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C O N T E N T S

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Message

Editor in Chief / Managing Editor

Dear Academicians & Research Scholars,

Happy New Year 2021…

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, 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 11 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 and Malaysia 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.

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Dr. P. S. Bhadouria

E-GOVERNMENT: MAIN GOALS, FACTORS OF SUCCESS AND DEVELOPMENT FEATURES

Raxmatkariyev Davron Rustam o'g'li[1]

ABSTRACT

E-government is one of the most economical and reliable opportunities provided by the development of information and communication technologies for the enrichment of our lives. It is known that the system of "E-government" has already demonstrated its advantages in world practice. The article highlights the main objectives and success factors for the formation of E-government. Шунингдек мақолада The article also examines the development features of the E-government system and the factors influencing it. The current dynamics of development of E-government in Uzbekistan is analyzed.

Keywords: *Public administration, modern information technologies, innovation, digital economy, "E-government", Internet, infrastructure, business.*

In today's world of globalization and integration processes, the most important raw material is information. The rapid increase of information began in the 1970s and in the 21st century it has multiplied.

Therefore, it is no exaggeration to say that the Information Age has reached a new level of human civilization. In this context, the effective collection, storage, transmission and processing of information demonstrate relevance. It is expedient to widely introduce information and communication technologies as a means of achieving this.

As a result of consistent reforms in the field of informatization of society, based on the tasks set for all sectors and industries of the Republic, including public administration, the development of modern ICT and their widespread implementation is being achieved. In this regard, large-scale reforms are being carried out in our country to introduce and develop E-government.

E-government is a system of organizational and legal measures and technical means aimed at ensuring the activities of government agencies to provide public services to individuals and legal entities through the use of information and communication technologies, as well as inter-agency electronic cooperation.

In the era of digital transformation, the further economic development and competitiveness of any country will depend on the introduction and development of multi-faceted modern digital technologies.

Consistent measures are being taken in Uzbekistan to modernize and develop the E-government system, including the facilitation of administrative processes in the system of public services aimed at improving the living standards of the population, creating a favorable investment and business environment.

Improvement of the E-government, increasing the efficiency and quality of public services and access to these services for the population and businesses are stated as main goals in the first principle, "Priorities for improving the system of state and society building", of the five priorities of the development of the Republic of Uzbekistan for 2017-2021, approved by the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No PF-4947 "Actions strategy for further development of the Republic of Uzbekistan" [1].

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The Resolution of the President of the Republic of Uzbekistan, dated April 28, 2020 No PP-4699 "Measures for the widespread introduction of digital economy and E-government" identifies the followings as additional tasks for further development of digital economy and E-government:

- With a view to doubling the share of the digital economy in the country's GDP by 2023, including the introduction of a complex of information systems in production management, the widespread use of software in financial and economic reporting and its rapid formation through automation of technological processes;
- Complete modernization of the country's digital infrastructure and access to modern telecommunications services in all regions by 2020-2021, with the aim of connecting all health facilities, schools and preschools, as well as villages and neighborhoods to high-speed Internet and improving the quality of communication services;
- With the goal of increasing the share of E-government services to 60% by 2022, creation and integration of state information systems and resources, unification of information in state databases, as well as development of E-government system through optimization and regulation of public service delivery procedures, etc. [2].

Today, the E-government system is proving its effectiveness in countries such as South Korea, United Kingdom, United States, Australia, New Zealand, Singapore, Norway, Canada, the Netherlands, Denmark and Germany.

Many public services in these countries are available online without leaving home. These include responses to inquiries, various payments, duplicate of official documents, filling them out, sending them by electronic signature, distance learning in higher education, applying to law enforcement agencies, and more.

The successful implementation of E-government in the country can be assessed on the basis of the following 4 objectives:

- Online government service;
- Paperless government;
- Knowledge-based government;
- Transparent government.

To achieve these four goals, an E-government system must be organized at several levels of government. There are 3 main tasks to be performed at each level of government:

- Innovative citizen services (G2C);
- Innovative business services (G2B);
- innovative government work (G2G, G2E).

There are several aspects of E-government and it's characterized as follows based on users and their interactions.

- Government-Citizen (G2C) citizens are provided with various information, services and other opportunities.
- Government-Business (G2B) provides a range of relationships and interactions between government and business.
- Government-Government (G2G) ensures the exchange of various information and support for cooperation between two government agencies within the country.

- Government-Employee (G2E) increases productivity by simplifying internal processes and facilitating the management of communication between the civil service, the state and its employees.

The terms of E-government can be summarized through the following four main parts.

E-government is described as follows[1]:

 1. Use of ICT (computer networks, internet, fax and telephone).

2. Support for government activities (information, services, products, administrative management).

3. Development of government relations with citizens (creating new channels of communication, engaging citizens in political or administrative processes through propaganda and agitation)

4. Determining the value of members' participation in processes in accordance with established strategies.
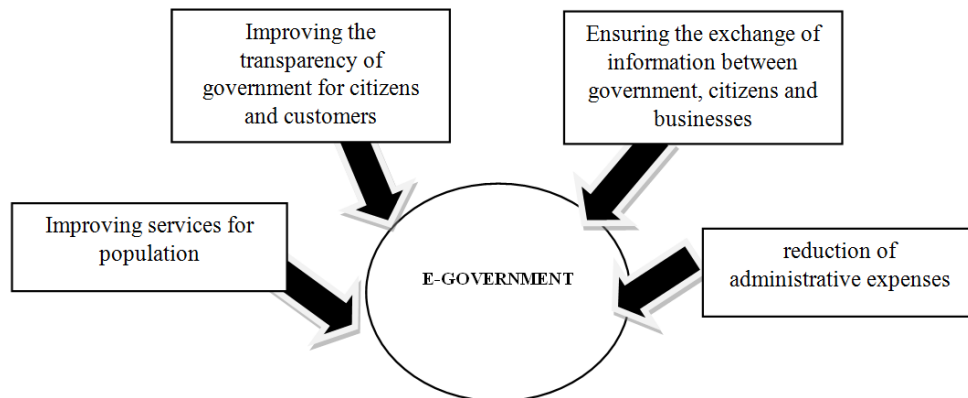
Figure 1. The main objectives of the development of E-government

Source: prepared by author

Scientific literature and online publications have also noted that there are risk factors in the implementation of E-government [2]

The risks of introducing E-government can be divided into risks from citizens and the government. In general, the risks from of citizens include:

- Digital inequality
- Lack of knowledge
- Inconvenience of use
- Lack of incentives
- Lack of confidence

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[1] e-Government Applications, by Nag Yeon Lee and Kwangsok Oh, printed in Scand-Media Corp., Ltd., Republic of Korea, in 2011, page–17

[2] e-Government Applications, by Nag Yeon Lee and Kwangsok Oh, printed in Scand-Media Corp., Ltd., Republic of Korea, in 2011, page–26-27

- Misunderstanding

Risks from government include:

- Complexity
- Incomplete integration of ministry systems
- Lack of ability
- Limited human resources
- Limited financial resources

Studies show that 35 percent of E-government projects worldwide have failed, 50 percent have been partially successful, and only 15 percent have been fully successful. Factors leading to the failure of E-government in developed countries include:

- Lack of cooperation with government agencies
- Unsuitable plans and strategies
- Lack of qualified specialists
- Lack of investment plan
- Limited new technologies
- Implementation without preparation.

In general, the increase of number of online services and wider use of these services indicate that the impact of the E-government system is huge. Thus, E-government requires the presence of a significant e-business participants to promote sustainable production by influencing government transparency and internal efficiency. An significant increase the number of E-government service users is required to move away from the traditional government service method to the E-government service method, and this process will not be easy.

In recent years, special attention has been paid in our country to the further development of E-government and the formation of a digital economy.

The statistics show that the measures taken to improve the single interactive public services portal and the introduction of optimized interactive public services have allowed to increase efficiency, including: -In 2019, the number of SIPSP**(**the single interactive public services porta**)** users **doubled** compared to 2018;

- The number of electronic payments made through SIPSP **increased more than 5 times** compared to 2018;

- The total amount of the payments for state duties and others **increased 13 times.**

In 2019, more than 273,000 business entities **(31,000 of them independently, without visiting public service centers)** were registered through the business registration information system.

In order to expand the functionality of this system, the following opportunities were created in 2019:

- Remotely opening local and currency account in bank;
- formation of the register of business entities with the state share in the authorized capital;
- Placement of QR-code on receipts and connection to electronic payment systems.

10 memorandums 2 road maps and 1 cooperation agreement within E-government were signed in the beginning of 2019.

On the basis of grants provided to donor countries, more than 30 study tours were organized to China People's Republic, South Korea, Great Britain, Estonia, Russia and other countries. More than 10 experts in E-government and digital economics from United Kingdom, United Arab Emirates UAE, Estonia, South Korea and other countries were invited to share experiences.

It should be noted that in March 2019 in Tashkent with 100 representatives of relevant agencies of more countries, as well as with participation of foreign experts from international organizations Uzbek-Korean E-government forum was held.

It's very important to improve E-government system for electronicization of public services provided by government agencies of the Republic of Uzbekistan to the population and businesses, sustainable development of the national economy, the creation of a secure database of the state, the rapid transition to a digital economy and the creation of smart and secure cities in our country.

To conclude, in modern conditions, the development of E-government in public administration is a key to ensure the socio-economic development of the country and increase the competitiveness of the national economy.

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MECHANISMS FOR IMPROVING INVESTMENT ATTRACTIVENESS IN OIL AND GAS COMPANIES

Umurzokov Jamoliddin Sherbekovich[1]

ABSTRACT

The article describes the role and importance of investment in ensuring sustainable development of the national economy in modern conditions. The development and peculiarities of the oil and gas sector, which play an important role among the sectors of the economy, are highlighted. The mechanism of investment activity in oil and gas companies and the objective need to attract investment are presented. The article also focuses on the attractiveness of the investment climate in oil and gas companies and examines the factors that affect the attractiveness of investment climate. There are scientific conclusions, suggestions and recommendations on the development of investment attractiveness in oil and gas companies.

Keywords: *national economy, industry, enterprise, oil and gas, investment, investment activity, investment environment, investment attractiveness, strategy, investment strategy, public-private partnership.*

In today's world investment activity has a special place among the prioritized conditions and factors of sustainable economic development. As a result of factors that influence the process of ensuring the efficiency of investment activities, the investment capacity and efficiency in production will increase.

From the earliest stages of the reforms, great attention has been paid to the implementation of structural changes in the economy of the country and the attraction of investment, including the attraction of foreign investment, especially direct investment[2].

The fuel and energy sector, which is an important factor in ensuring the stability of the economy of the republic, is always in the spotlight of investors due to its rich natural resources. This idea can also be substantiated by:

- The country's proven gas reserves are estimated at around 5 trillion cubic meters;

- Gas-oil and condensate reserves not only meet domestic demand, but also provide an opportunity to export energy;

- Natural gas production in the country began about half a century ago, and a school was established in this area;

- The republic is among the top ten gas-producing countries in the world;

- The territory of Uzbekistan has large underground oil and gas reserves, etc.

Equally effective investment activity in all sectors of oil and gas enterprises should be based on a well-thought-out investment development strategy established based on all the features of the industry. In this case, the correct assessment of investments is very important, because the results of the assessment serve as a basis for making important decisions such as resolution on the development of either segment of the industry, rational allocation of resources, application of innovations, incentives.

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[2] V.A.Golishev, S.A.Zakirova. National Economy of the Republic of Uzbekistan in transition period: Textbook. –T.UWED, 2007–p.142

The mechanism of investment activity is a set of legal, organizational and economic, financial methods based on the systematic support of the part aimed at expanding the production of investment sources and instruments, which is a set of forms and methods of investment activity.

In the world's practice, a number of scientific studies are being conducted to improve the mechanism of investment activity of oil and gas companies, the effective organization of financial support of enterprises, the rational use of investments. These studies investigate the theoretical and organizational foundations of investment activities, their formation, organization of investment activities in oil and gas companies, its scientific, theoretical, methodological aspects and impact on the company's activities. At the same time, topical issues such as improving the mechanism of investment activity in oil and gas companies, in particular, the direct impact of structural changes, digitization, artificial intelligence management on investment efficiency remain unresolved.

Achieving investment continuity in Uzbekistan with limited financial resources, ensuring the efficient use of funds and the subsequent attraction of new resources are important for oil and gas companies to maintain and expand their market share. Therefore, in the oil and gas industry, which is a leading sector of the economy, it is necessary to conduct research to improve the provision of financial support in corporate financial management, in particular, the attraction and use of investment funds.

The Strategy of Actions for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, approved by the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 "Strategy of actions for further development of the Republic of Uzbekistan" important and priority tasks such as active attraction of foreign, first of all, namely foreign direct investments in the sectors and regions of the country's economy, effective use of attracted foreign investments and loans have been defined [1].

Today, investment programs in the field of oil and gas companies are being implemented in the country, in this point, a total of 25 (including 10 in 2016, 7 in 2017, 6 in 2018 and 2 in 2019) projects were realized by "Uzbekneftegaz" in 2016-2019 within the framework of the State Investment Program of the Republic of Uzbekistan. In this line, they have created more than 2,800 new jobs.

These include the following major strategic investment projects for large and national economies:

- The project namely "Equipment of the South Kemachi minefield of the Mubarek Oil and Gas Production Department of Kashkadarya region" is worth 359.3 million USD. The project created 163 new jobs, produced up to 2.41 billion cubic meters of gas and 122.38 thousand tons of oil as well as up to 57.7 thousand tons of condensate;

- The project for the development of the East Berdakh and North Berdakh fields and the construction of a gas compressor station under the Ustyurt Gas Production Department of the Republic of Karakalpakstan - the cost of this project is 293.9 million USD. The project created 121 new jobs, launched up to 2.0 billion cubic meters of gas and up to 57.7 thousand tons of condensate;

- Project on construction of gas desulfurization units instead of decommissioned facilities at Mubarek gas processing plant in Kashkadarya region - the project's cost is 163.2 million USD. The project has created 86 new jobs, commissioned 6 billion cubic meters of natural gas sulfur treatment capacity;

- Construction of the Kandym gas processing plant under the Production Sharing Agreement with Lukoil company of the Russian Federation - the project cost is 3,029.54 million US dollars. The project has created 2,125 new jobs, the plant has capacity to produce 8.1 billion cubic meters of

processed natural gas, 7.8 billion cubic meters of commercial gas, 134.4 thousand tons of condensate, 212.9 thousand tons of sulfur.

In a market economy, investors with stable and economic potential decide to invest their funds only when they are firmly convinced that the country, region, enterprise or project in which they are investing will have high economic returns.

The efficiency of oil and gas companies is one of the most important strategic directions for the world economy. The development of this industry plays an important role in the development of not only financial and economic fields, but also social, cultural and humanitarian spheres. It is known that the oil and gas industry has its own sectoral characteristics. Unlike other industries, the achievement of a positive result in investment activities in this area also depends on more external factors. The main external factors are the dynamics of oil prices on the world market, sanctions, agreements to limit oil or gas production, the obligation to suspend investment in oil production.

Timely awareness of changes in the world market, alterations and causes of supply and demand, competitors' strategies, structural changes in energy consumption, seasonal fluctuations in demand are of great importance in the effective implementation of the company's goals.

In present times, one of the main tasks in attracting investment to enterprises is to ensure investment attractiveness. The state of the investment climate is determined by the generalizing features of economic, social, organizational, legal, political, environmental and other conditions that determine the expediency and attractiveness of investment activities. An investment climate is a set of economic, social, political, organizational, legal, environmental, cultural and other conditions aimed at ensuring the efficiency and security of investments in a country's economy or a particular region. It refers to the existing pros and cons of the conditions that determine the appropriateness and attractiveness of investing in a particular area.
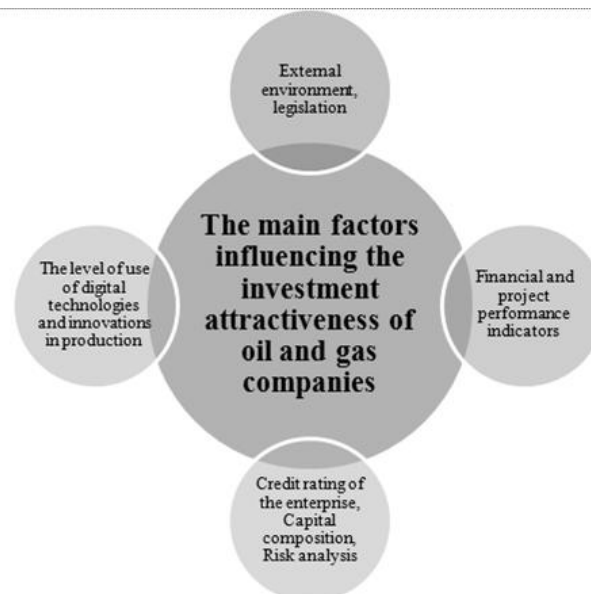
Figure 1. The main factors influencing the investment attractiveness of oil and gas companies [1]

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[1] Author's work summarizing information from the scientific literature

Investment attractiveness is determined by the evaluation of investment of a country, industry or individual enterprise in terms of profitability, development prospects and the level of investment risk. Investment attractiveness is determined by the simultaneous influence of two groups of factors that shape the level of investment potential and investment risk. By assessing such indicators, it is possible to determine the appropriateness and attractiveness of investments, the level of investment risk.

In today's conditions, investment processes in oil and gas companies are based on a standardized and maximum digitalized forecasting mechanism. In our opinion, in order to ensure investment attractiveness, oil and gas companies must, first of all, form a long-term investment mechanism that is economically, legally and organizationally sound.

Figure 1 shows the main factors that affect the investment attractiveness of oil and gas companies. In today's modern conditions, that is in the conditions of innovative development of the economy and digitalization, the level of the use of innovative and digital technologies in production plays a decisive role.

In improving the investment mechanism in investment relations, it is expedient to perform the following tasks:

- Extended implementation of the process of establishing venture financing funds in order to increase the efficiency of investment activities in enterprises, improve the mechanism of financing investment and innovative development;

- Enhancing the role of innovative factors in additional development support through the introduction of an improved clustering mechanism to regulate the investment climate in increasing investment attractiveness of enterprises;

- Simulation assessment of the effectiveness of the results that can be achieved as a result of improving the mechanisms of investment activities of oil and gas companies on the basis of econometric models, etc.

Thus, forming a long-term investment mechanism that is economically, legally and organizationally sound are of great importance for gas and oil companies when it comes to ensuring investment attractiveness. At the same time, the investment strategy and quantitative indicators for the long-term prospects of the industry are strictly defined, and the investment process is carried out on the basis of algorithms aimed at ensuring these indicators.

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3. BILL GATES
Its fine to celebrate success, but it is more important to heed the lessons of failure

EFFICIENCY OF BUSINESS ENTITIES: ANALYSIS OF THE GRAPHICAL REPRESENTATION OF OVERDUE DEBTS BETWEEN THEM

Shukhrat Khusanovich Ruzimuradov[1]

ABSTRACT

One of the important requirements of a market economy is that the financial results of economic entities must be effective. Failure to ensure sufficient efficiency of the business entity, contrary to market principles, may ultimately lead to the problem of financial indebtedness, in particular, overdue indebtedness, not only the business entity, but also other related entities.

Therefore, in order to "protect" against the problem of overdue receivables and payables in market conditions, it is necessary to pay special attention to the efficiency of each business entity. When overdue debts occur between business entities, the formation of a graphical representation of the chain of these debts plays an important role in its analysis and finding optimal solutions to the problem.

Keywords: efficiency of the business entity; overdue receivables and payables of business entities; a graphical representation of the chain sequence of overdue debts, the maximum number of debt bonds.

INTRODUCTION

In a market economy, the activities of economic entities in any field are associated with a certain level of risk. This, in turn, indicates that in market conditions, the financial condition of economic entities varies for the better or for the worse under the influence of various factors. Therefore, it is very likely that an inefficient business entity will face the problem of overdue indebtedness, allowing for a high level of risk without being based on accurate calculations. To date, no economic theory, economic-mathematical method has been developed to find optimal solutions to the problem of overdue debt.

Jeff Dejarden, editor-in-chief of the Visual Capitalist media site, published the following information on the amount of debt and their share in some developed countries in 2018 in the material of the site "**Global debt of $ 69 trillion is on an information chart**" based on data from the International Monetary Fund [1]:

- The United States has a debt of **21.5** trillion US dollars, which is **104.3**% of GDP and **31**% of total global debt;
- Japan has a debt of **11.8** trillion US dollars, which is **237.1**% of GDP and **17**% of total global debt.

World Bank experts Vi Chian Ko, M. Ayhan Koze,

According to Peter S. Negl, Francisca L., Onsorge, and Naotaka Sugavara, "Debts and the financial crisis" reports: *"... The rapid growth of debt, whether it is public debt or private sector debt, increases the likelihood of financial crises. In the wake of the global financial crisis, the global debt crisis reached a record high of about 230% of global GDP in 2018"* [2].

THE MAIN FINDINGS AND RESULTS

Since we aim to conduct research on finding optimal solutions to the problem of overdue receivables and payables between business entities, we must first pay special attention to the effective organization of

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the activities of each business entity. This is due to the fact that only business entities operating with sufficient efficiency will be able to fulfill their financial obligations in a timely and complete manner.

However, operating with the support of the state or sponsors is not in line with the principles of a market economy. This means that the greater the number of economic entities that can withstand free and healthy competition in the market, the lower the amount of overdue receivables and payables between economic entities.

The use of "deferrals", "debt waivers" and other administrative methods, bypassing the laws of a market economy, is not an acceptable solution to the problem of indebtedness between businesses. We are well aware of the results of these attempts from the experience of the former Soviet Union.

Also, a number of scientists and economists have conducted research on the analysis of overdue receivables and payables between economic entities and finding optimal solutions to the problem. However, *due to the lack of theoretical foundations and economic levers and mechanisms for the settlement of debts using economic and mathematical methods in accordance with market principles, the ideas, methods and theoretical views proposed as a result of their scientific* work are still not implemented.

We argue that only by stabilizing the financial condition of each business entity can a positive impact on the problem of overdue debt in the economy.

