction and Development, and others;
- Transfer payments made from non-state money and the state budget.

The following opportunities should be listed among those that have an indirect impact on the growth of the local economy:

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<sup>132</sup> Горбанев В.А. Эколого-экономические индексы регионов // Портал МГИМО. [Электронный ресурс]. URL: <http://www.mgimo.ru/news/experts/document229149.phtml> (дата обращения: 28.11.2019).

<sup>133</sup> Қонун ҳужжатлари маълумотлари миллий базаси, 23.10.2018 й., 09/18/841/2081-сон

- take advantage of the global market's size as a result of the regional economy's integration into the global economy and boost export potential;
- achieving the growth of related industries and sharing of markets thanks to the improvement of economic ties with other parts of the nation;
- creating free trade zones for the border region with neighboring nations.

Factors affecting sustainable development of the economy within the region are included in the endogenous group. It is appropriate to analyze them according to the following factors.

1) Group of natural-geographical factors:

- geographical location of the region;
- natural and climatic conditions;
- the power of natural resources.

2) Group of socio-economic factors:

- skill level of labor resources;
- volume and composition of internal financial resources;
- sectoral and regional composition of the economy;
- level of development of regional infrastructure.

3) Ecological balance.

Sustainable regional economic growth results from the intricate and logical use of the aforementioned variables. At the same time, it promotes the expansion of the nation's macroeconomic indicators and has an inertial impact on the socioeconomic development of other regions. When defining the directions of the region's development strategy, such an integral relationship necessitates the development of specific principles.

### **Conclusion**

We ranked the category of regional sustainable development as follows as a result of the scientifically rigorous research of the sustainable development of regions and in light of the theoretical viewpoints examined in this context. The region's sustainable development is defined as the growth of human civilization in which positive changes are continuously made to all aspects of the economic system, continuous growth is seen in the dynamics of macroeconomic indicators, and stable organic relationships with social and ecological elements in the territorial system are established and balanced.

In order to balance the interests of all stakeholders and guarantee a better quality of life for future generations, sustainable development is seen by us as a form of reciprocal cooperation. So, ensuring sustainable development is not just a legal problem (creating a regulatory framework), not just a technical problem (developing technical solutions for the best use of the resources already at hand), and not just a scientific problem. First and foremost, ensuring sustainable development necessitates a shift in consciousness based on ethical principles that express cooperation and mutual understanding, with the main principles of economic security, human capital development, ecosystem integrity, and concurrently rational use of natural resources. The urgent need for regional sustainable development is evident in this.

### **References:**

- UN Millennium Declaration of 08.09.2000 ([www.undp.org](http://www.undp.org).)
- Resolution adopted by the General Assembly on 25 September 2015 // [www.undocs.org/ru/A/RES/70/1](http://www.undocs.org/ru/A/RES/70/1)
- Ш.Шодмонов, Р.Х.Алимов, ТТ.Жураев. Иқтисодиёт назарияси Тошкент – “Молия” – 2002, 289 б.
- Современная экономика: Российская модель: Под.ред. Н.П.Молочникова, М.: Московский психолого-социальный институт:Изд. “Модэк” – 2002, - с.200

- X. Liang, D. Si, X. Zhang, Regional Sustainable Development Analysis Based on Information Entropy—Sichuan Province as an Example. *International Journal of Environmental Research and Public Health*, 1219, (2017)
- R. Gogonea, A. Baltalunga, A. Nedelcu, D. Dumitrescu, Tourism Pressure at the Regional Level in the Context of Sustainable Development in Romania. *Sustainability* 2017, 698, (2017)
- Гутман Г. В., Мироедов А. А., Федин С. В.. Управление региональной экономикой/ - М.: Финансы и статистика, 2002. - 173, [2] с.; ISBN 5-279-02402-3
- K. Mally, Regional differences in slovenia from the viewpoint of achieving europe's sustainable development. *Acta geographica Slovenica*, (2), 31-46, (2018)
- Хайруллоев Д.С. Устойчивое развитие региона как основа безопасности национальной экономики. // Труды IV Всероссийской научной конференции «Информационные технологии в системе социально-экономической безопасности России и ее регионов». – Казань. 23-26 апреля 2012. КФУ. – С. 41-49.
- Гущина Е.Г. Стратегическое планирование устойчивого территориального развития // Научное обозрение. Реферативный журнал. – 2016. – № 4. – С. 130-154; URL: <https://abstract.science-review.ru/ru/article/view?id=1802> (дата обращения: 02.10.2022).
- Шалмуев А. А. Теоретико-методологические основы устойчиво развития региона. *Инновационная деятельность в регионах. Инновации* № 3 (90), 2006.
- Marija Milenković, Ashok Vaseashta, Dejan Vasović. Strategic Planning of Regional Sustainable Development Using Factor Analysis Method. *Pol. J. Environ. Stud.* Vol. 30, No. 2 (2021), 1317-1323
- Iryna Buzko, Olena Vartanova, Iryna Trunina, and Inna Khovrak. Theoretical aspects of regional sustainable development in the EU and Ukraine SHS Web of Conferences 61, 01001 (2019) <https://doi.org/10.1051/shsconf/20196101001>
- M. Szabó, M. Csete, T. Pálvölgyi, Resilient Regions from Sustainable Development Perspective. *European Journal of Sustainable Development*, 7(1) 395-411, (2018)
- Z. Wysokińska, Implementing the Main Circular Economy Principles within the Concept of Sustainable Development in the Global and European economy, with Particular Emphasis on Central and Eastern Europe – the Case of Poland and the Region of Lodz. *Comparative Economic Research*, (3), 75-93, (2018)
- Горбанев В.А. Эколого-экономические индексы регионов // Портал МГИМО. [Электронный ресурс]. URL: <http://www.mgimo.ru/news/experts/document229149.phtml> (дата обращения: 28.11.2019).
- ДНО 2020: О реализации повестки дня до 2030 года в области устойчивого развития. Узбекистан. Ташкент, 2020.
- Қонун ҳужжатлари маълумотлари миллий базаси, 23.10.2018 й., 09/18/841/2081-сон