International Financial Reporting Standards state: "*The financial position of a company depends on the economic resources available to it, their financial composition and the company's liquidity and solvency, as well as its resilience to changes in the environment. Liquidity and solvency information is necessary to forecast the company's ability to meet its financial obligations in a timely manner*". [3; 77].

Indeed, a business entity that is insolvent is more likely to face the problem of overdue debts. It is also clear from these considerations that the only source necessary for businesses to meet their obligations on accounts payable is their cash.

Regarding the need to ensure adequate efficiency of business entities, economist Frank Fabottsy said: "*Even if the company does not operate at a loss, it will be in a difficult financial situation or go bankrupt due to inability to make timely payments on overdue obligations*" [4; 873].

This means that in a market economy, it is not enough to maintain the solvency of the business entity and not to face the problem of overdue debts - to operate without losses. Therefore, business entities must ensure a sufficient level of efficiency of their activities in order not to be overwhelmed by the problem of receivables and payables.

It should be noted that the lack of working capital in business entities or the fact that these funds have become overdue receivables also severely limits the scope of effective activities of business entities.

In this case, the change in the future activities of the insolvent business entity in a positive or negative direction depends on the existence of market institutions that provide them with advice and comprehensive assistance in making timely and informed decisions with adequate study and analysis of their activities; we believe that it is directly related to the effectiveness of the practical assistance provided by them.

We all know that untimely and incomplete payment of goods, services, work performed and loans for temporary use and interest accrued on it - creates a chain of overdue debts between economic entities interconnected in economic relations.

The first President of the Republic of Uzbekistan I.A. Karimov commented on this situation: "*Now let's look at how mutual debt arises. Suppose an enterprise produces a particular product. Of course he has to sell it. Then negligence is allowed. The product is shipped to an insolvent customer. This means that the seller cannot charge for the product. He also bought raw materials from someone to produce the product, spent on electricity, gas and other expenses. In turn, the manufacturer also borrows from someone. In this way, an endless "debt chain" emerges*" [5; 127-128].

In other words, failure of an insolvent business entity to fulfill its obligations under a contract with another business entity within a specified period of time may, in turn, lead to the inability of the second business entity to fulfill its obligations to the third business entity.

That is why economists in the Russian Federation have advised businesses to constantly study the solvency of their counterparties, noting that: "*In any case, even between the "seller" and the "buyer" for a long time there are various contracts and constant obligations. it is expedient for the "seller" to take all necessary measures to ensure that the "buyer" has information about the solvency, even if it is executed in a timely manner and there is a strong relationship between the parties*" [6; 48].

Indeed, the implementation of the necessary measures by each business entity to study the "financial condition of the buyer" and "how responsibly the buyer is approaching the fulfillment of its obligations", which is very important today, prevents them from being suddenly tied to the "chain of payments".

From the above considerations, it is clear that every business entity operating in a market economy, if it operates at a level of efficiency that meets market requirements, taking into account the risks associated with its activities, examines the solvency and financial condition of all counterparties - in a sense financial problems, such as overdue receivables and payables.

Therefore, every business entity should understand that in a market economy:

- *Operate without regard to market laws, as well as with the support of the state or another sponsoring organization;*
- *A one-sided approach to the issue of economic relations with their counterparties, not based on the principle of equality, ie only in their own interests;*
- *Delaying the timely and full fulfillment of its obligations will ultimately lead any business entity to financial problems, including receivables and payables*.

So, it should be noted that the prevention or reduction of receivables and payables between business entities depends on the extent to which each business entity pays attention to further improving its financial condition. This is because only a business entity that is financially stable and has sufficient funds will be able to fulfill its obligations in a timely and complete manner.

It should be noted that the formation of a graphical representation of the chain of debts is very important in the analysis of this problem and finding optimal solutions in case of overdue debts between economic entities. Because if we look at the economy as a single system, we can see that all the processes, links, economic entities in the economy are also interconnected, sequentially chained in a commodity-money-commodity` relationship. It is self-evident that the occurrence of overdue receivables and (or) payables in one business entity is likely to cause a problem of indebtedness in other business entities that are directly related to it. Therefore, the analysis of the problem of overdue indebtedness between economic entities A_p

(p=1,m) and $\mathbf{B_f}$ (f=1,n) and the formation of a graphical representation of the sequence of debts in determining the optimal direction of its reduction using economic levers and mechanisms is important.

It is inevitable that each business entity will enter into economic relations mainly with other economic entities operating in its territory and in the relevant direction, industry, and sector. With this in mind, we hypothesize that a graphical representation of the chain of unpaid debts between economic entities $\mathbf{A_p}$ (p=1,m) and $\mathbf{B_f}$ (f=1,n) may also consist of a number of independent, separately formed graphs.

However, the theoretical basis for the formation of a graphical representation of overdue receivables and payables between business entities has not yet been established.

Scientists of the Russian Federation A.A. Samarsky and A.P. Mikhailov noted that "*Graphical observation of the chain sequence of debts between enterprises, the introduction of the process of expression instead of 3 economic entities for N economic entities is a process that is not only difficult to implement, but also has serious fundamental shortcomings*" [7; 156-157].

It is no coincidence that this part of our scientific article is devoted to the formation of a graphical representation of the sequence of overdue receivables and payables between business entities. This is due to the fact that today the growing number of businesses facing the problem of overdue debts is also increasing the amount of information on overdue debts. This, in turn, requires that in order to analyze this problem and find optimal solutions, a graphical representation of the sequence of overdue debts between interconnected economic entities on debt relations should be formed.

Hence, there are no other alternative ways to analyze the current state of the problem and find optimal solutions without forming a graphical representation of overdue debt relations between economic entities $\mathbf{A_p}$ (p=1,m) and $\mathbf{B_f}$ (f=1,n). Therefore, as one of the intermediate goals of this research, we aim to develop a theoretical basis for the formation of a graphical representation of overdue receivables and payables between business entities as concisely as possible.

Today, the basics and concepts of "graph theory" are widely used in the analysis of the current state of the economic system, the study of the relationships between the elements of the economic system. In particular:

- To express the weight and dynamics of various economic indicators in the form of pictures, diagrams, graphs;
- To show the degree of interdependence and interdependence between the elements of the economic system with the help of pictures, diagrams, graphs;
- The theory of graphs is effectively used in the graphical representation of what factors affect the sectors of the economy or economic processes.

Thus, "graph theory" is very important in finding optimal solutions to complex macroeconomic problems. Therefore, the methodological basis for the formation of a graphical representation of overdue receivables and payables between economic entities $\mathbf{A_p}$ (p=1,m) and $\mathbf{B_f}$ (f=1,n) should be developed based on the "graph theory".

In view of the above considerations, we propose to form a graphical representation of the sequence of overdue debts between economic entities by sequentially (automatically) placing information in the form of an electronic file on each $\mathbf{A_p}$ and $\mathbf{B_f}$ pair of non-payers in the following special table.

Table 1. Preliminary view of the table showing the graphical representation of overdue debts between business entities.

Source: author's development

This special table is the first view of the table, which serves to form a graphical representation of the sequence of overdue debts between business entities A_p (p=1,m) and B_f (f=1,n) on the relationship of debt. (*In this case, the lines representing the columns and rows of the table should be visible and light colors, which are not noticeable when printed on white paper, as well as the colors used to represent the details of business entities and debt relations between them.*)

Our research shows that the placement of the details of each pair of participants A_p and B_f in the cells of Table 1 should be based on the choice of one of the four options (appropriate to the current situation) in the table below.

Table 2. Options for placing the details of each A_p anda B_f pair of non-payments in the cells of Table 1 to represent the debts in a graphical form.

Options	No-fees for pairs of participants		
	requisites	requisites Table 1	
		whether it is present in the cell	to be entered in the cell
variant 1	A_p	–	A_p
	B_f	–	B_f
variant 2	A_p	+	–
	B_f	–	B_f
variant 3	A_p	–	A_p
	B_f	+	–
variant 4	A_p	+	–
	B_f	+	–

Source: author's development.

We formulate a graphical representation of the chain sequence of overdue receivables and payables between economic entities A_p (p=1,m) anda B_f (f=1,n) in Table 1 - based on the rules developed taking into account the requirements of graph theory we consider it expedient.

Thus, the placement of electronic file information on overdue receivables and payables between business entities in Table 1 or, if necessary, rearrangement (*reshaping the graphical representation of the chain of debts*), as well as the size of this special table, taking into account the current situation The gradual expansion (*adding the next column and (or) row to it*) is carried out on the basis of the stated rules - allows you to form a graphical representation of overdue debt relations between **m + n** economic entities.

Summarizing the above considerations, we can conclude that no matter how complex the overdue debt relations between economic entities A_p (p=1,m) and B_f (f=1,n), it is possible to form a graphical representation of the chain of these debts on the basis of relevant rules available. This is because even if an economic entity interacts with several hundred economic entities on overdue debts, it is also possible to form a graphical representation of these debts in different sections (*with separate separation of receivables and payables, by separate groups of economic entities, by customers of each bank (bank branch), by types of bank accounts of customers, regions, etc.*) by entering the data in Table 1.

It should be noted that the formation of a graphical representation of the chain sequence of overdue debts between economic entities A_p (p=1,m) and B_f (f=1,n) is in turn:

- Identification of the main causes of overdue indebtedness among economic entities, including the guilty economic entities and the formation of their list;
- Analysis of the sequence of overdue debts between business entities in different sections;
- Provides a basis for the identification of the necessary measures based on market principles and the optimal direction of their implementation in order to minimize the problem of overdue debts between business entities.

Now, in order to take the necessary measures based on economic measures to reduce overdue receivables and payables between economic entities, we first analyze the **maximum number of continuous indebtedness relationships** between economic entities reflected in the graphical representation of these debt relations.

It should be noted that the calculation of the **maximum number of continuous indebtedness** in the form of a graph of overdue receivables and payables, the definition of overdue indebtedness between reciprocal, directly related business entities, their size or simplicity, simple or complex gives the opportunity.

Russian scientist N.N. Kalitkin noted that the maximum number of debts between n enterprises can be n (n-1) / 2 [8; 14].

Analyzing this formula proposed by N.N. Kalitkin, we can see that only *each of the business entities represented in the graphical form of overdue debt relations between economic entities is directly, interrelated with all other economic entities reflected in this graph, and between them -can be used to calculate the maximum number of debt relationships only in the absence of counter-debt*.

In view of the above, consider how A_p (p=1,m) and B_f (f=1,n) are interconnected and seamlessly connected to each other on the problem of overdue debts, and what does the continuous graph of these debts look like? In general, we have come to the conclusion that the methodology for calculating the maximum number of these debt relations using certain formulas should be improved.

According to our research, in order to determine the laws of calculation of the maximum number of indebtedness in the form of a continuous graph of overdue receivables and payables between business entities, we need to divide the graphical representation of debts into the following 3 groups:

- **The first group**, each business entity participating in the chart of the sequence of debts, with all other economic entities in this chart, directly, organically linked graphical representations on the problem of overdue debts;
- **The second group**, all business entities participating in the schedule of the sequence of debts, are connected with each other on the problem of overdue debts in a series (continuous) with each other, the "**start**" and "**end**" points of this chart are not directly connected;
- **The third group**, all economic entities participating in the chart of the sequence of debts, are connected with each other in a series (continuous) on the problem of overdue debts, the "**start**" and "**end**" points of this chart are interconnected, Graphical views that make up the "**closed contour**".

Each of the above groups of graphical representations of the sequence of overdue debts between business entities A_p (p=1,m) and B_f (f=1,n) allows to accurately calculate the maximum number of continuous debts in these graphs, requires a unique approach. The graphical representation of this overdue receivables and payables sequence is detailed in Table 3 of Annex 1, with improved methodological framework and relevant formulas for calculating the maximum number of these continuous indebtedness relationships, depending on which of the above groups they belong to.

As can be seen from the data in Table 3, the following laws and formulas have been developed to calculate the maximum number of debt relationships in the form of graphs, depending on the order in which the business entities are connected on the problem of overdue debts.

The first law: If each of the business entities that are continuously interconnected on overdue debts is directly interconnected with all other economic entities participating in the continuous schedule of these debt relations, then the maximum number of debt relations in this schedule:

a)   when there are conflicting debt relations between them:

with the help of formula

$$\text{THE MAXIMUM NUMBER OF DEBT RELATIONS} = (XC - 1) * XC \qquad (1)$$

b) in the absence of conflicting debt relations between them:

We can calculate using formula

$$\text{THE MAXIMUM NUMBER OF DEBT RELATIONS} = \frac{(XC - 1) * XC}{2} \qquad (2)$$

The second law: Business entities are linked to each other in a sequential, continuous manner on overdue debts. If the "start" and "end" points of the graphical representation of these debt relations do not overlap (are not interconnected), then the maximum number of arrow directions in this graph:

a) when there are conflicting debt relations between them:

Using formula

$$\text{THE MAXIMUM NUMBER OF DEBT RELATIONS} = (XC * 2) - 2 \qquad (3)$$

b) in the absence of conflicting debt relations between them:

We can calculate using formula

$$\text{THE MAXIMUM NUMBER OF DEBT RELATIONS} = \frac{(XC * 2) - 2}{2} \qquad (4)$$

The third law. If the "start" and "end" points of the graphical representation of these debt relations overlap (cross-linked), then the maximum number of arrow directions in this graph is the maximum number of arrow directions in this graph. :

a) when there are conflicting debt relations between them:

Using the formula

$$\text{THE MAXIMUM NUMBER OF DEBT RELATIONS} = (XC * 2) \qquad (5)$$

b) in the absence of conflicting debt relations between them:

We can calculate using formula

$$\text{THE MAXIMUM NUMBER OF DEBT RELATIONS} = \frac{(XC * 2)}{2}$$

Here:

Maximum number of debt relations - the maximum number of overdue debt relations between business entities;

XC - is the total number of business entities that are continuously interconnected on overdue debts.

CONCLUSION

Given that the formulas we propose above are, in fact, the number of economic entities A_p (p=1,m) and B_f (f=1,n) and in what order they appear to be continuously interrelated overdue indebtedness, these indebtedness allows you to calculate the maximum number.

If, in a graphical view of overdue debt relations between economic entities A_p (p=1,m) and B_f (f=1,n), two or more of the above-mentioned (*belonging to the above-mentioned groups*) types of continuously linked debt relations if it is aggregated, then we can also calculate the maximum number of debt relationships by analyzing the graphical representation of borrowings belonging to each group separately.

Thus, as shown in the above examples, the laws for calculating the maximum number of debt relationships in graphical form of debt between them have been improved, taking into account the order in which business entities (*regardless of their number*) are continuously interconnected on overdue debts.

This, in turn, leads to the conclusion that the maximum number of indebtedness in the form of a chart of receivables and payables can be calculated on the basis of these laws, formulas, taking into account the fact that business entities are interconnected on overdue debts, will be the basis for.

Table 3. Debts between business entities are in the form of a graphical representation of a chain sequence calculate the maximum number of debt relationships

LEGISLATION

the total number of interconnected, directly related business entities	Debts are in the form of a continuous graph of a chain sequence						
	in cases where each business entity is directly, personally connected with other business entities in this schedule		business entities are connected to each other in series and the "starting" and "ending" points of the graph				
			in non-interconnected cases		in interconnected cases		
	the debts are the opposite debts between the participants of the couple						
	when available	after elimination	when available	after elimination	when available	after elimination	
	calculation of the maximum amount (number) of debt relations in the form of a graph of debts						
A	**B** $= A - 1$	**C** $= A * B$	**D** $= C/2$	**E** $= (A * 2) - 2$	**K** $= E/2$	**L** $= (A * 2)$	**K** $= L/2$
1	X	X	X	X	X	X	X
2	1	**2**	1	**2**	1	X	X
3	2	**6**	3	4	2	6	3
4	3	**12**	6	6	3	8	4
5	4	**20**	10	8	4	10	5
6	5	**30**	15	10	5	12	6
7	6	**42**	21	12	6	14	7
:	:	:	:	:	:	:	:
70	69	**4 830**	2 415	138	69	140	70
:	:	:	:	:	:	:	:
500	499	**249 500**	124 750	998	499	**1 000**	500
:	:	:	:	:	:	:	:
1 000	999	**999 000**	499 500	**1 998**	999	**2 000**	**1 000**

Source: author's development.

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LONG RUN CONSUMPTION FUNCTION IN U.K. DURING 1920-2017

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ABSTRACT

In this paper, author examined the long run consumption function in UK during 1920-2017 which follows Kuznets hypothesis of consumption theory. The drifting of the long run consumption function did not follow the Keynesian hypothesis. The estimated equation is proportional which was estimated by double log regression model. Johansen cointegration test assured one cointegrating equation in which VECM showed significant long run causalities from disposable income, wealth to consumption expenditure of UK. The cointegrating equation moves towards equilibrium with the speed of adjustment by 19.6% per year. The short run causalities were found from wealth and income to price level and consumption to income but causality from income to consumption is not significant. The model is unstable and non-stationary. The cyclical behavior revealed that consumption did not move in the same direction with disposable income during great depression, second world war and in the years of recession in UK.

Key words-consumption function, cointegration, vector error correction, cointegrating equation JEL Codes-C13, C22, C32, D11, D12, E21

Introduction

Economists have developed the nature and patterns of consumption spending since long time as a consequence of economic activities and livelihood in which the dimensions on the concepts of consumption functions had been enriched and modified through the various school of thoughts. Fisher (1930) developed a model of consumption behavior which described how rational, forward-looking consumers make intertemporal choices i.e., choices involving different periods of time. His model focused on the constraints of consumers face, the preferences they have and how these constraints and preferences together determined their choices about consumption and saving. He formulated the basic provisions of the theory of intermittent choice. During a lifetime a person takes and gives borrowing to smooth out the level of consumption during the lifetime. That is consumption depends on the current value of income in the period under review and discounted value of future income. Keynes (1936) stated that consumption increases with disposable income but not by as much as the increase in income where income increases marginal propensity to consume and average propensity to consume decrease but average propensity to consume is always higher than marginal propensity to consume. It is noted that Keynes' consumption function is based on the absolute income hypothesis where aggregate consumption is a stable but not necessarily linear function of disposable income. Kuznets'(1946) study was a turning point in the development of consumption function literature because his study considered the long run analysis of consumption where he showed that except for depression years the average propensity to consume in the United States over the period 1869-1938 fluctuated between 0.84 and 0.89.The findings of Kuznets indicated that the average propensity to consume is fairly constant over the long period of time and the autonomous consumption tends to zero in the long run. Kuznets empirical findings are consistent with the permanent income theory where the MPC out of permanent income is constant and equal to APC. The relative income hypothesis of Duesenberry (1949) stated that consumption function depends on current income as well as its relative magnitude in the society i.e., consumption depends on the percentage of income saved by the households and an increasing

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function of its percentage position in the income distribution. Thus, he concluded that aggregate saving rate is independent of aggregate income and the propensity to save of an individual is an increasing function of his or her percentile position in the income distribution. Later on, Modigliani and Brumberg (1980) examined that the determinants of consumption function are expected income and the value of wealth in the long run analysis. And in due course, enough researches had been done on the chief determinants of consumption expenditure and the various dimensions of consumption expenditure in the long run analysis both in theory and in empirical studies.

In this paper, author examined to study empirically the nature of consumption expenditure in UK during the long period from 1920 to 2017 taking disposable income, wealth (financial assets) and price level (measured by CPI) as the principal determinants of consumption expenditure of households.

Some important studies

Hansen (1946) studied that consumption is a function of income in the long run as well as in the short run and there is an upward secular drift of the consumption function which occurred during the secular rise of income.

Friedman (1957) stated that permanent consumption is a function of permanent income in the long run and their relationship is proportional.

Hadden (1965) fitted consumption function in Canada taking data during 1946-1963 and estimated the equation as C=-1+0.93Y which is significant and also found that the ratio of wealth to income had fallen and the stability of long run personal saving ratio or consumption ratio change with income distribution, social security measures, interest rate and so on. The consumption ratio is decreased by the decline in average family size, shorter working life, longer retirement time and changes in interest rate respectively.

Keithahn (1973) studied the relation between per capita consumption and disposable income in USA during 1897-1947 and found that Friedman observation on the secular tendency for the APC to rise or fall was not feasible because the variations were caused by wars and depressions. The lowest values were recorded in 1917,1918 and 1942-1945.The highest values in depression were in 1921 and 1930s.

Van Treeck (2008) examined asymmetric income and wealth effects in a non-linear consumption spending by ARDL and ECM methods in USA using quarterly data from 1953Q1 to 2007Q3 and found that a decline in income and wealth have substantial negative effects on consumption in the short run. But income and wealth influenced largely on consumption expenditure in the long run and reduction is relatively smaller when income and wealth declined.

Alimi (2013) estimated consumption function in Nigeria during 1970-2011 and found that MPC follows Keynes' hypothesis but it was not stable and autonomous consumption was negative in the long run. Income elasticity of consumption did not follow Keynes' hypothesis which was greater than unity.

Khan (2014) investigated empirically on the relationship between income and consumption of farm households in Peshwar, Khyber, Pakhtunkhwa province of Pakistan among 300 households out of 3244 in 2012 and found that income, family size, education and social status are positively related to consumption significantly and the age of households was negatively related to consumption. The study also followed the Duesenberry's relative income hypothesis.

Khan and Ahmed (2014) studied in Pakistan during 1980-2012 between consumption expenditure and income using secondary data and primary data of 697 respondents and estimated the consumption function as c=2401.027+0.832y which is significant. The paper also found a positive relation between income, education and family size significantly.

Ahmed, Baloch and Khan (2015) studied aggregate real private consumption in High income economies viz Australia, Korea, New Zealand and Singapore during 1971-2013 taking GDP, wealth, real interest rate and unemployment rates as determinants applying ARDL and ECM log linear models. The paper found that [i] 1% increase in real GDP will amplify ARPC in case of Australia, Korea, New Zealand and Singapore by 0.5005%,0.434%,0.4178% and 0.510% per year respectively which are significant at 5% level.[ii] 1% rise in wealth leads to increase ARPC by 0.2885%,0.193%, 0.179% and 0.106% per year respectively in Australia, Korea, New Zealand, and Singapore significantly.[iii]1% increase in real interest rate leads to reduce ARPC by 0.028%,0.071%,0.237% and 0.068% per year in Australia, Korea, New Zealand and Singapore significantly.[iv]1% increase in unemployment rate reduced ARPC in Australia, Korea, New Zealand and Singapore by 0.0935%, 0.0423%,0.0599% and 0.0853% per year significantly.

Hon (2016) studied the relationship between permanent income and permanent consumption in UK using the post war quarterly data and found that there is causal relation between the two and they are cointegrated and confirmed the long run relationship using ECM.The paper also found that the elasticity of permanent income and permanent consumption is unity.

Rooshabh and Panda (2016) estimated both short run and long run consumption function including elasticity in India during 1950-51-2013-14 following Duesenberry-Modigliani model, Keynesian and Brown-Davis-Friedman model and concluded that still income and accumulated income matter for consumption in India.

Foster (2018) estimated consumption function at current year taking current year GDP, ratio of consumption to GDP of previous year, short run real interest rate (real 3 months Bond rate) and long run real interest rate (real 10year Bond rate) in USA using quarterly data from 1964 to 2016 applying cointegration, error correction and impulse response functions. The paper found the real impact of short and long run real interest rates on consumption decisions but wealth is the important factor in determining consumption and the income elasticity of consumption is low implying a low MPC. There were upward shifts of autonomous consumption function. The paper found that income elasticity is just below 0.5 and the impact of exogenous shocks on expenditure via multiplier effect is also low. Stabilising economy by fiscal policy require much larger spending or tax cutting as well as monetary expansion.

Globlan, Carlo, Simona and Axel (2020) estimated households consumption function in Saudi Arabia through error correction model and weighted symmetric test during 1970-2017 taking income, wealth, interest rate, and productivity growth as independent variables. The paper verified the long run relationship where positive relation about 0.7-0.9 and income wealth relation is about 0.2, the consumption income ratio is constant over time and there is one cointegrating equation among consumption, income and wealth and the long run MPC can range from 0.5 to 0.9 depending on economies and the type of consumers.

Methodology and the source of data

Semi-log regression model and double-log regression model were applied to find out the long run relation between disposable income, wealth, price level and consumption expenditure of households in UK during 1920-2017.The structural breaks were found out through applying Bai-Perron model (2003).

Johansen(1988) cointegration model and vector error correction model was used to justify the short run causality and long run association among the four variables. The Wald test (1943) was applied to verify the short run causality in the system equations and the long run causality was examined from the cointegrating equation. The long run cyclical relationship between them were characterized by using STL method from regression filter of Hamilton (2018) model. The data on disposable income (million pounds) ,wealth(measured by household financial assets in million pounds),price level(measured by CPI where 2015=100) and the consumption expenditure of households of UK from 1920 to 2017 were collected from Fred Economic Data: A Millennium Macroeconomic data for UK (https://fred.stlouisfed.org/categories/33839).The paper asumed y= disposable income, c=consumption expenditure , w= wealth and p=price level respectively.

Empirical results of Long run consumption function

Long run consumption function during 1920-2017 in UK is subdivided into three time series data viz 1920-1960,1961-1990 and 1991-2017 respectively to justify the drifting process of consumption expenditure which is dependent on the disposable income.

Assume for the period from 1920 to 1960 the Keynesian consumption function is estimated as given below;

C=-171.6961+0.9545y

    (1.27)   (61.52)*

R^2=0.989, F=3785.14*, DW=0.234, *=significant at 5% level

This estimated consumption function is unstable during 1930-1947 and stable remaining other periods which were tested by CUSUM of squares. Here MPC_1=0.9545 which implies that θ_1=43.65°

In the period from 1961 to1990, the estimated consumption function is shown below;

C=-2073.569+0.9215y

    (1.89)*   (140.82)*

R^2=0.998, F=19832.62*, DW=0.473, *=significant at 5% level

It is unstable during 1969-1987 and stable in the remaining periods according to CUSUM of squares test. Here, MPC_2=0.921, i.e., θ_2=42.64°

During 1991-2017, the estimated consumption function is found as:

C=-196138.43+0.978y

    (-1.43)   (81.74)*

R^2=0.99, F=6682.817*, DW=0.907, *=significant at 5% level

It is unstable during 2000-2009 and stable during the rest of the periods according to CUSUM of squares test. Here, MPC_3=0.978 i.e., θ_3=44.15°.

Thus, it is clear that the first drift is downward and the second drift is upward as the base line from 1920 to1960 where mpc$_1$>mpc$_2$(θ_1> θ_2), mpc$_2$<mpc$_3$(θ_2< θ_3) and mpc$_1$<mpc$_3$(θ_1< θ_3). These findings do not follow Keynesian hypothesis during the long run analysis of consumption function in UK(Smithies,1945).

Throughout the period from 1920 to 2017, the marginal propensity to consume had been decreasing at the rate of 1.07% per year which is not significant at 5% level and also it was unstable according to CUSUM of squares test.

MPC=1.8181-0.0107t

(4.10)* (-1.38)

R^2=0.0198, F=1.926, DW=1.87, *=significant at 5% level

On the other hand, average propensity to consume had been increasing at the rate of 0.032% per year significantly although it was unstable during 1947-1939 and 1947-1974 respectively as shown by CUSUM of squares test.

APC=0.91184+0.00032t

(95.44)*   (1.91)*

R^2=0.0369, DW=0.211, F=3.68*, *=significant at 5% level.

Even, the income elasticity of consumption had been dwindling at the rate of 0.0315% per year significantly at 5% level during 1920-2017.

dlog(c)/log(c)(c)/dlog(y)/log(y)=0.03029-0.000315t

(4.42)*   (-2.64)*

R^2=0.068, F=6.98*, DW=1.87, *=significant at 5% level.

In addition to that, as disposable income rises, MPC decreases with a very slow rate insignificantly but APC increases also with a slow rate significantly but both of them are unstable according to CUSUM of squares test. Their estimated equations are given below.

MPC= 1.376-0.0000324y

(5.13)* (-0.609)

R^2=0.0038, F=0.37, DW=1.84, *=significant at 5% level

APC=0.9153+0.00000429y

(166.72)* (3.92)*

R^2=0.138, F=15.41*, DW=0.236, *=significant at 5% level.

Therefore, all the Keynesian hypotheses are not valid and significant in the long run in UK during 1920-2017.

The long run consumption function during 1920-2017 in UK as stated by Kuznets is being estimated by double log regression model and is given below.

Log(c)=0.993442log(y)

(1868.34)*

R^2=0.99, DW=0.1732, SC=-2.805, AIC=-2.8315, n=98, *=significant at 5% level, where c=consumption expenditure of households in UK, y=disposable income of household in UK.

The estimated equation states that one percent increase in the disposable income of households of UK led to 0.993 per cent increase in consumption expenditure during 1920-2017 in UK which is significant at 5% level.

The scatter diagram of the consumption expenditure and disposable income during 1920-2017 in UK is depicted in the following figure which is upward starting approximately from origin as stated by Kuznets.

Figure 1: Long run consumption function
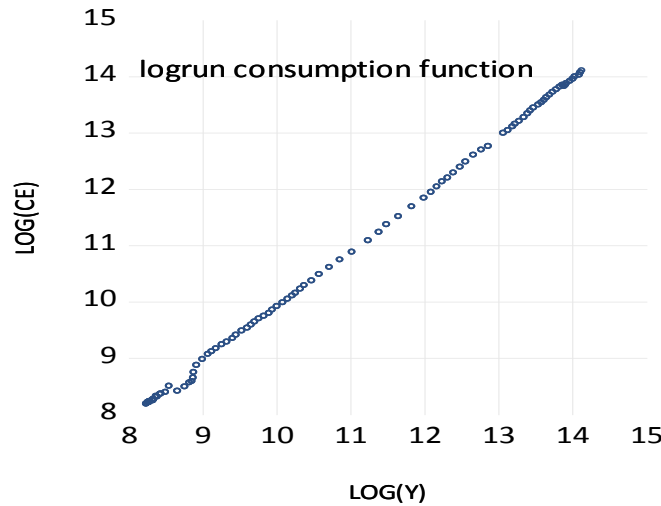
Source-Plotted by author

The actual and fitted regression equations have been plotted where they look like upward rightwards from the nearby origin shown in Figure 2 below and it is non-linear.

Figure 2: Fitted long-run consumption function
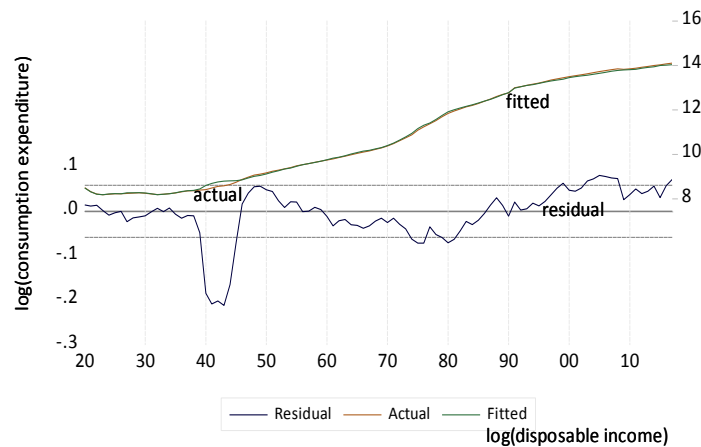
Source: Plotted by author.

The stability test as measured by CUSUM of squares test of residuals showed that it is stable except from 1935 to 1940 and from 1944 to 1961 because of second world war and after the recessions in the British economy where the economy of England was ruined abruptly. In Figure 3, the CUSUM of square line departed beyond the significant level of 5%.

Figure 3: Stability test
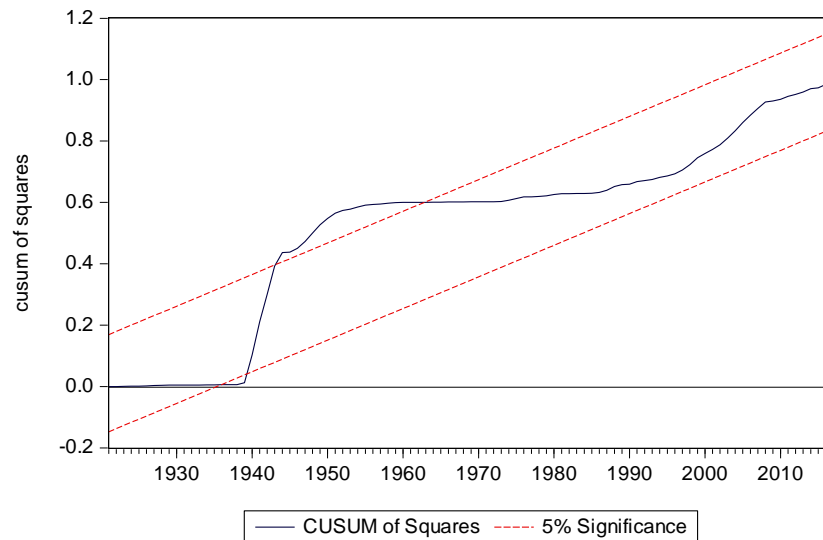
Source: Plotted by author

The double log multiple regression analysis states that one percent change in disposable income, wealth holding (financial assets) and price level (CPI) per year from 1920 to 2017 in UK lead to 0.88 per cent increase ,0.075 per cent increase and 0.079 per cent increase in consumption expenditure per year significantly where relation between price level and consumption expenditure is not significant. The estimated equation is given below.

Log (c) =0.1218+0.8805log(y)+0.0752log(w)+0.0797log(p)

$\qquad$ (0.43)   (14.81)*   (3.25)*   (1.24)

R^2=0.99,F=58431.02*,DW=0.238,*=significant at 5% level.

The estimated equation is highly significant but it suffers from autocorrelation problem and if the problem of autocorrelation is being removed then consumption expenditure is simply turned into a function of disposable income.

Johansen unrestricted rank test of the first difference series of log of consumption expenditure, disposable income, financial wealth and price level (measured by CPI) of UK during 1923-2017(after adjustment) revealed that the Trace statistic has two cointegrating equations and Max Eigen statistic has one cointegrating equation which are significant at 5% level. The values of Trace static, Max-Eigen statistic, Eigen value, critical values of 0.05 level with their probabilities have been shown in Table 1.

Therefore, the above variables have long run association among them.

Table 1: Cointegration test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.303013	64.30941	47.85613	0.0007
At most 1 *	0.163951	30.01549	29.79707	0.0472
At most 2	0.120876	13.00398	15.49471	0.1147
At most 3	0.008022	0.765197	3.841466	0.3817
		Max-Eigen Statistic		
None *	0.303013	34.29392	27.58434	0.0059
At most 1	0.163951	17.01151	21.13162	0.1715
At most 2	0.120876	12.23878	14.26460	0.1020
At most 3	0.008022	0.765197	3.841466	0.3817

 * denotes rejection of the hypothesis at the 0.05 level

 **MacKinnon-Haug-Michelis (1999) p-values

Source-Calculated by author

Since, the variables are cointegrated, then the vector error correction is needed where the estimated VECM are shown below.

[1]$Dlogc_t = -0.196 EC_1 + 0.3615 dlogc_{t-1} + 0.3247 dlogc_{t-2} - 0.0458 dlogy_{t-1} - 0.327 dlogy_{t-2} - 0.0158 dlogw_{t-1}$

$\qquad$ (-3.97)*$\quad$ (2.50)*$\qquad$ (2.30)*$\qquad$ (-0.28)$\qquad$ (-1.96)$\qquad$ (-0.54)

$+0.0152 dlogw_{t-2} + 0.296 dlogp_{t-1} - 0.131 dlogp_{t-2} + 0.03696$

$\quad$ (0.49)$\qquad$ (1.87)*$\qquad$ (-0.98)$\qquad$ (5.58)*

$R^2 = 0.66, F = 18.66*, AIC = -4.18, SC = -3.91$

[2]$Dlogy_t = -0.114 EC_1 + 0.027 dlogc_{t-1} + 0.318 dlogc_{t-2} + 0.485 dlogy_{t-1} - 0.367 dlogy_{t-2} - 0.0341 dlogw_{t-1} -$

$\qquad$ (-2.13)*$\quad$ (0.158)$\qquad$ (2.09)*$\qquad$ (2.79*)$\qquad$ (-2.03)*$\qquad$ (-1.09)

$0.0088 dlogw_{t-2} + 0.248 dlogp_{t-1} - 0.098 dlogp_{t-2} + 0.0309$

(-0.26)$\qquad$ (1.45)$\qquad$ (-0.68)$\qquad$ (4.32)*

$R^2 = 0.624, F = 15.69*, AIC = -4.02, SC = -3.75,$

[3] $Dlogw_t = -0.768 EC_1 - 0.199 dlogc_{t-1} + 0.151 dlogc_{t-2} - 0.311 dlogy_{t-1} - 0.262 dlogy_{t-2} - 0.0669 dlogw_{t-1} -$

$\qquad$ (-4.50)*$\quad$ (-0.40)$\qquad$ (0.313)$\qquad$ (-0.28)$\qquad$ (-0.45)$\qquad$ (-0.67)

$0.0804 dlogw_{t-2} + 0.266 dlogp_{t-1} - 0.129 dlogp_{t-2} + 0.1044$

   (-0.76)   (0.48)   (-0.28)   (4.58)*

$R^2 = 0.269, F = 3.49, AIC = -1.70, SC = -1.43$

[4] $Dlogp_t = -0.0863 EC_1 + 0.0123 dlogc_{t-1} + 0.109 dlogc_{t-2} + 0.362 dlogy_{t-1} - 0.274 dlogy_{t-2} - 0.082 dlogw_{t-1} -$

              (-2.20)*   (0.10)   (0.98)   (2.85*)   (-2.08)*   (-3.59)*

$0.0167 dlogw_{t-2} + 0.507 dlogp_{t-1} - 0.0078 dlogp_{t-2} + 0.0133$

   (-0.69)   (4.06)*   (-0.074)   (2.56)*

$R^2 = 0.76, F = 30.67*, AIC = -4.65, SC = -4.38$

The estimated VECM equations revealed four important conclusions which are statistically astonishing and are given below.

[1] Incremental disposable income, wealth and price level had insignificant impact on the incremental consumption expenditure level.

[2] incremental wealth, consumption expenditure in the short run and price level had insignificant influence in the change of disposable income.

[3] Incremental income, consumption, and price level had insignificant impact on the change of wealth respectively.

[4] Incremental disposable income, and wealth significantly influenced the change of price level but incremental consumption expenditure did not significantly impact the change of price level.

From the system equations of the VECM, the Wald test found that there are short run causalities to price level from the disposable income and the value of wealth which are significant in UK. But, the short run causality was seen from consumption expenditure to disposable income. On the other hand, there is no short run causality from disposable income to consumption expenditure in UK. The findings are presented in the Table2.

Table 2:Short run causality

Causality from …. To…..	Value of Chi-square(2)	Probability	Ho=no causality is rejected	causality
From wealth to price level	13.313	0.0013	Rejected	Yes
From disposable income to price level	10.48	0.0053	Rejected	Yes
From consumption expenditure to disposable income	5.6265	0.060	Rejected	Yes
From disposable income to consumption expenditure	4.367	0.112	accepted	no

Source: Calculated by author

The system equations of the estimated VECM implies that there are long run causalities from disposable income, values of wealth and price level to the consumption expenditure of UK during 1920-2017 (during 1923-2017 after adjustment) which can be expressed by the cointegrating equation given below .The cointegrating equation tends towards equilibrium because the t value of the coefficient of log C_{t-1} is found

significant at 5% level where the speed of adjustment is found as 19.6% per year but it is not exactly touches equilibrium because t value of coefficient of $logp_{t-1}$ is insignificant.

Long run causality is exemplified by the cointegrating equation which is stated below.

Z_{t-1}=-0.196$logc_{t-1}$-1.1425$logy_{t-1}$+0.195$logw_{t-1}$-0.0905$logp_{t-1}$-0.4634

(-3.978)*   (-7.15)*   (2.91)*   (-0.55)

The movement of the cointegrating equation towards equilibrium is depicted in Figure 4 below.

Figure 4: Cointegrating equation
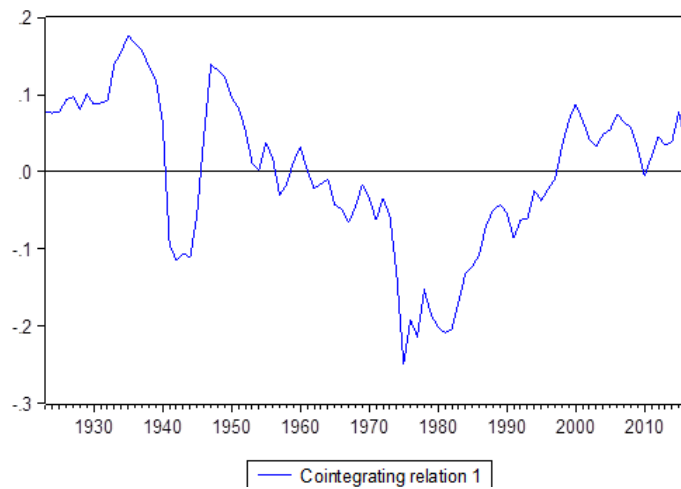
Source: Plotted by author.

Above all, the VECM is unstable and non-stationary because some of the roots of characteristic polynomial lie outside the unit circle and some lie on or inside the unit circle. The values of roots are shown in the table-3 and unit circle is plotted in Figure 5 below.

Table 3: Values of roots

Root	Modulus
1.000000	1.000000
1.000000 - 1.29e-15i	1.000000
1.000000 + 1.29e-15i	1.000000
0.894185	0.894185
0.518349 - 0.333971i	0.616622
0.518349 + 0.333971i	0.616622
0.459804	0.459804
-0.364601	0.364601

-0.001940 - 0.343591i	0.343597
-0.001940 + 0.343591i	0.343597
0.028685 - 0.154107i	0.156754
0.028685 + 0.154107i	0.156754

Source-Calculated by author.

Figure 5: Unit circle
Inverse Roots of AR Characteristic Polynomial
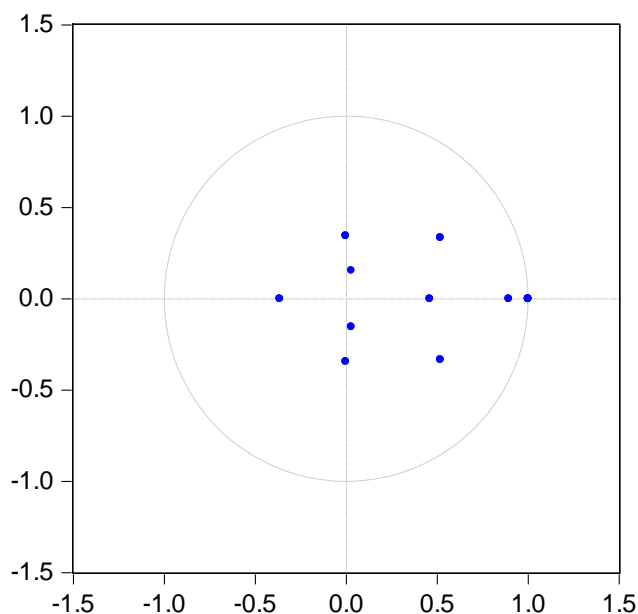
Source: Plotted by author

But the VECM incurs the problem of autocorrelation where the vertical lines showed both the positive and negative signs in all the panels in figure6.

Figure 6: Autocorrelation of the variables
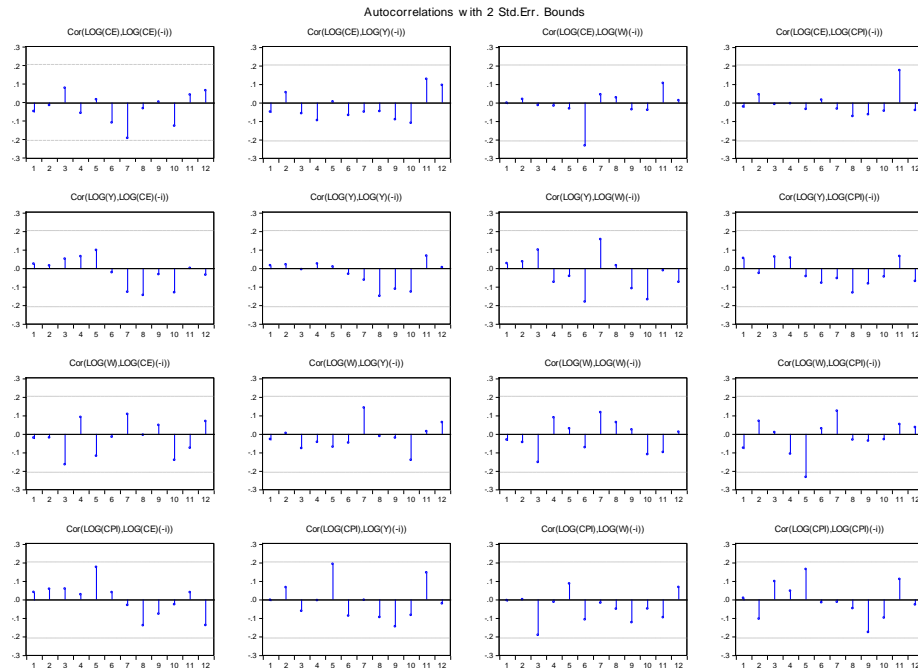
Source: Plotted by authors

The response of wealth, disposable income and price level to the consumption expenditure have been diverting away from equilibrium which also confirmed that the model is nonstationary and unstable. All the responses are seen in the impulse response functions given in the figure7.

Figure 7: Impulse response functions
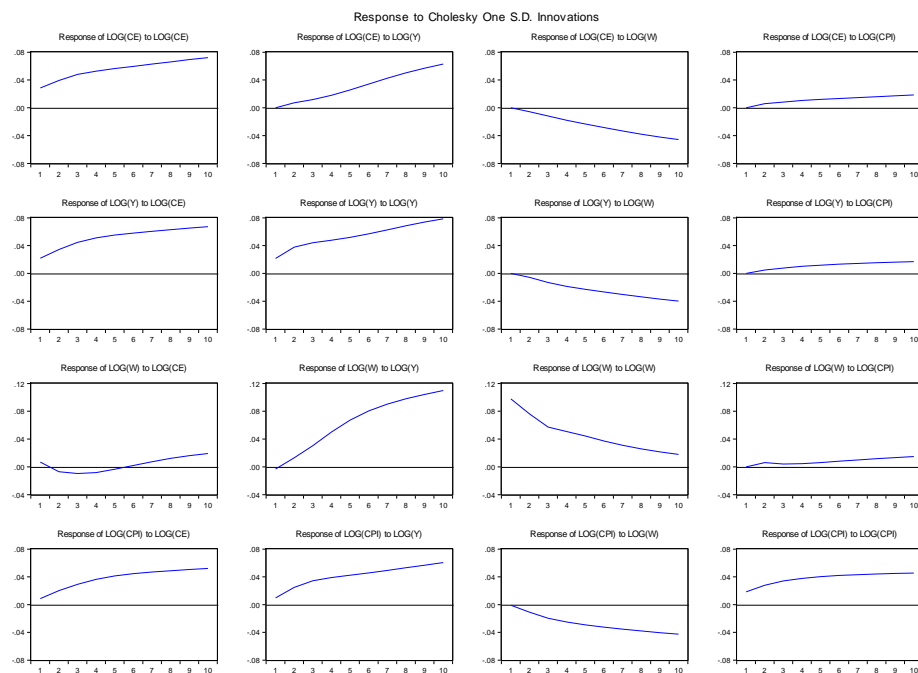
Source: Plotted by author

Long run cyclical behavior

The structural breaks of the long run consumption function during 1920-2017 in UK was found by applying Bai-Perron (2003) test of L+1 vs L sequentially determined breaks selecting trimming=0.15, maximum breaks=5 and significant level=5% using HAC standard errors and covariance of Bartlett kernel, Newey-West fixed bandwidth=4.0 where, n=98.All the values are given in the Table 4 below.

Table 4: Values of structural breaks

Variable	Coefficient	Std. Error	t-Statistic	Prob.
		1920 - 1950 -- 31 obs		
C	8.456462	0.099584	84.91770	0.0000
		1951 - 1974 -- 24 obs		
C	9.937562	0.172307	57.67345	0.0000
		1975 - 1990 -- 16 obs		
C	12.02071	0.225427	53.32429	0.0000
		1991 - 2017 -- 27 obs		
C	13.61863	0.119154	114.2940	0.0000

R^2=0.96, F=905.6301, DW=0.533732, AIC=1.025978, SC=1.131487

Source: Calculated by author

The consumption function during 1920-2017 in UK revealed three upward structural breaks in 1951,1975 and 1991 which are comparable to upward drifts in the Keynesian manner which is nicely plotted in the Figure 7, below.

Figure 7: Structural breaks
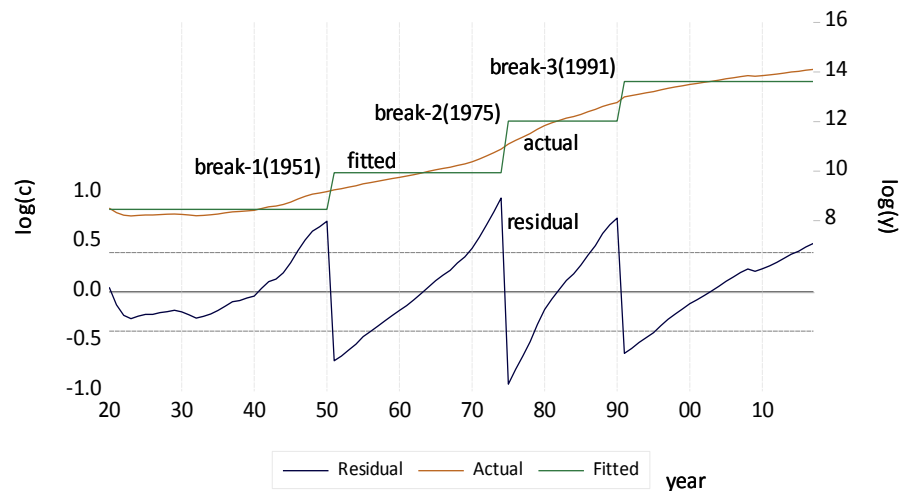
Source-Plotted by author

Hamilton regression filter of household consumption expenditure of UK during 1920-2017 which was adjusted in 1931-2017 for filter is estimated for finding residual to get decompositions.

$Log(c_t)=0.5029+3.6539log(c_{t-8})-1.334log(c_{t-9})-0.2398log(c_{t-10})-1.1084log(c_{t-11})+v_t$

       (3.93)*   (5.14)*   (-1.03)   (-0.186)   (-1.66)

R^2=0.989   F=2019.76*   DW=0.35, AIC=-0.227   SC=-0.085, n=87 (adjusted sample=1931-2017) *=significant at 5% level, v_t= residual

Thus, the residual is

$V_t= Log(c_t)-[0.5029+3.6539log(c_{t-8})-1.334log(c_{t-9})-0.2398log(c_{t-10})-1.1084log(c_{t-11})]$

This Hamilton residual is decomposed into cycles, cyclical trend, seasonal fluctuations by STL method in a panel of diagrams. In panel 1, the consumption expenditure cycle of household of England from 1932-2017(after adjusted samples) is shown where 12 peaks and 12 troughs are visible and after 1947 there are quick downswing after that upswing took longer time till 1980 and then downswings took longer periods till 2015.In panel 2, the cyclical trend of the consumption expenditure is plotted where 6 peaks and troughs were found. From 1935, the upswing took many years to reach at peak level near 1980s and then it started downswing till 2015. So, in the cyclical trend of consumption expenditure, the attainment of peak level took much longer periods than the trend of downswing in UK. The seasonal variation of consumption expenditure revealed inverse v shaped which showed diminishing volatility till 1970 and then volatilities slowly increased which is shown in panel 3. In panel 4, the remainder of the residual regression filter of Hamilton showed numerous small upswings and downswings. In panel 5, the seasonally adjusted cycles are as like as the residual cycles of panel 1.

Figure 8: Decomposition into trends and cycles of consumption expenditure
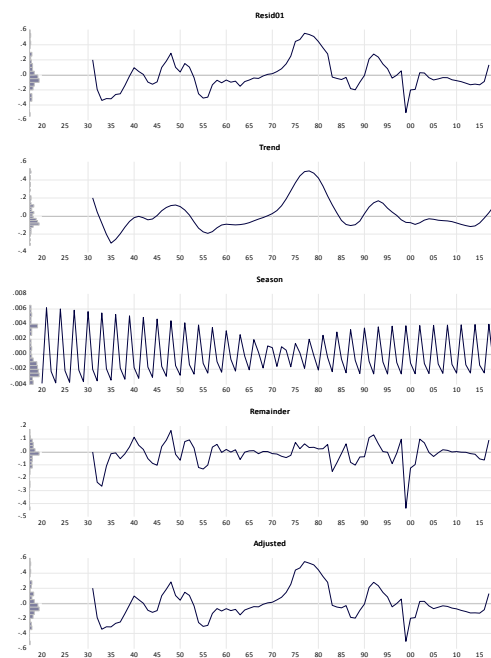
Source: Plotted by author

Figure 9: Cycle, trend and seasonal adjustment of consumption expenditure
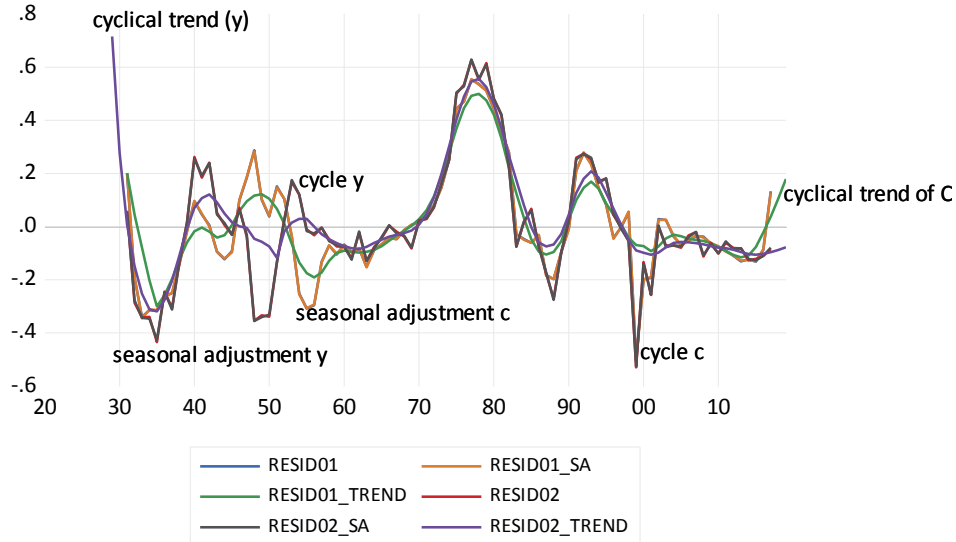
After the great depression in UK, both the consumption expenditure and disposable income have been fallen steeply and picked up from 1936 to 1940 and then started to decline up to mid-40s from where consumption expenditure increased but disposable income has fallen sharply till 1950s.During 1950-1956,the consumption expenditure sharply fell down and then it started to move upswing and on the other hand, disposable income is shown downswing up to 1964.Thereafter both the consumption expenditure and disposable income moved in the same direction in course of cyclical patterns. During great depression, second world war and successive recessions in 1956,1961,1973-1975,1980-81,1990-91 the cyclical behaviours were not in a same direction. In Figure10, it is visible clearly.

Figure 10: Cycles of consumption expenditure and disposable income
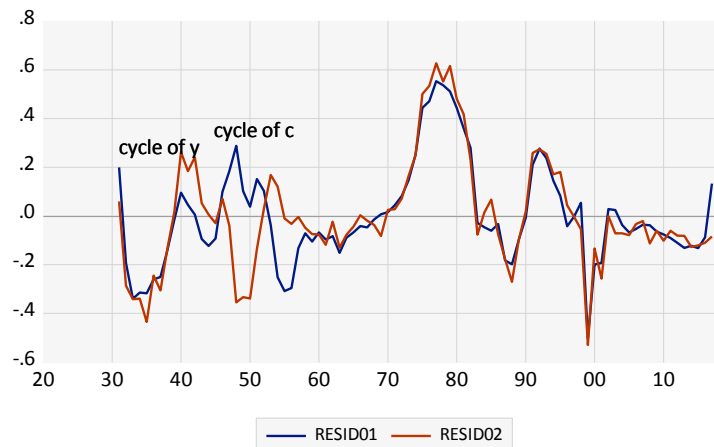
Source:Plotted by author

During 1935-1960, the cyclical trends of consumption expenditure and disposable income moved in a differential manner and sometimes they moved in opposite directions and both the trends showed similar cyclical trends after 1964 onwards showing 3 peaks and troughs. The impact of great depression, second world war, and the recessions in UK were also clearly visible in the cyclical trends in disposable income and consumption expenditure. In Figure 11, it is shown clearly.

Figure 11: Cyclical trends of consumption expenditure and disposable income.
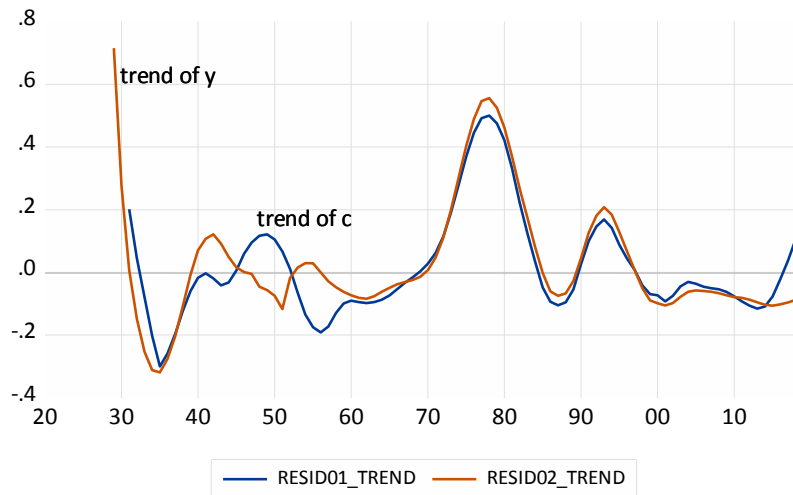
Source: Plotted by author

The same patterns of observations in the seasonal adjustment of consumption expenditure and disposable income of UK during 1932-2017 as like as cyclical trends were observed and shown in the Figure12.

Figure12 : Seasonal adjustments of consumption expenditure and disposable income
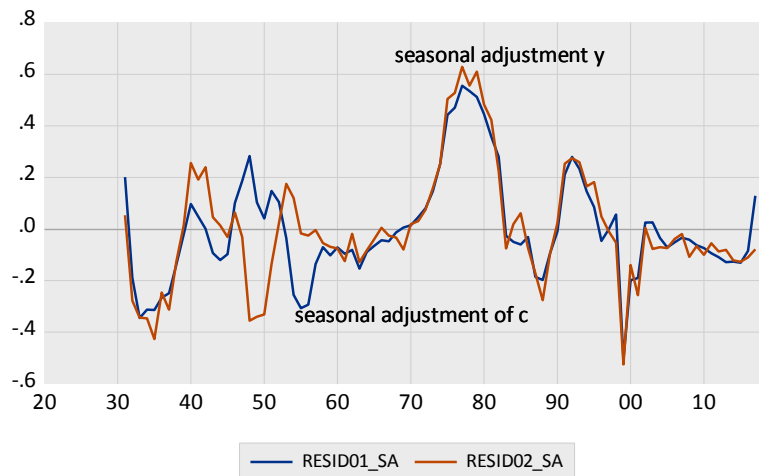
Source-Plotted by author

The seasonality of consumption expenditures of the households of UK during 1920-2017 (1931-2017 after adjustment)can be verified through the autocorrelation and partial autocorrelation functions which are

fluctuating from positive to negative values through out the periods.AC functions are positive and decreasing up to lag 6,then they tended to negative values which are both rising and falling up to lag 26,then their values moved to positive values up to lag 31 and then changed to negative up to 36 lags. The partial autocorrelation functions varied from positive to negative continuously and Q stats are significant at 5% level. In Figure 13, the AC, PAC and Q stats of consumption expenditure is given below.

Figure 13: AC, PAC of consumption expenditure

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.817	0.817	60.025	0.000
		2	0.636	-0.092	96.872	0.000
		3	0.439	-0.160	114.65	0.000
		4	0.286	-0.002	122.30	0.000
		5	0.160	-0.036	124.71	0.000
		6	0.028	-0.142	124.79	0.000
		7	-0.068	-0.018	125.23	0.000
		8	-0.116	0.051	126.55	0.000
		9	-0.079	0.166	127.18	0.000
		10	-0.048	-0.049	127.41	0.000
		11	-0.013	-0.007	127.43	0.000
		12	-0.022	-0.100	127.48	0.000
		13	-0.056	-0.103	127.80	0.000
		14	-0.067	0.028	128.27	0.000
		15	-0.056	0.078	128.61	0.000
		16	-0.029	0.058	128.70	0.000
		17	-0.052	-0.114	129.00	0.000
		18	-0.116	-0.174	130.50	0.000
		19	-0.145	0.047	132.89	0.000
		20	-0.157	-0.037	135.75	0.000
		21	-0.175	-0.108	139.35	0.000
		22	-0.179	0.063	143.17	0.000
		23	-0.175	0.068	146.89	0.000
		24	-0.147	0.019	149.56	0.000
		25	-0.085	0.019	150.45	0.000
		26	-0.008	0.029	150.46	0.000
		27	0.054	0.000	150.83	0.000
		28	0.085	-0.057	151.78	0.000
		29	0.094	0.019	152.95	0.000
		30	0.067	-0.048	153.56	0.000
		31	0.040	-0.036	153.78	0.000
		32	-0.005	-0.058	153.79	0.000
		33	-0.038	0.054	153.99	0.000
		34	-0.085	-0.046	155.04	0.000
		35	-0.136	-0.129	157.79	0.000
		36	-0.180	-0.108	162.68	0.000

Source- Plotted and calculated by author

The autocorrelation functions of disposable income are positive up to lag 5 then they tend negatives with increasing and decreasing patterns up to lag 10 and became positive up to lag 17 which ultimately tend to

negative fluctuating up to 35 lags. The partial autocorrelations functions have been changing from both positive to negative values continuously. All these proved that the disposable income behaved in seasonal patterns. All the values of Q stats are shown significant at 5% level. In Figure14, the AC, PAC and Q stats are given below.

Figure 14:AC,PAC ,Q stats of disposable income.

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.824	0.824	61.062	0.000
		2	0.667	-0.036	101.56	0.000
		3	0.430	-0.340	118.61	0.000
		4	0.254	0.008	124.61	0.000
		5	0.105	0.027	125.65	0.000
		6	-0.038	-0.188	125.79	0.000
		7	-0.142	-0.051	127.73	0.000
		8	-0.203	0.071	131.79	0.000
		9	-0.140	0.298	133.73	0.000
		10	-0.067	-0.009	134.18	0.000
		11	0.056	0.042	134.50	0.000
		12	0.108	-0.080	135.71	0.000
		13	0.171	0.066	138.77	0.000
		14	0.176	-0.091	142.06	0.000
		15	0.189	0.022	145.92	0.000
		16	0.160	-0.013	148.72	0.000
		17	0.063	-0.164	149.16	0.000
		18	-0.017	0.048	149.19	0.000
		19	-0.098	0.101	150.28	0.000
		20	-0.136	-0.082	152.41	0.000
		21	-0.149	0.015	155.01	0.000
		22	-0.153	-0.050	157.81	0.000
		23	-0.143	0.039	160.27	0.000
		24	-0.146	-0.183	162.90	0.000
		25	-0.129	-0.059	164.99	0.000
		26	-0.136	-0.061	167.32	0.000
		27	-0.145	-0.054	170.05	0.000
		28	-0.161	0.008	173.47	0.000
		29	-0.186	-0.030	178.08	0.000
		30	-0.182	0.070	182.58	0.000
		31	-0.165	0.033	186.36	0.000
		32	-0.127	-0.012	188.65	0.000
		33	-0.086	0.074	189.71	0.000
		34	-0.046	-0.105	190.01	0.000
		35	-0.013	-0.007	190.04	0.000
		36	0.004	-0.069	190.04	0.000

Source-Plotted and calculated by author

Some Limitations

The paper has some limitations too since it did not consider the interest rate as one of the significant variables which can influence the consumption behaviour in the long run when the financial assets(wealth) and price level are taken as important variables. Even, the type of assets, share prices, liquidity demands

are significant determinants of consumption expenditure in the long run. Therefore, the paper has enough scope to explore these findings in the future.

Conclusion

The paper concludes that the long run consumption expenditure of the households in UK from 1920 to 2017 follows the Keynesian hypothesis partially in case of drift of consumption functions during 1920-1960,1961-1990 and 1991-2017 respectively but follows Kuznets theory where APC=MPC=0.993 which was estimated through double log regression model. This is unstable during 1935-40 and 1944-61 which were found from the CUSUM of squares test. There was long run association between consumption expenditure, disposable income, wealth and price level in which one cointegrating equation was sorted out which stated that the speed of adjustment was 19.6% per year for moving towards equilibrium. But this long run causality from disposable income, wealth and price level to consumption expenditure is unstable but nonstationary. In the long run this relation showed three upward structural breaks in 1951,1975 and 1991 respectively. Hamilton decomposition asserted that consumption expenditure from 1920 to 2017(1932-2017 after adjustment) consists of 12 peaks and troughs but cyclical trend minimised into 6 peaks and troughs and the seasonal variation showed v shaped. The seasonal adjustment of consumption expenditure was also verified by the patterns of autocorrelation and partial auto-correlation functions successfully. The behaviours of seasonal patterns of consumption expenditure and disposable income during 1940-1960 revealed inverse relation in some years due to impact of world war, and war with India and then their patterns were in a same direction. These were also reflected in the cyclical trends of both the variables.

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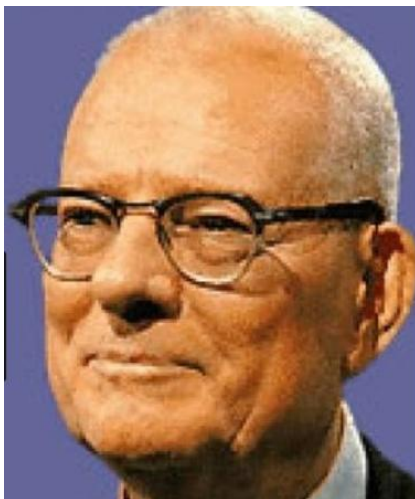
The most basic problem is that performance appraisals often don't accurately assess performance.

— W. Edwards Deming —

PREDICTING THE DEVELOPMENT OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP ACTIVITY USING MULTIFACTORIAL EMPIRICAL MODELS

Laziz Niyozovich Khudoyorov[1]

ABSTRACT

The multifactorial empirical model of development of small business and private entrepreneurship activity in Karshi are created and predicted in this article. Factors which influence the development of small business and private entrepreneurship activity in Karshi, namely, the volume of products which are produced by small business and private entrepreneurship, the number of employed, investments, the number of enterprises, the value of fixed assets are selected in the forecasting.

Keywords: small business, small business entities, share of small business, new jobs, econometric model, the least squares method, empirical models, forecasting.

INTRODUCTION

From the first years of independence in the Republic of Uzbekistan, special attention has been paid to the development of small business and private entrepreneurship as one of the important areas of increasing the economic potential of our country. Small business and private entrepreneurship are considered an inseparable part of any developed economic system. One of the strategic goals which was set by the state in the concept of long-term socio-economic development of Uzbekistan until 2030 is considered the need to develop small business in order to form market relations and socio-economic stability of society.

The complex measures which are being carried out in our country to further improve the business environment give opportunity for the rapid development of small business and private entrepreneurship and ensure sustainable economic growth. In 2000-2019, the share of small business and private entrepreneurship in Gross Domestic Product increased from 31.0% to 56.5%, increased by 25.5% units. Also, if we give attention to the share of small business in Gross domestic product in developed countries, this figure composed of 48% in South Korea, 51% in the UK, 53% in Germany, 58% in Australia, 60% in Israel, 68% in Italy and 21% in Russia.

The development of small business and private entrepreneurship has significant importance for a consistently high level of employment, as well as for innovative development and improvement of the sectoral structure of the economy. Therefore, it is important to study the factors which influence the development of small business and private entrepreneurship, create a model through them and forecast. We want to observe the forecasting in the example of Karshi city.

LITERATURE REVIEW

The econometric approach to theory of small business and private entrepreneurship, modeling and forecasting, the issues of its application in practice are widely covered and substantiated in the scientific

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work of foreign scientists. In particular, it is covered in the scientific works of V.Afanasev, E.Berndt, M.Verbik, D.Dayitbegov and others.

Together with this, G.Sh.Abdullaev, V.M.Vlasova, I.Tolmachev, S.Stanislav and others conducted scientific researches by putting into practice of small business and private entrepreneurship in the countries of the Commonwealth of Independent States (CIS).

General problems of small business and private entrepreneurship in Uzbekistan, issues of econometric modeling and forecasting are widely covered in the scientific works of S.S.Gulomov, B.Yu.Khodiev, B.A.Begalov, T.Sh.Shodiev, Yo.Abdullaev, N.B.Ashurova, S.K. Salaev and others.

Nowadays, there is a vital need for solving and putting into practice of scientific and practical problems, such as econometric modeling, forecasting of development trends of the future of small business and private entrepreneurship in the region.

ANALYSIS AND RESULTS

One of the important problems is considered the formation of small business and private entrepreneurship as a system and the development trends, identification and elimination of existing problems, setting science-based perspectives by using econometric modeling priorities for small business and private entrepreneurship in the territories of our republic while policy of further deepening of economic reforms of our country, modernization of the country, increasing incomes and welfare of the population is carrying out in today.

In order to create a multifactorial empirical model on the factors which influence the development of small business and private entrepreneurship activity in Karshi city, the factors which influence the small business and private entrepreneurship activity were taken and how they behave in the model will be examined. As a result, the following factors were selected: the volume of products which were produced by small businesses and private entrepreneurship in Karshi city (Y), the number of people who were engaged in small business and private entrepreneurship in Karshi city (X1), investments which were shared small business and private entrepreneurship in Karshi city (X2), number of small business and private entrepreneurship in Karshi city (X3), value of fixed assets of small business and private entrepreneurship in Karshi city (X4).

Table 1 Correlation matrix

Sample: 2000 2019					
Included observations: 20					
Correlation					
SSCP					
t-Statistic					
Probability	Y	X1	X2	X3	X4
Y	1.000000				
	58.08359				

X1	0.904638	1.000000			
	8.678901	1.584625			
	9.005692	-----			
	0.0000	-----			
X2	0.924256	0.913616	1.000000		
	58.95658	9.625880	70.05303		
	10.27122	9.533588	-----		
	0.0000	0.0000	-----		
X3	0.304238	0.392612	0.436755	1.000000	
	1.573768	0.335450	2.481145	0.460683	
	1.355004	1.811140	2.059843	-----	
	0.1922	0.0868	0.0542	-----	
X4	0.987920	0.861302	0.919019	0.227293	1.000000
	55.42165	7.980862	56.61989	1.135580	54.18285
	27.04741	7.191986	9.890777	0.990240	-----
	0.0000	0.0000	0.0000	0.3352	-----

The correlation matrix of natural logarithmic values among the factors which influence the development of small business and private entrepreneurship in Karshi city was created (Table 1)

The correlation matrix of natural logarithmic values among the factors which influence the development of small business and private entrepreneurship in Karshi city was calculated in the Eviews 9 program.

All the above-mentioned factors will be taken and how they behave in the model will be examined in order to create a multifactorial empirical model on the factors which influence the development of small business and private entrepreneurship in Karshi city.

Table 2 Parameters of a multivariate multifactorial empirical model which was built for the development of small business and private entrepreneurship in Karshi city

Dependent Variable: Y				
Method: Least Squares				
Sample: 2000 2019				
Included observations: 20				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	1.470358	0.341006	4.311820	0.0006

X2	-0.189689	0.075359	-2.517154	0.0237
X3	0.939574	0.325089	2.890209	0.0112
X4	0.984816	0.069027	14.26704	0.0000
C	-5.130198	0.786709	-6.521085	0.0000
R-squared	0.992302	Mean dependent var		3.712700
Adjusted R-squared	0.990249	S.D. dependent var		1.748437
S.E. of regression	0.172650	Akaike info criterion		-0.462784
Sum squared resid	0.447120	Schwarz criterion		-0.213851
Log likelihood	9.627837	Hannan-Quinn criter.		-0.414189
F-statistic	483.3978	Durbin-Watson stat		2.688585
Prob(F-statistic)	0.000000			

It is expedient to use a linear and hierarchical multifactorial econometric model on the basis of the evaluation criteria due to its condition for the development of small business and private entrepreneurship activity.

We use the least squares method in order to create and analyze the econometric model between the development of small business and private entrepreneurship activity and the factors which influence them.

We created the following empirical model on the basis of the results which were obtained from the Eviews 9 program.

$$Y = 0,005946 * X_1^{1,468} * X_2^{-0,1895} * X_3^{0,9399} * X_4^{0,985}$$
$$t \quad (-6,528)\,(4,316)\,(-2,518)\,(2,892)(14,278) \tag{1}$$

If we evaluate the generated model according to the evaluation criteria, we can see the following results, usually the coefficient of determination takes the values in the cross section [0; 1]. The closer the value of the coefficient is to 1, the stronger the correlation. In this case, the fact that the coefficient of determination is equal to 0,992 means that there is a strong enough correlation among these economic indicators in the model.

The corrected determination coefficient is usually used in order to be able to compare the models with a different number of factors and not to affect these quantitative factors R^2 statistics, , namely:

$$R^2_{\text{текис}} = 1 - \frac{s^2}{s_y^2} \tag{2}$$

In this case, the fact that this flattened coefficient of determination is equal to 0,99 and is close to R^2, means that values are accepted around the change in the number of factors which influence the model.

We use Fisher's F-criterion in order to determine the statistical significance of the constructed multifactorial econometric model and its relevance to the process which is being studied. The real value of the F-criterion is calculated using the following formula:

$$F_{\text{хисоб}} = \frac{R^2}{1 - R^2} \cdot \frac{n - m - 1}{m}, \qquad (3)$$

where: R^2 - determination coefficient;

n - number of observations;

m - number of factors.

The real value of the F-criterion is equal to $F_{\text{хисоб}}$=484,39. If the real value is greater than the value in the table, then the constructed multifactorial econometric model is said to be statistically significant or adequate to the process which is being studied.

We find the table value of the F-criterion. In order to do this, we calculate the values according to the degrees of freedom $k_1 = m$ and $k_2 = n - m - 1$ as well as the degree of significance α. According to given significance level $\alpha = 0,05$ and freedom levels k_1=4 and k_2=20-4-1=15, the table value of the F-criterion is equal to $F_{\text{жадвал}}$= 4,39.

$F_{\text{хисоб}}$>$F_{\text{жадвал}}$ satisfies the condition, it is statistically significant because the calculated value of the F-criterion is greater than the value in the table, it can be used to forecast the volume of products which are produced in small business and private entrepreneurship in future periods.

If the autocorrelation does not exist in the residuals of the resulting factor, then the value of the calculated DW criterion will be around 2. The value of the DW criterion which is calculated in this example is 2,689. This indicates that there is not autocorrelation from the residuals of resulting factor.

We selected the changes of the volume of products which were produced by small businesses and private entrepreneurship in Karshi city in time series and their trend models, the factors which influence it, we built and analyzed multifactorial empirical models on the basis of them. The forecasting options have been developed on the basis of built models.

We considered that it is expedient to compare the forecasting options on the basis of trend and empirical models which are built to increase the volume of products which were produced by small businesses and private entrepreneurship in Karshi city.

The forecasting results based on the trend model of the volume of products produced by small businesses and private entrepreneurship in Karshi city in Table 3 show that the volume of products which were produced by small businesses and private entrepreneurship in Karshi city (on the basis of prices in 2019)will increase by 1,271 times by 2020 compared to 2019, the growth will be forecasted to increase to 5,419 times by 2025. The analysis of the results of the multifactorial empirical (3.2.11) model shown in the table shows that the volume of products which were produced by small businesses and private entrepreneurship in Karshi city (on the basis of prices in 2019) will increase by 1,412 times by 2020 compared to 2019, and the growth will be forecasted to increase to 7,755 times by 2025.

We can conclude from this it is expedient the forecasting results which are obtained from multifactorial model in order to increase the level of satisfying demand and the high demand for the volume of products which were produced by small businesses and private entrepreneurship as a result of the socio-economic reforms which are being carried out in today.

Thus, the further development of small business in our country will be carried out through more efficient use of demographic, natural and economic opportunities. Besides, imbalances in the distribution of resources are also reflected in the complex economic, demographic and social conditions which occur in this or that region. Therefore, the objective, differentiated approach to the effective use of limited resources is needed in today's market economy, taking into account the priorities of small business development not only in the republic and its regions, but also in the districts and cities of the regions, and such strategic approach determines the development future of small business in each region which is taken separately.

Table 3 Forecasting of the volume of products which were produced by small business and private entrepreneurship in Karshi city from the trend and multifactorial empirical model and the forecasting of the factors which influence it from the trend model

Years	Forecasting obtained from multifactorial empirical model of Y	Forecasting obtained from obtained the trend model of Y	Forecasting obtained from the trend model of X1	Forecasting obtained from the trend model of X_2	Forecasting obtained from the trend model of X_3	Forecasting obtained from the trend model of X4
2019 Real	**677,377**	677,377	20,769	393,081	4,489	1360,119
2020	**956,639**	861,081	22,580	492,56	4,418	1481,154
2021	**1324,628**	1150,772	25,702	599,596	4,688	1667,539
2022	**1853,169**	1537,923	29,320	721,459	5,036	1864,848
2023	**2612,299**	2055,323	33,472	859,109	5,471	2073,081
2024	**3700,276**	2746,790	38,194	1013,505	5,999	2292,239
2025	**5253,306**	3670,886	43,526	1185,605	6,632	2522,321

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, in order to further accelerate the development of small business and private entrepreneurship, on the basis of the priorities of sustainable and balanced economic growth and structural changes, modernization, technical and technological renewal of its most important sectors, the main focus in our republic should be given to the elimination of loss-making, economically insolvent and unpromising enterprises, restructuring, downsizing and modernization, identification of privatized but non-working enterprises and setting up production on them, the process of liquidation on the organization of new small businesses, home-based jobs and production on the basis of sales to new owners, diversification of types of products which are produced by local unprofitable enterprises, the need to restructure existing unused capacity, surplus land, social facilities, financial condition, structural changing of management are based.

When we analyze the results of the empirical model which is built for the development of small business and private entrepreneurship in Karshi city, we have achieved the following result:

If we analyze the results of the model which is built for the development of small business and private entrepreneurship (Y) in Karshi city, we can see that if the number of people who are engaged in small business and private entrepreneurship (X_1) increases by 1%, the volume of products which are produced by small business and private entrepreneurship (Y) will increase by 1,468 %, if the amount of investments in small business and private entrepreneurship (X_2) increases by 1%, it will decrease by 0,1895%, if the number of small businesses and private entrepreneurship (X_3) increase by 1%, it will increase by 0,9399% and if the value of fixed assets of small business and private entrepreneurship (X_4) increase by 1%, the volume of products which are produced by small businesses and private entrepreneurship (Y) will increase by 0,985 %.

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PROBLEMS OF IMPLEMENTATION AND DEVELOPMENT INCLUSIVE EDUCATION IN HIGHER EDUCATIONAL INSTITUTIONS OF UZBEKISTAN

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ABSTRACT

The article discusses the need to introduce inclusive education in higher educational institutions of Uzbekistan as the most acceptable form of education for persons with disabilities. The author analyzes the history of the formation and development of this form of education in international practice and in Uzbekistan. The current situation with the introduction of inclusive practice in higher educational institutions was analyzed separately; existing barriers and problems in this direction, appropriate recommendations were given to improve the efficiency of inclusive education in higher educational institutions of Uzbekistan.

Key words: persons with disabilities, inclusive education, integration, supportive environment, educational learning platform, tolerant sociocultural environment, humanism.

Introduction:

Since the beginning of the 70s of the XX century in the countries of Western Europe and the United States began to consider the possibility of training persons with disabilities (HH) in general education institutions along with their peers. Throughout the social development of society, at all times, the problem of training and adaptation of persons with disabilities was associated, which was the most urgent task, the solution of which was accompanied by a number of difficulties for the education system of each state. No state, no society is protected from the risk of having children with physical or mental health problems, as evidenced by the fact that, on average, 7-10% of newborns worldwide are born with certain health problems every year, and this is a kind of challenge or warning about the forthcoming preparation of the education system for teaching these children in the future.

The problem studing level: Today, every member of society has the right to receive a proper education at all stages of the educational process, which is legally enshrined in the constitutions of many countries. However, there is a category of people with disabilities who require a separate approach in the learning process, the most effective of which, in our opinion, is inclusive education. It is educational inclusion that meets the ideology as much as possible, which excludes any forms of discrimination against persons with disabilities and affirms equal treatment of all people, but at the same time creates the necessary conditions for persons with special educational needs [1.p.3]. According to S.I. Kondratyeva "An inclusive form of education is a fairly new form of education. Inclusive education has been widely used in the West as the most acceptable and humane form of education for children with disabilities, as well as for children of social risk groups (children from disadvantaged families, children of immigrants, refugees who have suffered as a result of violence, wars, terrorist attacks) since 70s XX century "[2.page 18].

Research methods: In the study, the author used such generally accepted methods of cognition as dialectics, scientific abstraction, inductive and deductive methods, monographic observation, comparative analysis and the method of economic statistics.

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Analysis and results: Inclusive education is the most striking form of integration of students with disabilities into society, when students study together with their peers in the same classroom without any discrimination with the possibility of realizing their abilities. That is why inclusive education is recognized as the most humane form of education around the world, and countries are taking the initiative to include this form in the educational process. In the process of education, the formation and implementation of inclusive educational programs in higher educational institutions includes the solution of the following tasks:

- The formation of a favorable environment conducive to increasing the access of persons with disabilities to higher educational institutions;

- Develop a mechanism aimed at improving the quality of education in higher educational institutions for persons with disabilities;

- Based on the individual abilities of each student of a person with disabilities, to form an educational learning platform that integrates the activities of trainers and faculty;

- The formation of a tolerant socio-cultural environment in the educational organization of higher education [3, p. 175].

In the Republic of Uzbekistan, the introduction of inclusive education is a strategic task of the education system, which is receiving close attention at the state level. So, in particular, in the decree of the President of the Republic of Uzbekistan Sh.M. Mirziyoyev "On approval of the concept of development of the higher education system of the Republic of Uzbekistan until 2030" it is provided: "To increase the types of educational services provided to students with disabilities and improve their quality, the development of inclusive processes in education , introduction of adaptive technologies "[4.page 9], which envisages expanding the coverage of higher education of socially vulnerable groups of the population, in particular persons with disabilities. It should be recognized that there are a number of problems in the higher education system of Uzbekistan that have accumulated over the years of independence, which in turn negatively affect the process of the widespread introduction of inclusive education in higher educational institutions. These include in particular the following:

- The infrastructure of most buildings and structures of higher educational institutions is not adapted to the training of persons with disabilities;

- Educational buildings of universities in Uzbekistan consist of at least four floors and higher, however, there is a problem of moving around the floors, since many buildings do not have elevators, and the existing ones are subject to major repairs;

- In universities, according to the schedule, students study in classrooms located on different floors of the building, high stairs and the lack of ramps are a serious barrier to entry and movement in the building of persons in wheelchairs; [5.p.30]

- Lack of educational and educational-methodical literature, developed for the training of persons with disabilities;

- A very serious problem of higher education in Uzbekistan, in general, inclusive, in particular, is the low provision of educational institutions with highly qualified personnel: the share of doctors of science in the teaching staff of universities is 5%, candidates of science - 25.5% [6.]. It is no coincidence that in the process of teaching persons with disabilities in higher educational institutions,

a number of problems have been identified related to the inadequate level of training of the teaching staff in an inclusive form of education, as well as the lack of special training programs adapted to inclusive education.

This, in turn, requires the formation of the necessary conditions in higher educational institutions of Uzbekistan for the training of persons with disabilities.

In higher educational institutions, the process of teaching persons with disabilities faces various kinds of difficulties that are associated with the physical or mental abilities of each student, which requires an individual approach when developing a training program. At the same time, it is advisable for the faculty of the university to focus on the positive prerequisites of each student with disabilities, such as motivation, character, initiative for self-improvement, perseverance and will.

Persons with disabilities studying in universities of Uzbekistan find it difficult to adapt to the traditional form of education due to the lack of consideration of their individual capabilities, which include:

- Today, in many universities of Uzbekistan, students are taught using computer technologies, however, in most computer classes there are no special technical devices that take into account the individual physical capabilities of each student;

- Physical or mental disabilities in students with disabilities are directly manifested in the level of mastering the educational material, which requires a more flexible and individual approach to them on the part of teachers;

- In the process of teaching in classrooms, each student with disabilities, based on their capabilities, perceives the educational material according to the degree of intensity; the first group perceives for a long time, but productively, the second is long and unproductive, the third needs breaks, which directly affects the productivity of the educational material and, of course, their cognitive activity;

- In the classroom, communication between students with disabilities and the teacher is carried out in a different manner; the first group of students communicate freely and easily understand the teacher, the second group of students needs constant support and help, the third group of students communicates independently and does not need outside help;

It should be noted in recent years in Uzbekistan, special attention has been paid to the training of persons with disabilities. It is also gratifying that the attitude of society towards this group of people has changed, based on mutual trust, tolerance and the concept of their problem. In Uzbekistan, in order to harmoniously develop the personality of students with disabilities, the idea of inclusive education, aimed at creating the necessary conditions for ensuring equal access to education for all students in higher educational institutions, is at the forefront. Based on this, it is advisable for universities in Uzbekistan to design their own model of inclusive education, including; learning objectives; content of training; didactic processes; teachers; special technical training aids; organizational forms of training; learning outcome.

- Conclusions and recomendation: In our opinion, for the development and effective implementation of an inclusive education model in universities in Uzbekistan, it is necessary to solve the following tasks:

- Development of a regulatory and organizational framework for inclusive education aimed at wider and more accessible education of students with disabilities.

- Establish a procedure for registering persons with disabilities upon admission to a university, during study and in employment after graduation;

- To radically revise the level of pedagogical readiness of the teaching staff with a more in-depth training in order to form their skills and qualifications for inclusive education of people with disabilities;

- It is necessary to revise the architectural and construction appearance of buildings and structures of universities, taking into account the conditions for training persons with disabilities; the presence of elevators and ramps, special equipped places for the disabled in classrooms, the equipment of sanitary and hygienic facilities, taking into account the capabilities of students with disabilities;

- To establish the material and technical support of the educational process at the institute (purchase and installation of sound amplifying equipment, multimedia and other technical means of receiving and transmitting educational information in accessible forms for students with hearing impairments; purchase and installation of braille computer equipment, electronic loupes, video enlargers, programs non-visual access to information, speech synthesizer programs and other technical means of receiving and transmitting educational information in accessible forms for students with visual impairments; purchase and installation of computer equipment adapted for disabled people with special software, alternative input devices and other technical means of receiving and transmitting educational information in accessible forms for students with musculoskeletal disorders) [7.p.28];

- To develop educational and methodological programs based on the needs of students with disabilities, that is, to adapt the educational and training program of universities based on the capabilities and abilities of students.

- To provide for the possibility of teaching students with disabilities remotely, that is, using computer technologies and for this purpose to improve the information and technical base of universities with the latest achievements in this area;

- The solution of these problems contributes to the introduction of an inclusive form of education in the universities of Uzbekistan based on international standards and requirements in this direction, which is the ultimate goal of all reforms of the higher education system in our country.

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I told my son: You don't need to be in the top 3 in your class

Being in the middle is fine, as long as your grades aren't too bad. Only this kind of person has enough free time to learn other skills.

- JACK MA, Founder, Alibaba

ANALYSIS OF MIGRATION MANAGEMENT IN TURKEY

Chulliev Tulkin Mekhmonkulovich[1]

ABSTRACT

Turkey's migration management is highly structuralized, despite a number of problematic situations. As for the evaluation of this policy, we can see that there are several attempts to do this. But we have to consider the role of global, regional and local institutions during this process also. The article attempts to analyze the impact of such institutions in the implementations of Turkey's migration policy.

Key words. *Migration, migration management, migration policy, migration management institutions.*

Located in the heart of the European Union and MENA (the Middle East and North Africa), Turkey is one of the key players in the migration processes. For this reason, no matter what period of the country's migration management we look at, we can see that this policy was interdependent with the activities of actors surrounding the region. No country can successfully manage migration on its own. Improperly managed migration leads to an excess of irrational and forced migrants over the number of rational migrants, endangering the lives of millions of people and the values of society. Therefore, effective cooperation in this area paves the way for each country to facilitate rational migration, prevents illegal migration and solves the problems on the basis of humanitarian principles even during the forced migration processes.

Considering the above-mentioned, we can firmly say that today, a comprehensive system of management of these processes has been formed in Turkey. With regard to the architecture of the country's migration management, it is important to note that this policy is formed and implemented through three types of institutions: global (supranational), regional, and national institutions.

Supranationality is a legal feature of an international organization. This characteristic gives the organization the right to make decisions that are binding on states that have legally confirmed its activities. In some cases, the consent of the receiving country may not be taken into account. It becomes apparent when a supranational international organization implements the goals and objectives set by international norms. Sovereign states that are members of the organization stipulate in their legislation that the exercise of certain rights is vested in an international organization.[2]

In this regard, Turkey also shares some rights in the management of migration processes with a number of international organizations. In addition, it follows the norms formed by the global and regional institutions. Based on their requirements, countries form their own national institutions and implement migration management. The architecture of Turkey's migration policy can be conditionally described as follows (Figure 1).

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[1] PhD Candidate, University of World Economy and Diplomacy

[2] Moiseyev, A. (2009). Suverenitet gosudarstva v mezhdunarodnom prave. Moskva. s. 228.

Figure 1. Architecture of Turkey's Migration Policy.
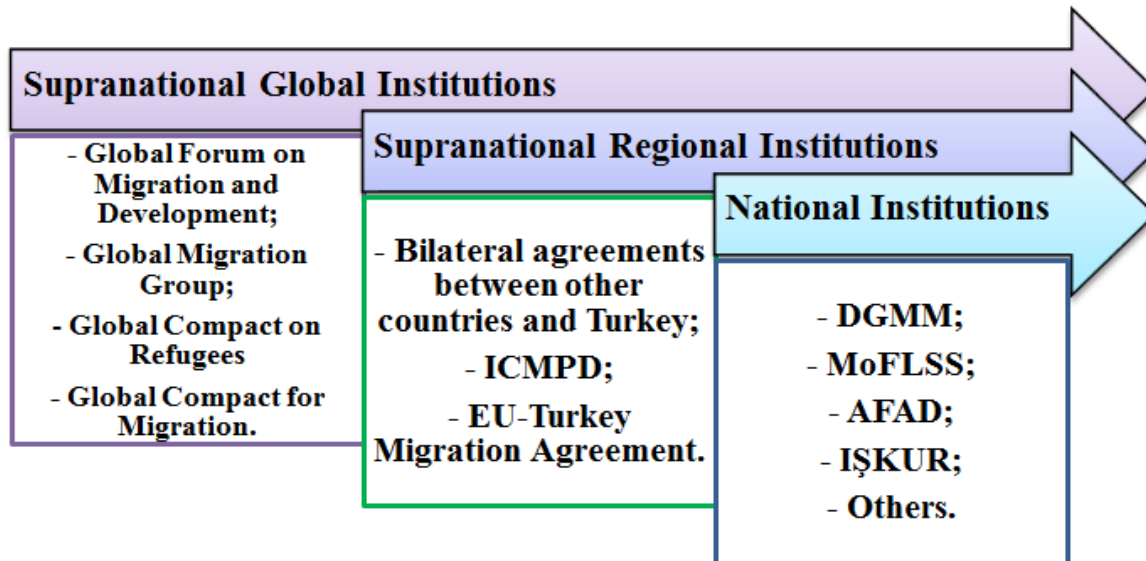
All processes related to migration in the world are managed directly and indirectly by the institutions established at the initiative of the UN. The Global Forum on Migration and Development (GFMD) and the Global Migration Group (GMG) are the main institutions in migration management.

The GFMD was established in 2017 at the initiative of the United Nations ensuring practical results-oriented cooperation. In particular, after several years of debate over the role of the private sector in migration management, the GFMD business mechanism was established in 2016 during Istanbul Summit. The aim of this was to engage the private sector in migration management negotiations and ensure co-operation in this area, as well as to explain to governments how migration management affects business relations nationally, regionally and globally. In addition, GFMD's activities are in line with the Sustainable Development Goals (SDG) adopted in 2015 UN and agreed by all member countries.

In 2006, the Global Migration Group (GMG) was established at the initiative of the UN Secretary-General based on the recommendation of the Global Commission on International Migration. This group brings together high-level institutions that are directly and indirectly involved in international migration processes. Besides, the Global Migration Group, which includes 22 UN institutions, was established in 2003 to replace the Geneva Migration Group. The main institutions that GMG includes are:

• International Organization for Migration (IOM);

• International Labor Organization (ILO);

• United Nations High Commissioner for Refugees (UNHCR);

• United Nations High Commissioner for Human Rights (OHCHR);

• United Nations Development Program (UNDP).

Here, we have to say that one of the main tasks of the UN is to constantly optimize relations between these institutions.

In addition to the global institutions listed above, two other major agreements have a direct impact on Turkey's migration policy. These are the Global Compact on Migration (GCM) and the Global Compact on Refugees (GCR). The executor of the first agreement is the IOM, while the second agreement is monitored by UNHCR.

Regional institutions also play an important role in the implementation of Turkey's migration policy. In particular, Turkey has signed social protection agreements on migration with 28 countries in the region, and bilateral agreements have been signed with 12 countries on labor contracts. In addition, agreements have been reached with a number of neighbors in the Caucasus and the Middle East on visa liberalization (Syria - 2009, Lebanon - 2010, Albania - 2009, Libya - 2009, Jordan - 2009, Tajikistan - 2009, Azerbaijan - 2009).

According to the Resolution of the Cabinet of Ministers of the Republic of Turkey No.2007/12441 dated June 19, 2007, the procedure for obtaining visas for Uzbek citizens visiting Turkey for tourism purposes for a period of up to 30 days has been abolished. At the same time, citizens of Uzbekistan visiting Turkey without a visa shall have $30 for each day of their stay in Turkey and inform the state border authorities about the purpose of their visit and their place of residence. The visa-free regime does not apply to drivers of heavy trucks and buses, as well as to persons without citizenship of the Republic of Uzbekistan, documented by a travel document. This procedure came into force on August 1, 2007.[1]

In addition, over the past few years, Turkey has joined Syria, Kyrgyzstan, Romania, Ukraine, Greece, Bosnia and Herzegovina, Pakistan, Yemen, Russia, Nigeria, and Moldova to fight illegal migration.

Turkey is also a member of the Budapest Process, which brings together 53 governments (including Uzbekistan) and 16 international organizations, and has been its permanent chairman since 2006. The Budapest process is governed by Senior Officials Meetings, which bring together all participating countries. Besides, regional working groups will create an extra platform to discuss migration and related issues.[2] The main purpose of the forum is to develop a comprehensive and sustainable policy in the field of migration management. Turkey is also chairing the Silk Route Working Group. The task of the working group is to ensure active cooperation with the countries interested in rational migration and fight irrational migration on the Eastern Europe-Turkey route, which is a historical direction of migration. In general, the Turkish-led Budapest Process is based on the principle that 'the most effective way to prevent illegal migration is to remove barriers to legal and rational migration,' and has achieved a lot.

Established in 1993 at the initiative of Austria and Switzerland the International Center for Migration Policy Development (ICMPD), accepted Turkey as a new member in 2018. The organization is aiming to support the mechanism of informal consultations on migration, as well as to analyze emerging issues in the field of international migration and asylum. ICMPD is a close partner institution that promotes and implements the EU's Global Approach to Migration and Mobility. The institute has also been closely assisting the European Commission in addressing migration issues in the framework of EU foreign cooperation. It is noteworthy that the ICMPD will act as the Technical Secretariat of the Budapest Process chaired by Turkey.

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[1] The Ministry of Foreign Affair of the Republic of Uzbekistan. *O'zbekiston fuqarolari uchun soddalashtirilgan tartib o'rnatilgan alohida mamlakatlarga kirish tartibi.* https://mfa.uz/uz/consular/easyvisa/
[2] The International Organization for Migration. https://www.iom.int/budapest-process

Another factor in shaping Turkey's migration policy is the relationship between the EU and Turkey. The peak of this relationship was observed in 2016. In the spring of that year, the EU-Turkey migration agreement was officially signed to end the migrant crisis that has been going on since 2010. As a result, in order to comply with the agreement, Turkey was forced to re-admit irregular migrants entering Greece through the country, while in Europe it was forced to send only official refugees. 'Under the agreement, Turkey gets cash – 6 billion euros, or $6.6 billion – and other incentives, including jump-started talks on its bid for E.U. membership and a conditional promise of visa-free travel for its citizens to Europe.[1] The two sides also agreed to resume stalled talks on Turkey's EU membership. However, by 2018, these negotiations stopped again. In general, the key dates for Turkey's EU membership steps are shown in Table 1.

In 2018, the EU noted that Turkey has deviated from EU goals. It is also said that negotiations on the country's accession to the EU have stalled and no practical steps have been taken between Turkey and the EU to bring the Customs Union to a new level.[2] Nevertheless, Turkey's migration policy has undergone significant changes since the 2000s as a result of Turkey's efforts to meet EU membership criteria.[3] As a result of Turkey's efforts to adopt the EU acquis system, the country's justice, freedom and security legislation has been optimized. Also, in 2013, Law No.6458 on Foreigners and International Guarantees was adopted, which is a great achievement for Turkey. With this law, Turkey's migration and asylum norms have been brought as close as possible to EU norms.

Table 1. Key dates for Turkey's EU membership.

Date	Main Results
1963	Association Agreement between Turkey and the EU
1987	Turkey's application for EU membership
1993	Commencement of negotiations on the Customs Union
1996	Entry into force of the Customs Union between Turkey and the EU
1999	Helsinki summit. Granting Turkey the status of a candidate country for EU membership
2001	Approval of the roadmap for Turkey's EU membership by the Council of Europe
2005	The start of negotiations on Turkey's accession to the EU
2016	Suspension of Turkey's membership talks by the European Parliament

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[1] The Washington Post. (2016). *E.U. strikes deal to return new migrants to Turkey.* https://www.washingtonpost.com/world/europe/europe-offers-deal-to-turkey-to-take-back-migrants/2016/03/18/809d80ba-ebab-11e5-bc08-3e03a5b41910_story.html

[2] Council of the European Union. (2018). Council conclusions on Enlargement and Stabilisation and Association Process. https://www.consilium.europa.eu/media/35863/st10555-en18.pdf

[3] Paçacı Elitok, S. (2013). *Negotiations on Turkey's Migration Policy: One-on-One or One-on-Twenty seven?*. IPC-Mercator Policy Brief.

Currently, the execution of Turkish migration policy is done by DGMM (General Directorate of Immigration), MoFLSS (Ministry of Family, Labor and Social Services), AFAD (Crisis and Emergency Management Dept.), and IŞKUR (Turkish Employment Agency).

DGMM is the main institution implementing migration policies and strategies in Turkey. The MoFLSS is an institution that works closely with the International Labor Organization (ILO) to address labor and social issues. Turkey's transformation into a transit country for migration in the post-2000s has created a number of problems for migrants. As a result, AFAD was established in 2009 to address these issues. İŞKUR deals with employment issues in the country.

In general, recent trends show that Turkey is gradually moving from an emigration state to an immigration state. In this context, it is very important to study the needs of foreign nationals who are currently moving to the country or those who are moving to work within the country, and to develop appropriate policy instruments. In this regard, the DGMM has developed an e-ikamet online portal for granting the right of residence, while the International Organization for Migration (IOM) and MoFLSS have developed a step-by-step guide to granting the right to work for 4 different categories of foreign nationals. These 4 categories are as follows:

1. Applicants from abroad;

2. Applicants residing in the country;

3. Foreigners with temporary protection status;

4. Foreigners with international protection status.

Increasing flow of refugees, which began in the early 2010s as a result of military operations in Syria, has not bypassed Turkey. By 2019, Turkey had received about 3.6 million registered refugees. Official support for refugees in 2011-2018 was equaled to $30 billion. It is unknown at this time whether these individuals will return to Syria or not. Therefore, the Turkish government is implementing a number of programs to determine their legal status, study their basic needs, provide employment, focus on education, and coordinate their impact on the local population. As of January 31, 2020, the data on Syrian refugees are as follows (Figure 2).

Figure 2. Distribution of Syrian refugees registered as of January 31, 2020
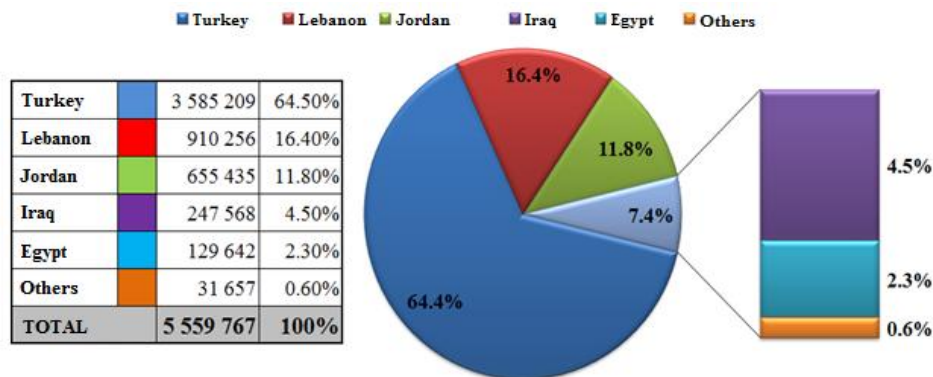
Source: UNHCR. *Total Persons of Concern by Country of Asylum.* Retrieved from https://data2.unhcr.org/en/situations/syria# on 28 February 2020.

The figure shows that the largest share of Syrian refugees (64.5%) is registered in Turkey. The next places are taken by Lebanon (16.4%), Jordan (11.8%), Iraq (4.5%) and Egypt (2.3%). Other countries account for only 0.6% of refugees. Another important aspect is that Syrian refugees have been entering Turkey since the beginning of 2012. According to the UNHCR, as of January 2012, there were 9,500 registered refugees in Turkey, but this figure has since grown steadily and now stands at 3.6 million.

In general, since the 2000s, a number of internal and external factors have forced Turkey to systematically institutionalize the management of 'international migration flows and their consequences'. The analysis shows that an active policy on emigration and immigration has been implemented over the last 10 years. Turkey's migration policy can be considered successful. However, at present, the country is facing difficulties in some areas, especially related to the effective solution of the migration issues in crisis situations. Given that this direction is mainly due to changes in external factors, the scope of practical measures and current trends, it can be said that Turkey has a great deal of experience in overcoming migration crises, and migration policy in this area can be optimized further in the future.

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UNCONVENTIONAL ASSESSMENT METHODS TO EVALUATE THE POTENTIAL OF HISTORICAL-CULTURAL TOURIST SITES

Sobir Khudoyberdievich Makhmudov[1]

ABSTRACT

The article substantiates the need to survey the potential of historical and cultural tourist facilities and gives a few strategies. The article also proposes modern methods of assessing the potential of historical and cultural tourist destinations by the author and analyzes them on the illustration of a historical object. Its idiosyncrasies and advantages are clarified.

Keywords: Tourist, Tourist Object, Tourist Resource, Income, Employment, Living Standards, Tourist Service, Investment, Competition, Tourist Potential, Natural And Cultural Landscapes, Modernization, Diversification.

INTRODUCTION

Today, tourism is the fastest developing and most beneficial sort of business in the world economy, bookkeeping for 10% of net national income. According to statistics, one in seven of the occupations created, 50 percent of cash receipts in "third world" countries, and 80-90 percent of the work rate belong to the tourism sector [1].

The World Tourism Organization (WTO) emphasizes the need for countries to form proposals to extend tourism potential, offer modern services, create new tourism brands, and profoundly increment the competitiveness of the tourism industry. This demonstrates the need to further expand the geography of tourism, increase its share in the net residential product (GDP) and tourism is one of the foremost profitable industries.

Hence, Uzbekistan is continuously taking comprehensive measures to broaden the national economy, accelerate the advancement of regions, create new employments, increment incomes, and living benchmarks, and increase the country's speculation attractiveness as one of the vital sectors. The concept of tourism development in the Republic of Uzbekistan for 2019-2025 gives for increasing the share of tourism in the country's GDP to 5%, the number of tourists to 9 million, including 2 million foreign visitors [2].

THE MAIN FINDINGS AND RESULTS

Uzbekistan has enough tourist potentials to achieve such goals, "special, supreme, magnificent architectural monuments provide valuable information about their creators and tell the story of the life, traditions, culture, and religion of the people of that time" [3]. At the current stage of development of society, there's an incredible intrigue in travelers to induce an idea of the past, to be aware of the lives of our generations.

Realization of the existing potential of the country in the field of tourism requires expanding the proficiency of utilizing the potential of historical, cultural, and architectural heritage sites. This, in turn, creates the need for the traveler potential of existing historical and cultural sites in the nation. Without

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understanding the potential of tourism, it is difficult to recognize the potential of tourist facilities, existing resources for further development of historical and cultural tourism, create deductively based conclusions and logical and viable suggestions, and make the right decisions. So, assessing the potential of historical and cultural tourism is an objective need. Tourism potential is an important condition for the rapid development of the industry, raising it to a higher level of development, ensuring the tourist attractiveness of the country. Therefore, it is important to study the potential of historical and cultural tourist facilities, which have a significant share in the structure of tourism.

Analysis of the relevant literature

As it were by comparing the current state of tourism with its real potential can we draw clear conclusions and make real decisions about what tasks we will set for tourism and how ensured they are in the future. Studies have shown that numerous scientists have developed surprising approaches and methods for assessing the historical and cultural tourism potential. In particular, the theoretical, methodological practices, and methods of historical and cultural tourism are widely reflected in the works of foreign scientists M.S. Bezuglova [4], A.V. Degtyar [5], V.M. Kozyrev [6, p. 312].

It was found that the study and analysis of the results of inquiring about by local and foreign researchers to evaluate the potential of historical and cultural tourism offered different methods of assessing tourism potential, specifically traditional (typological, comparative, cartographic) evaluation, expert method, factor, and regression analysis. Most remote researchers support scoring and expert evaluation strategies [7]. Analyst I.S. Koroleva proposed a method of analysis and evaluation of tourist resources and modeling of tourist processes [8, p. 18-21]. In addition, incredible attention was paid to the application of mathematical and statistical formulas in the method proposed by the analyst K.V. Kaimina [9, p. 167]. The approach proposed by economist A.V. Drozdov from the research work on the assessment of historical and cultural tourism potential of the regions is noteworthy [10]. According to him, in assessing the tourist potential, all the resources that make up the tourism product can be divided into 2 major groups. The first gather of key factors included in the formation of tourist potential is the natural and cultural landscapes and their components, and the second bunch is all the means and conditions for the implementation of the species (excursions, programs).

In recent years, there is a developing bolster for the use of the level of saturation of the tourist area with architectural, cultural, historical, archeological, and artistic monuments as the main criterion in assessing the potential of historical and cultural tourism. These include Russian researchers V.G. Lukyanova, V.I. Tsybukh, L.E. Grintsevich, and N.N. Grivko. Particularly noteworthy is the formula proposed by E.N. Karchevskaya to calculate the level of saturation of the tourist zone with historical and cultural tourist assets [11, pp. 110-117]. E.N. Karchevskaya recommended the following formula for calculating the level of saturation of the region with tourist resources:

$$J_{cul-his} = D^0 K_i J V_j \qquad (1) [11, pp. 110-117]$$

Here

$J_{cul-his}$ - the degree of saturation of the administrative territory with cultural and historical resources;

K_{iJ} - an indicator of the coefficient of saturation of the administrative territory with cultural and historical resources of type J;

V_j is the weight coefficient of the indicator.

In our view, the advantage of this indicator is that it permits us to differentiate them depending on the degree of saturation with historical and cultural objects in the region and its territories. By comparing these objects, it will be conceivable to create scientifically based, correct, and practical decisions approximately their future development.

The most problem which will emerge in the practical application of the proposed method is that it isn't continuously possible to find the number of historical and cultural monuments by their individual sorts in all regions. As a result, there are certain challenges and issues in calculating the tourist potential of the locale. In addition, the role of the subjective factor in determining the coefficient of saturation of the object to the tourist resource is very large, and this creates conditions for errors in the assessment of the potential of the area.

V.G. Lukyanova and V.I. Tsybukh developed special strategies for assessing the potential of historical and cultural tourism facilities. They recommend the following two methods in assessing the potential of chronicled and social sites:

The first is the assessment of historical and cultural objects in terms of their place in the world's authentic and social masterpieces;

The second is to evaluate each region according to the level of development of historical and cultural tourism [12, pp. 152-155].

These two methods proposed by V.G. Lukyanova, V.I. Tsybukh for application in the evaluation of the potential of historical and cultural objects are of incredible practical importance, and they are totally different from the proposals of economists said over. These methods allow a clear assessment of the potential of historical and cultural sites. For example, concurring to the first strategy, when assessing the potential of historical and cultural sites, scientists determine that it is included in the UNESCO cultural heritage. In fact, the potential of historical and cultural sites included in the UNESCO cultural heritage is tall and they are alluring to buyers. They are unique and one of a kind objects in the world-historical and cultural masterpieces.

Depending on the number of destinations included in the UNESCO historical and cultural heritage, it is possible to survey the historical and cultural tourism potential of the countries. In this regard, the first strategy of assessing the potential of historical and cultural destinations by V.G. Lukyanova, V.I. Tsybukh is noteworthy.

The second method is to assess the potential of each region depending on the level of development of authentic and cultural tourism. In our opinion, in this way, the researchers considered the revenues from historical and cultural tourism in the improvement of the regions. On the off chance that the share of revenues   from historical and cultural tourism within the region is higher than the share of other industries within the region, the potential of this tourism resource is considered tall.

L.E. Grintsevich developed a framework for assessing the potential of historical and cultural sites [13]. In this system, L.E. Grintsevich, in assessing the financial potential of chronicled and cultural objects, divided them into categories (high-potential, medium-potential, potential) and developed criteria for their inclusion in these categories (Table 1).

Table 1 Assessment of the economic potential of historical and cultural sites

Category	Description
A. High level of economic potential of the historical and cultural object	- very good location (availability and proximity of subways and parking lots, location in the city center); - good technical condition of the building (70% of the previous condition); - high value; - very high historical and cultural value.
B. Intermediate economic potential of the historical and cultural object	- better location (suburbs, proximity to the subway or bus stations, the availability of parking, if possible); - average technical condition (suitability) of the building (50% of the previous condition, availability of communication facilities); - average value;
C. Low economic potential of the historical and cultural object	- presence of historical and cultural value; - maintenance of the original condition in 40%, technical condition (usability below average) - inconvenient location outside the city. - low historical and cultural value.

The assessment criteria for each category take under consideration the area of historical and cultural sites, nearness to infrastructure, the physical condition of the object, the degree of preservation of the original state. N.N. Grivko recommends paying attention to 4 important points within the evaluation of the potential of historical and social objects: "first, the part (density) of historical and cultural objects occupied in the territory; second, the diversity of historical and cultural sites; third, the level of the ubiquity of historical and cultural sites; fourth, the importance of historical and cultural sites [14].

In evaluating the potential of historical and cultural sites, N.N. Grivko considers it suitable to assess the area occupied by him, the reality that the area consists of a few historical monuments, ensembles, attractions, the level of notoriety of historical and cultural locales, the importance of historical and cultural sites. He approached the assessment of the potential of historical and cultural objects from a historical point of view and paid special consideration to the construction architecture of the objects, their engaging quality. In this respect, the economist N.N. Grivko differs from the method of the other economists mentioned above.

Fundamentally analyzing the approaches of economists, we created a modern method of assessing the potential of historical and cultural locales (Table 2): In this system, the tourist potential of a historical and cultural location is evaluated on four criteria, between 1 and 4 points. If the result is between 1 and 2, the historical and cultural object is considered potential, on the off chance that between 2 and 3, the protest is considered as medium potential, if between 3 and 4, the protest is considered as tall potential. Based on the over information, the assessment of historical and cultural tourism potential ought to be based on the supply

of historical and cultural assets, as well as the number of tourists per square meter, historical and cultural significance, level of notoriety (decided by visitor overviews) and the world, or it is expedient to determine on the basis of its state significance.

Table 2 System for assessing the potential of historical and cultural monuments

(Developed by the author)

№	Indicators of assessment of historical and cultural object	Evaluation criteria (points)		
		0,25	**0,5**	**1**
1.	The number of tourists per square meter	By 5, each	5-8 each	8 and higher
2.	Historical and cultural significance	World-famous monuments in the field of science, places inherited by scientists who founded world science	Ensembles built on the basis of historically unique architecture, mausoleums where famous saints are buried	Mausoleums, mausoleums where famous and great people of the world are buried
3.	Popularity level (determined by a survey of tourists)	Recognition by world-famous tourists	Partly world-famous facilities recognized by world tourism organizations	Objects with a very high reputation in the world, always recognized and taken into account
4.	Ownership of world or national importance	Certain buildings of historical significance, of scientific, artistic or special cultural value	Famous historical houses, buildings, cultural centers of state importance and protection	Inclusion in the UNESCO list of cultural heritage

Research methodology

Methods of comparison, systematic analysis, descriptive, historical, historical-comparative analysis were used in the research of the subject. The World Tourism Organization (WTO), the State Statistics Committee of the State Committee for Tourism Development of the Republic of Uzbekistan, as well as the materials identified by the author on the premise of special research, field research served as a statistical basis for solving research problems.

Analysis and results

The facilities used as tourist assets were built centuries prior and today it is not possible to describe its value in quantitative terms. Tourism potential is a multifaceted and highly complex concept, and numerous indicators are included in its formation. This requirement poses certain difficulties in capacity evaluation. Since it is not possible to quantify some of the indicators that shape potential. Hence, in assessing the

traveler's potential, we consider it imperative to require into account the importance of the historical and cultural object, the level of popularity, world or national centrality, the fact that the mausoleums, mausoleums where famous people are buried are included in UNESCO's cultural heritage.

It should be noted that there are advanced countries in the world that have enriched the composition of UNESCO's cultural heritage, including 55 historical sites in Italy, 48 in Spain, 45 in France, 46 in Germany, 35 in Mexico and 32 in the United Kingdom [15] (Table 3).

Table 3 Objects included in the UNESCO cultural heritage [16]

№	Countries	Total number of items, pcs	Of these	
			Historical and cultural sites	**Natural and beautiful places**
1	China	52	36	16
2	India	36	30	6
3	Russia	28	21	7
4	Iran	22	18	4
5	Japan	21	17	4
6	Turkey	17	16	1
7	South Korea	12	11	1
8	Syria	6	6	0
9	Uzbekistan	5	4	1
10	Kazakstan	5	3	2
11	Saudi Arabia	4	4	0
12	Turkmenistan	3	3	0
13	Kyrgyzstan	3	2	1
14	Tajikistan	2	1	1
15	Afghanistan	2	2	0

According to the table, the number of historical and cultural locales in the Republic of Uzbekistan is about 0.4% of the cultural heritage included in UNESCO. In some countries, the figure is much higher. For example, in Iran and Japan 2.0 percent, in Turkey 1.5 percent, and in the People's Republic of China about 5.0 percent. From this point of view, if we survey the historical and cultural tourism potential of the Republic of Uzbekistan, it ranks 16th among Asian countries [17].

Depending on the number of historical and cultural destinations included in the UNESCO social heritage, it is possible to know the development of historical and cultural tourism in the nation. Historical and cultural sites Within the countries that are part of the cultural heritage of UNESCO, the most prestigious organization

in this field, the number of foreign tourists is increasing. Foreign tourists are more interested in watching and getting acquainted with historical and cultural sites with high potential.

With this in mind, we evaluated the historical and cultural object with a score of 1.0 on each of the listed criteria, taking into account its importance, level of popularity, and high recognition by the world community. Thus, the potential of Gor Amir Mausoleum on a 4-point scale was 3.5 points.

Using the over-assessment framework, the potential of verifiable and social monuments in Samarkand was calculated. In particular, the potential of the mausoleum of Gor Amir was assessed as follows:

Table 4 The potential of the Tomb of the Grave Amir

(Samarkand region of the Republic of Uzbekistan)

№	Criteria for the assessment of historical and cultural objects	(point)			Total points
		0,25	**0,5**	**1**	
1.	In terms of the number of tourists per square meter	-	0,5	-	0,5
2.	By importance	-	-	1	1
3.	According to the level of popularity (determined by a survey of tourists)	-	-	1	1
4.	In terms of world or national importance	-	-	1	1
	Total		**0,5**	**3**	**3,5**

Since more than 5 tourists per square meter of the mausoleum of Gor Amir, it's potential on this criterion was estimated at 0.5 points.

The UNESCO assessment system can be used to assess the potential of tourism and historical and cultural sites in the regions of the Republic of Uzbekistan. In the UNESCO assessment system, cultural heritage potential is assessed on the basis of 10 criteria. At the same time, chronicled and social locales are assessed on 6 (1-6) criteria and natural and beautiful landscapes on 4 (7-10) criteria. UNESCO's evaluation of verifiable and social sites on these criteria plays a vital part in determining the level of potential of the sites.

CONCLUSIONS AND SUGGESTIONS

Historical and cultural objects clearly reflect not only the history of the building created in a certain period but also the level of socio-economic development of that period, ancient traditions, people's culture. Therefore, it is advisable to use several criteria in assessing the potential of historical and cultural sites.

The results of the analysis showed that the historical and cultural tourism facilities in Samarkand region have sufficient potential. In accordance with the principles of a market economy, the national wealth of the country as an important economic resource ought to bring a large income and be used viably for the benefit of the people and the development of the nation. For this reason, the issue of effective use of the tremendous historical and cultural potential of Samarkand is very important today. It is the development of

historical and cultural tourism, the use of national wealth accumulated in the region for centuries as a tourist product, raising them to the level of an attractive factor in attracting foreign tourists to the country will allow turning historical monuments into a source of great income for the country.

We offer a system for assessing the potential of historical and cultural tourist facilities based on the following 4 criterias:

- The number of tourists per square meter of the historical and cultural object;
- The level of importance of the historical and cultural object;
- The level of popularity of the historical and cultural object;
- The historical or cultural object of world or state significance.

According to this system, the grades for each model ought to be from 0.25 to 1 point, the most extreme score is break even with to 1 point, and the overall number of focuses is rise to 4, so the grades ought to be between 1 and 4 focuses. On the off chance that the result is between 1 and 2 focuses, the historical-cultural object is appraised as potential, in the event that the result is between 2 and 3 focuses, the question is evaluated as **medium potential**, in case the result is between 3 and 4 focuses, the protest is evaluated as **high potential**.

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COMMUNICATION AND INFORMATION SERVICES TO THE POPULATION OF THE REGION

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Nosirov Bakhtiyor Nusratovich[2]

ABSTRACT

Analyzing development processes of each sector of the service sector, the sequence of choosing and modeling the main factors which influence their development are represented through simulation schemes in this article. Multifactorial empirical models were built on the example of the service sector which is provided to the population of Kashkadarya region, forecasts were given through them and suggestions and recommendations were given on the basis of obtained results.

Key words: service sector, complex modeling, econometric modeling, differential equations, static and dynamic parameters, structural analysis, synthesis, optimization, multifactorial empirical models, regression equation, correlation coefficient, Darbin-Watson criterion, Fisher and student criteria.

Introduction

The spread of digital technologies in Uzbekistan today is reflected in the" strategy of action on five priority areas of development of the Republic of Uzbekistan in 2017-2021", presented in Annex 1 to the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. 4947, which States that"by expanding the scale of modernization and diversification of the regional economy, social growth will be ensured - accelerated development of comparable districts and cities by reducing differences in the level of economic development and, above all, improving the quality of public services".

In the implementation of these tasks, in terms of further deepening reforms, "... in the future, there should be important tasks for the comprehensive development of not only the basic sectors of the economy, but also, above all, the regions, ensuring the vital interests of all citizens of the country and increasing their incomes» [1; 2].

Over the past 30 years, the issues of empirical modeling, the information technologies' influence on the activities of the service sector and the optimal management of the economic system of the territory have received much attention in the scientific works of foreign and domestic scientists.

Of the foreign scientists in this field, the research was conducted by an English economist M.Keynes and one of the Russian scientists V.M. Granberg[5; 14], but the research of scientists of our country has studied some aspects of optimal regulation of the economic system of regions. In particular, the theoretic and methodological aspects of the complex and proportional development of the territories were considered in the works of B. Ruzmetov[15]. Despite many years of research, the issue of accurate forecasting of the development of the economic system remains relevant.

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Methods

Interest in regressive complex-numerical econometric models and complex-numerical variable functions with statistical observation arose in the 50-60s of the XX century. G. N. Tavares and L. M. Tavares in their research they also focused in this direction. Only in 2004, the Russian economist scientist S.G. Svetunkov for the first time created the theory of constructing complex numerical econometric models[16; 17; 18; 21]. This marked the beginning of the formation of an integrated digital economy. As noted in the studies of A.A. Afanasyeva, O.S. Ponomareva. and G.B. Kleiner "such production functions as describing the influence of production resources on the result of production, help to solve many practical issues." [19; 20].   T.V. Merkulov F.I. Prikhodko in his studies, "the advantages of complex numerical econometric modeling lie in the fact that with their help there are opportunities for solving complex problems that cannot be solved by functions with real variables." An important factor in the territorial system is the theory of optimal regulation. Its distinctive feature is analyzed and the corresponding scientific conclusions are drawn on the need for consistent application of the principle of optimality in solving the entire complex complex of problems of regulation and management of the economic process in the region[19].

According to the famous American researcher P. Strassman, investments in information technology are most closely related to such indicators of service enterprises as administrative and management costs[6]. Media and technology can reduce the cost of internal governance in the industry. In his works, P. David[7]. argues that information technologies are "General-purpose technologies". Harvard Business School professor G. Loveman[8] . also emphasizes a similar point of view. Information technology creates the potential for the development of other digital technologies, but technologies that do not exist without digital technologies will not bring immediate benefits by themselves. Information technology provides a platform for improving organizational processes and introducing fundamentally new tools into the existing service sector.

In the works of modern authors, a number of areas for assessing the implementation of information technologies in the service sector are distinguished, it can be divided into the following classification[9; 11; 12; 13]:

using the classical methodology for evaluating investment projects and programs based on international standards; use of economic methods for calculating the inclusion of a factor in the overall result, cost savings, calculation of the system of financial indicators, assessment of the level and dynamics of indicators by industry (when using an information system) application of expert assessment methods (usefulness, prospects, accessibility, ease of use of information resources, etc.)); use of information diagnostic methods (netmetry, webometry)

A similar operation was carried out by scientists E. Brinolfsson and L. Hitch, having studied the activities of 527 large American firms. In this approach, the authors note, an essential role is played by additional assets (assets that change under the influence of information technologies: experience and qualifications of employees, communication tools and technologies, quality of decision-making, changes in business processes, etc.). Over time, the results of the introduction of digital technologies appear gradually, in a general form. The complexity of public service systems (systems based on the use of information technologies) requires taking into account the specifics of digital technologies. It is responsible for intelligent processing of information about changes in the state (efficiency) of complex objects and provides the choice of management decisions[3; 4].

Results and Discussion

There are two approaches to creating a digital economy: planned and market-based. For developing countries, the development of the service sector is one of the most effective ways to improve the living standards of the population. The main issue is not only to increase the share of the service sector in GDP, but also to expand its structure, increase employment, and develop modern forms and technologies of providing services that more fully meet the needs of the population. In developed countries, the service sector accounts for the bulk of the employed population, including " in the United States-80%, in Japan-more than 70%." While a number of American companies own at least 50% of the profits from production, selling services related to production[20].

In econometric modeling, the task of control systems is considered change of the variable *y(t)* in given accuracy (with permitted error) in accordance with the law. When projecting and operating automatic control systems, it is necessary to select the parameters which can ensure the required control accuracy of the *S* system, as well as its stability during the transition process.

If the system becomes stable, then its behavior by time, the maximum deviation of the adjustment variable *y(t)* in the transient process, the transient process time, and others are of practical interest. The properties of different classes of automatic control systems can be concluded by the types of differential equations which most closely describe the processes in the system. The order of the differential equations and the value of the coefficients completely determine the static and dynamic parameters of the system.

In our opinion, there are the following actual issues which are waiting for their solution, in the development of the service sector: identifying classification of the types of services which are provided to the population, evaluating the nature of the service sector, developing a system of indicators of service sectors in current situation, improving the process of econometric modeling of   providing communication and information services to the population of the region and forecasting it through them.

Human creates and serves the object of service to himself. Because of this, it is possible to introduce the belief that services are for the human and performing the service is also a human. This means that both the producer of the services and its consumer are also human. This can be expressed as follows:

It is known that as a result of the service, the GDP of country will increase. This will be done in the following directions: a gross domestic product will be created in the conditions of market relations, as a result of service, irrespective of creating or non-creating a material wealth. Therefore, it is expedient to look at services not from the point of view of the creation of material wealth, but from the point of view of the creation of gross domestic product.

In the modern era of development of social and service sectors, the provision of services is gaining popularity. Therefore, the labor efficiency per unit of achieved output is required to be able to calculate fixed assets, material and financial costs.

Production and services have long been a part of human economic activity, social community life. The interaction among people as a social community institution of services, the existence of useful activities - are considered necessary condition of society and life of human. It should be noted that it is not exaggeration if we say that services will increase the level of development of society, not only at the level of its productive forces, but also taking into account its spiritual and enlightenment status.

In this study, we will mark public service sectors as a system by improving the development models of public service sectors as a basis for systematic analysis. At the same time, we consider a single object and the types of services as a collection of collected elements in order to achieve the goal. Namely, we will

systematically study to increase the efficiency of public services and living conditions. These researched types of services are understood as interconnected integrity in their integrity. As a result of systematic analysis, the economic-effectiveness indicator will be determined.

If we consider the process as a system in the modeling of communication and information services to the population of the region , we must choose the main influencing factors, namely, input indicators. When modeling a process, we will choose the type or appearance of the model to be generated, if we choose which type of service sector. It is not impossible to take into account all factors in modeling, so we must choose the main influencing factors and take into account the ongoing socio-economic reforms which have been carried out in this field. The outcome factor and evaluation criteria are determined from the generated model (Figure 1).
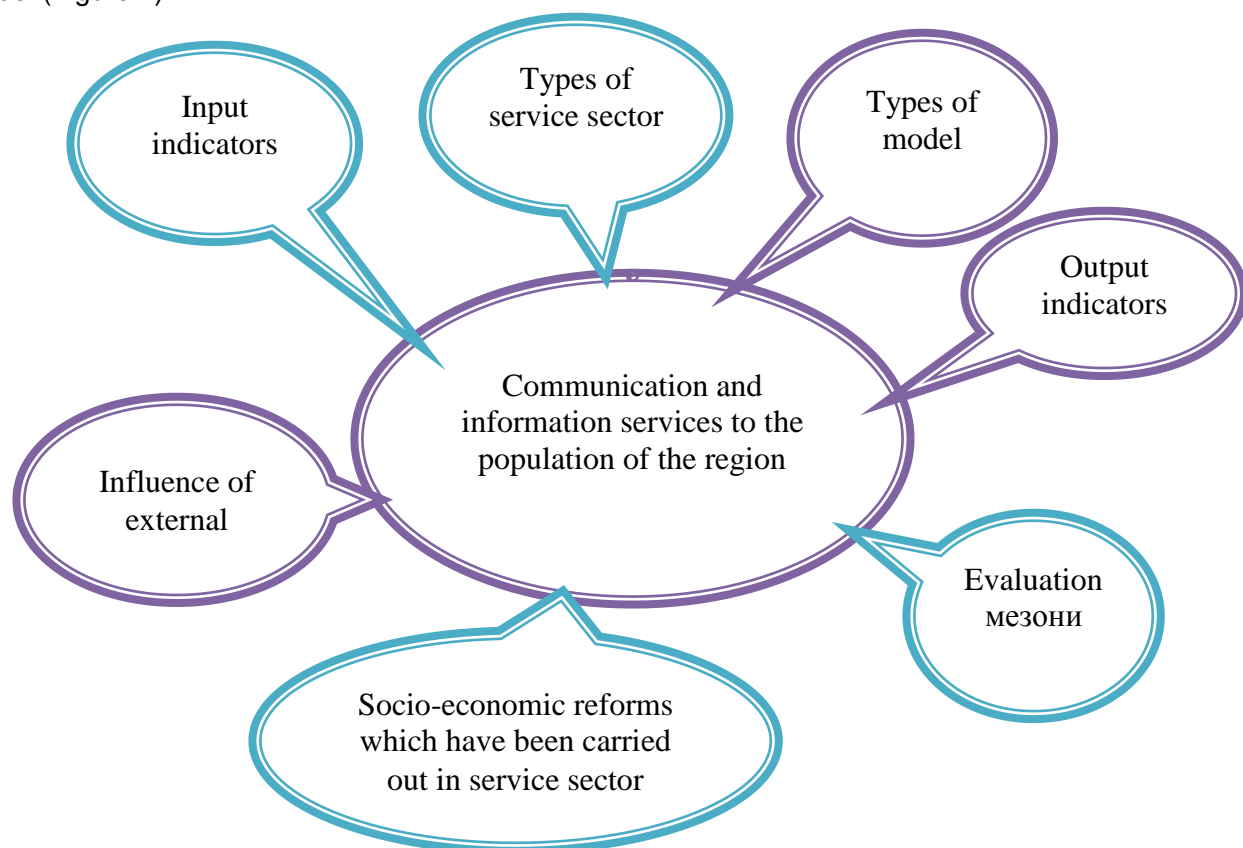
Figure 1. Systematic analysis, synthesis and optimization in the modeling of service sectors

It should be noted that the attitude of the population to the service sector is formed in the conditions of social ownership to production tools, a single centralized system of economic movement, limited economic independence of enterprises.

In the condition of market economy, service enterprises operate in a variety of forms of ownership, full economic independence and competitiveness. This market involves the flexible use of different methods of householding management and the choice of econometric models of service, in this case, it creates opportunity for rapid adaptation to changes in the external environment in a competitive environment.

Our goal consists of analyzing the service sectors in the region and improving its models.

I. First of all, modeling gives opportunity to express a large and complex system using a simple model. The process of providing services to the population is a very complex system. It can be expressed through a systematic analysis scheme (Figure 1).

The mechanism of public service can be described graphically. Of course, this creates many problems.

II. The wide field is created for making experiments with the structure of the econometric model of public service sectors. We can determine the most optimal state of activity of service enterprises by changing several times the parameters of the model. We can experiment on electronic computing machines through this model and then we can apply it in life.

Experimenting on real objects can lead to many mistakes and huge costs.

III. The service sectors will be studied and analyzed in detail in order to create a model. After the model is created, it can be obtained new information about processes of service sectorwith using it. Thus, the process of service sector becomes a continuous process.

A systematic methodology of complex problems in the field of services is developed on the basis of a systematic approach and general concepts. During the analysis, we take into account the internal and external environment of the service sectors. This means that it must be taken into account not only internal factors, but also external factors such as economic, geopolitical, social, demographic, environmental and other factors.

Each system of the service sector includes its own service elements, while at the same time it reflects the low-level subsystem elements. In other words, the elements of the service sector will be interconnected with different systems in many ways, without interfering with each other.

The systematic approach is expedient for each element of its structural structure in ensuring the completeness of the public service system.

In order to do this, the service sector is considered as a complex system, quantitative and qualitative aspects of its expression laws are studied. Imitation has important role in the analysis of the activities of the service sector which is considered as a complex economic process.
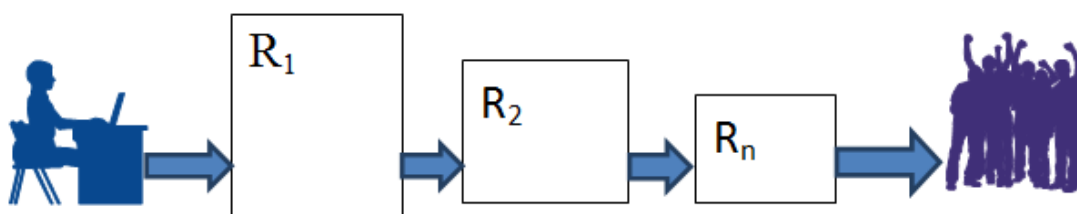
Figure 2. Scheme of systematic imitation of econometric modeling of the public service sector

The imitation model is constructed for each sector to predict the future state of the public service sector. The following tasks should be done in order to do this (Figure 2):
- Forming database of service sector networks and factors which influence it;
- Identifying the relationship between each service sector and the factors which influence it, the Factors which influence it;
- Developing a separate model for each service sector;

- Examining developed models according to evaluation criteria;
- Forming a database forecast on the basis of certain legitimacies of factors which influence forecasting through models which are considered significant;
- Achieving outcome factors on the basis of databases and models.

In this case, special functions are reviewed, attention is paid to the algorithms of system operation. It is implied the properties which lead to the goal as function. In this case, performing functions of the system are evaluated on the basis of a functional approach. It creates opportunity to determine the activity of the system, to determine its status, to mark the management legitimacies of systems. An important aspect of this is considered appearing hierarchical subordination among these parts and reflecting it in the relative independence of these parts. This will help the population to develop an integrated systematic imitation model of all elements of its service sector on the basis of a single system.

It is expedient to study the correspondence of different values to the factors which influence to the social phenomena, not the same values, and the correlation connection of their interdependence. Because a characteristic feature of the social spheres is that it is impossible to determine a complete list (strength) of all the factors which affect this sphere.

Besides, only approximate expressions of the connections can be written using the formula. Because the number of factors which influence the living conditions of the population is so large, it is impossible to determine a complete list of them and write an equation which fully represents the connection with influencing outcome sign.

The development of the living conditions of the population is considered so incompletely connection, that different values of the results of the factor which influence it in the different time and space, correspond to each value of the factors. Hence, the total number of influencing factors will be unknown. It is expedient to study such a dependence through correlation connections.

Our task consists of evaluating the existence of strong and weak connections which influence the development of public service sectors. We use the correlation analysis method in order to perform this task. Because our goal is considered to evaluate the importance and reliability of the interdependencies which influence the development of each sector which serves the population. We measure the criterion of dependence which influences the living conditions of the population through correlation analysis, but we cannot determine the cause of the relationships.

We selected information which belong to the reporting years 2004 - 2018, these information identified the areas of service and the factors which influence them, on the basis of certain signs (Table 1).

Table 1. Service sectors for the population of Kashkadarya region and the factors which influence them

A_{aax} –providing communication and information services to the population of the region (in billion soums)	Y_1
A_s – total number of the population of region (thousand people)	X_1
I_{ba} – employed part of the population of the region (thousand people)	X_2
A_d – total income of the population of region (in billion soums)	X_3
U_i – total consumption of the population of the region (in billion soums)	X_4
SH_i – personal consumption of the population of the region (in billion soums)	X_5
I_i –social consumption of the population of the region (in billion soums)	X_6
K_m – capital investments of the population of the region (in billion soums)	X_7

We created the following functional view on the basis of the communication and information services to the population of the region n Table 1 and the factors which influence them (Table 2).

Table 2. A functional view of the empirical models which are structured for each communication and information services to the population of the region

A_{aax} − providing communication and information services to the population of the region	$A_{aax} = \varphi_1(A_s, A_d, U_i) + \varepsilon_1$

We used statistical data from 2004 to 2018 to create multi-factoral empirical models through the service sectors for the population of Kashkadarya region and the factors which influence them.

Table 3. Statistical data of the service sector of the population of Kashkadarya region

Y_1	X_1	X_3	X_4
8.7	2378.2	541.7	430.3
10.1	2419.8	653.5	539.1
17.9	2462.2	850.3	701.75
27.9	2506.2	1068	877.8
48.8	2565.9	1376.6	1130.7
55.6	2615.5	1803.4	1494.4
89.4	2671	2380.4	1938.7
101.3	2713.2	2692.1	2199.4
131.9	2762.3	3186	2596.5
187.7	2895.5	3723.5	3027.4
241.2	2958.9	4304.4	3492.1
274.8	3025.6	4928.9	3990.5
328.7	3089.4	5597.1	4522.6
370.6	3148.1	6308.6	5088.6
426.1	3186.8	7063.8	5688.3

One of the main rules of constructing a multi-factorial empirical model is considered to determine the connection densities among the factors which are selected for the model, namely, to investigate the problem of multicollinearity of the connection among the selected factors. To do this, the correlation coefficients among the factors are calculated in order to do this, and when x_i and y_i variables accept the values of $i=1,...,n$, they are considered the most common indicator which shows the linear relationship between x and y, and the correlation coefficient. It is calculated as follows[16; 17]:

$$r_{xy} = \frac{Cov(x, y)}{\sqrt{Var(x)}\sqrt{Var(y)}}. \qquad (1)$$

The value $Cov(x, y)$ in the dividend of the fraction of equation (1) is determined by the following ratio:

$$Cov(x, y) = \frac{1}{n-1}\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y}) \tag{2}$$

and it is called the covariance of the variables x and y and it is found as follows:

$$Cov(x, x) = Var(x), \; Cov(y, y) = Var(y). \tag{3}$$

The correlation matrix among the factors which influence the development of each sector of the service sector in Kashkadarya region, was calculated in the program Eviews 9. For example, we have selected the number of teachers per thousand students in the region, the total expenditures of improving the living standards of the population of the region, the expenditures for public education in the region and providing household goods and computer repair services to the population of the region as factors which influence modeling quality education services. All above-mentioned factors are taken in order to create a multi-factorial empirical model on the factors which influence the development of each sector of the public service sector, and it is examined how their importance are in the model.

It is expedient to use a linear and hierarchical multi-factorial econometric model on the basis of its evaluation criteria according to its condition for each sector of the service sector.

We use the least squares method to construct and analyze an econometric model between public service sectors and the factors which influence them.

The linear multi-factorial econometric model has the following view:

$$Y = a_0 + a_1 x_1 + a_2 x_2 + \cdots + a_n x_n \tag{4}$$

Here: y - the outcome factor; $x_1, x_2,..., x_n$ - Influencing factors.

The following system of normal equations is constructed to find the unknown parameters a_0, a_1, a_2, ... , a_n in the model (4):

$$\begin{cases} na_0 + a_1\sum x_1 + a_2\sum x_2 + ... + a_n\sum x_n = \sum y \\ a_0\sum x_1 + a_1\sum x_1^2 + a_2\sum x_1 x_2 + ... + a_n\sum x_n x_1 = \sum yx_1 \\ .... \\ a_0\sum x_n + a_1\sum x_1 x_n + a_2\sum x_2 x_n + ... + a_n\sum x_n^2 = \sum yx_n \end{cases} \tag{5}$$

The hierarchical multi-factorial econometric model has the following view:

$$Y = a_0 * x_1^{a_1} * x_2^{a_2} * \cdots * x_n^{a_n} \tag{6}$$

Here: y - the outcome factor; $x_1, x_2,..., x_n$ - Influencing factors.

If we take the substitution in the model (6) by the natural logarithm, then we have the following view:

$$\ln(y) = \ln(a_0) + a_1\ln(x_1) + a_2\ln(x_2) + ... + a_n\ln(x_n). \tag{7}$$

In model (7), if we make the definitions $\ln(y) = y'$, $\ln(a_0) = a_0'$, $\ln(x_1) = x_1'$, $\ln(x_2) = x_2'$,..., $\ln(x_n) = x_n'$ then we get the following view:

$$y' = a_0' + a_1 x_1' + a_2 x_2' + ... + a_n x_n'. \tag{8}$$

The following system of normal equations is constructed to find the unknown parameters $\grave{a}_0, \grave{a}_1, ... , \grave{a}_n$ in the model (8):

$$\begin{cases} n\dot{a}_0 + \dot{a}_1 \sum x'_1 + \dot{a}_2 \sum x'_2 + \cdots \dot{a}_n \sum x'_n = \sum y' \\ \dot{a}_0 \sum x'_1 + \dot{a}_1 \sum x'^2_1 + \dot{a}_2 \sum x'_1 x'_2 + \cdots \dot{a}_n \sum x'_1 x'_n = \sum x'_1 y' \\ \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \cdots \\ \dot{a}_0 \sum x'_n + \dot{a}_1 \sum x'_n x'_1 + \dot{a}_2 \sum x'_n x'_2 + \cdots \dot{a}_n \sum x'^2_n = \sum x'_n y' \end{cases} \quad (9)$$

If this system of normal equations (9) is solved analytically by several methods of mathematics, then the values of the unknown parameters $\dot{a}_0, \dot{a}_1, \ldots, \dot{a}_n \dot{a}_0, \dot{a}_1, \ldots, \dot{a}_n$ are found.

In order to have multi-factorial empirical models of the processes, several options were calculated in the Eviews 9 program and appropriate results were obtained. For example, builds an empirical model for providing quality educational services to the population of the region is built in table 6 and it is shown their importance using criteria in the evaluation of this model and its parameters.

If there is not autocorrelation in the residuals of the outcome factor, then the value of the calculated DW criterion will be around 2.

It was determined that the value of the DW criterion which were calculated the empirical models which were constructed for each sector of the service sector was higher than the table value. This indicates that there is not autocorrelation in the residues of outcome factor. The Fisher and Student criteria were calculated and the calculated value was compared with the table values, the magnitude of it was determined that they were higher than the table values.

The results of the analysis of the empirical models constructed for each sector of the communication and information services to the population of the region public service sector in the region are presented in Table 4.

Table 4.

Empirical models which were built for each sector of the service sector to the population of the region

№	The view of empirical models	R^2	F	DW
1.	$Y_1 = -548,371 + 0,225 * X_1 + 1,221 * X_3 - 1,472 * X_4$ $t \quad (-2,205) \quad (2,099) \quad (5,017) \quad (-4,671)$	0.9165	1039.591	1.787

The parameters which were taken into account in the models which were built for each service sector (for linear regression equations) consist of different indicators. Therefore, it is necessary to calculate the coefficients of elasticity in the analysis. For example, we calculated the coefficients of elasticity in the analysis of the model built for the sector of communication and information services to the population of the region (Table 8).

Table 8. Elasticity of model coefficients which were built for the sector of providing communication and information services to the population of the region

Variable	Model coefficients	Standardized coefficient	Elasticity coefficient
X1	0.225065	0.437066	4.014907
X3	1.220895	18.55420	24.45173
X4	-1.471871	-17.99397	-23.92220
C	-548.3712	NA	-3.544434

Analysis of the results of the multifactorial empirical model which is built for providing communication

and information services to the population of the region (Y_1) gives opportunity to determine the followings: if the total number of the population of the region (X_1) increases by 1%, providing communication and information services (Y_1) will increase by 4,01% , if the total income of the population of the region (X_3) increases by 1%, providing communication and information services (Y_1) will increase by 24,45%, if the total consumption of the population of the region (X_4) increases by 1%, providing communication and information services (Y_1) will decrease by 23,92 percent.

Table 13. Forecast of service sectors for the population of Kashkadarya region (billion soums / thousand soums)

Indicators	2019 (real)	Forecast years					
		2020	2021	2022	2023	2024	2025
A_{aax} – providing communication and information services to the population of the region Y_1 / per capita	478,29	538,79	602,84	670,41	741,52	816,2	894,4
	147,27	162,84	178,90	195,42	212,37	229,7	247,5

Providing communication and information services (A_{aax}) to the population of the region in 2020 will increase by 1,13 times compared to 2019, and by 1,87 times by 2025. Development of information and communication technologies is necessary to have a positive impact on the processes which are taking place in civil society and in a market economy. Communications such as mobile communication, international, communication among cities, local communication, postal, telegraphic communication, television, Internet in the field of communication and information services, further development of high-tech services, expanding the list of new types of services, as well as improving the quality of services impact to increase service sector;

Conclusions

It is expedient to separate econometric modeling of communication and information services to the population of the region. Because development of each sector of the service sector has a positive impact on development of another sector. Therefore, the use of econometric models in the form of interconnected equations system has particular importance in development of service sectors. Together with this, the organizational-economic mechanism of development of service sectors represents a hierarchical system of interconnected elements and groups (subjects, objects, principles, forms, methods and tools) at different levels, as well as their interrelationships, innovative infrastructure form relationships with market participants.

According to forecasts which was carried out, the total volume of services which are provided to the population of Kashkadarya region is expected to increase by 3,46 times by 2025, at the expense of saving the current trend.

It is expedient to pay essential attention to the innovation factor for the sustainable development of the service sector for the population of the region in the future. It is necessary to encourage innovative ideas and newly opened service sectors, to encourage the factors which create conditions for the development of high-quality service sectors for developing and organizing service sectors on the basis of innovation in the region.

It is necessary to econometrically model the management plans for the elimination of imperfections in the way of achieving the social goals which are set for the economic growth and living standards of the

population and the development of the living conditions of the population. During 2017-2021 years (also, in next periods), it is expedient to develop long-term forecasts (2020-2025) in order to plan policy and projects which will be accepted as the part of action strategy of regional development of the region, plan technologic modernization and service sectors, intensive development of infrastructure, orient them to the welfare of the population.

In the current situation, the service sector to the population offers a variety of additional services, the main content of these services composed of releasing the population from the anxieties in living conditions, improving the quality of services and achieving to live in meaningful daily life.

As a result of the research, recommendations are made on forming the methodology and development goals of the service sector, choosing options for decision-making methods and evaluation criteria variants, developing optimal options.

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METHODS OF DETERMINATION OF TOURISM BRAND COMPETITIVENESS

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ABSTRACT

The scientific article contains a comparative analysis of the national brands of 6 countries based on the methods as brand elements classification, the quality of the proposal constituent slogan, regional brand strategy and national brand ranking results. Developed proposals to achieve sustainable competitiveness of the national brand of Uzbekistan.

Key words*: destination, brand, logo, slogan, online image, digital demand, sustainable competiveness.*

I. Introduction

In the framework of the Decree PF-5611 "**On additional measures for the accelerated development of tourism in the Republic of Uzbekistan**", the "Concept for the development of tourism in the Republic of Uzbekistan in 2019-2025" was adopted. Institutional reforms aimed at creating a solid legal framework for development, modernization of infrastructure and promotion of the country's brand and "creation of a single national tourism brand and the creation of a regional tourism brand based on the specifics of each region". Creating a brand of national and local tourism regions and promoting them in places that attract long and short tourists is a guarantee of success in global markets, as well as regular monitoring of the effectiveness of regional brand strategies, identification of appropriate measures to achieve sustainable competitiveness of the country's tourism industry. That is, knowledge of the global reputation of the national brand is important in determining strategies for its sustainable development, and the study of international standards and methodologies for determining the competitiveness of the brand in the tourism region is a very important issue today. According to a report by Google Traveler (www.thinkwithgoogle.com), about 70% of people who want to relax in the process of choosing a destination use the Internet as a reliable source of information. According to the same survey, 64% of travelers choose tourist destinations through search sites. Millions of potential tourists around the world are so inspired by what they see on search sites that they choose their travel destinations based on its online image.

II. Literature review

Scientists such as P.P.W.Wong, K.Teoh (Wong, Teoh, 2015) have substantiated the problem of the impact of consumer-based brand value on the competitiveness of the tourism region, Beritelli P. and Laesser C. (Beritelli, Laesser, 2016) ways to reduce costs for branding by national tourism management organizations, Russian researcher Alexandrova A. (Aleksandrova, 2015) the principles of regional co-branding in the organization of festivals, d. Richardson and D. Cohen (Richardson, Cohen, 1993) described the hierarchy of basic requirements for the formation of a tourist area slogan based on the concept of a unique commercial proposition, S.C. Pike (Pike, 2004) has developed a seven-level methodology for assessing the quality of slogans within the tourism area brand.

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From Uzbek scientists H.N. Abdulazizova (Abdulazizova 2016) explores national and regional brand concepts, emphasizing that a national brand development strategy reflects the value of a brand, target audiences, internal and external relationships, as well as the emblems and characters that represent a national brand. D. Richardson and D. Cohen (Richardson, Cohen, 1993) studied the image of U.S. cities and states and developed a hierarchy of basic requirements for the formation of a tourist area slogan based on the concept of a unique commercial proposal: the slogan should contain an offer; the offer should be limited to one or more positions; it is expedient that the offer should arouse the interest of tourists and express the advantages of the tourist area; and the advantages are unique, concluding that the tourist area must be able to differentiate itself from competitors.

S. Pike (Pike, 2004) analyzed 100 tourist area slogans and concluded that many tourist areas are almost unforgettable. Emphasizing the lack of creative ideas and the fact that advocacy work is often based on temporary differences, it identifies 14 key themes used in the process of positioning the market and consumer consciousness. They are: 1) leadership; 2) discovery; 3) nature; 4) geographical location; 5) people; 6) water; 7) expression of personality; 8) avoidance of daily life, diving; 9) enjoyment; 10) the treasury; 11) peculiar to kings; 12) energetic, meaningful life; 13) climate; 14) cooking. The author's approach to the country's image from the point of view of supply and demand, market and consumer awareness is scientifically based (Ibragimov, 2018).

III.Analysis

In this study, a comparative analysis of the national tourism brands of Armenia, Azerbaijan, Kazakhstan (one of the most actively promoted brands), Kyrgyzstan, Tajikistan and Uzbekistan was carried out, which used the following methodologies:

•   According to the brand composition previously developed by the author (Logo + Tourist zone name + Slogan (slogan), Logo + Tourist zone portal web address + Slogan (slogan), Logo-converted tourist zone name + Slogan (slogan); Logo-converted tourist zone name + Web address of the portal of the tourist area) method of classification (Ibragimov, 2018);

•   The quality of the slogan of the selected national tourism brands Pike S. 7-level evaluation system developed by;

•   The results of Bloom Consulting regional brand rating, which is calculated and regularly published based on variables such as 1) cost-effectiveness, 2) digital demand, 3) regional brand strategy rating and 4) online efficiency in determining the ranking of regional brands (Bloom Consulting Country Brand Ranking, 2014-2015).

Pike S. (Pike, 2004) In order to analyze the slogans of the brands of tourist areas in New Zealand, he developed a seven-level methodology of slogan quality, describing them as follows:

1. Level 0 - there is no clear offer in the slope;

2. Level 1 - offer "Buy our product";

3. Level 2 - "We have a good product" offer;

4. Level 3A - offer corresponding to the desired tourist area;

5. Level 3B - offer specific to many other regions;

6. Level 4A - an offer based on a unique feature, but of no benefit to the tourist;

7. Level 4B - is a slogan with a unique commercial offer.

Based on the methodology developed by Bloom Consulting [10], it is engaged in determining the rating of brands of different countries, regions and cities, and annually publishes the rating of national brands of 180 countries. In general, the creation of regional brands and continuous improvement of its efficiency has 5 goals, namely: 1) increase exports, 2) attract investment, 3) development of tourism, 4) attract foreign experts to the region as a workforce, 5) the country's popularity further increase. These 5 goals have benefits with different needs, i.e. 1) producers, 2) investors, 3) tourists, 4) labor market, 5) the general public.

Stakeholders have specific needs, namely 1) the entrepreneur wants to produce a unique product, 2) the investor wants to have an advantage, 3) the tourist wants to have a new and memorable experience, 4) the specialist wants to be recognized internationally, 5) the general public wants to impress others.

Bloom Consulting uses variables such as 1) cost-effectiveness, 2) digital demand, 3) region brand strategy rating, and 4) online efficiency in determining regional brand rankings. In order to determine economic efficiency, based on UNWTO statistics, an average 5-year indicator of the country's tourism revenue is obtained and its average growth rate is determined. In order to calculate the *digital demand* variable, online tourism searches are analyzed by 40 brand tags divided into 5 groups (see Table 1), keywords related to attractions and types of travel in the tourist area. Typically, 3,818,000 keywords are analyzed in 9 language sections, including English, French, Italian, Spanish, Russian, German, Portuguese, Japanese, and Chinese.

Table 1 : Brand tags used by Bloom Consulting to study digital demand (#) *

Culture	Recreation	Outdoor sports	Certain markets	Target markets
1. Historical monuments 2. National dishes 3. Indigenous people 4. Local traditions 5. Museums 6. Applied Arts 7. UNESCO	8. Coasts 9. Swimming 10. Recreation parks 11. Gambling 12. Rest 13. Night life 14. Trade 15. Spa 16. Special events	17. Adventure and Extreme 18. Dayving 19. Fishing 20.Golf 21. Walking 22. Hunting 23. Surfing 24. Water sports 25. Winter sports	26. Animal observation 27. Urban tourism 28. Cruise 29. Language learning courses 30. Luxury tourism 31. Medical tourism 32. Reserves 33. Pilgrimage tourism 34. Sustainable and rural tourism	35. Entrepreneurship 36. Young couples 37. Families 38. LGBT 39. The elderly 40. Youth and backpackers

* Bloom Consulting Country Brand Ranking. 2014-2015, contact@bloom-consulting.com

According to **the Regional Brand Strategy (RBS) rating variable**, the effectiveness of the tourism brand strategy of the National Tourism Organizations of the 180 countries identified will be assessed. That is, for the purpose of calculating the **Digital Demand Variable**, the most popular and most searched Internet brands of a particular tourist area are compared with keywords widely promoted by the National Tourism Organization (Tourism Development Committee of Uzbekistan).

The more relevant the keywords searched by potential tourists through search sites with brands targeted by the National Tourism Organization, the higher the Region brand strategy is rated and the following rating system is applied: very strong (AAA), strong (AA), partially strong (A), very good (BBB), good (BB), partly good (BB), partly weak (CCC), weak (CC), very weak (C).

Recently, to calculate **the Online Performance Variable**, Bloom Consulting, an international organization, manages to determine the number of visitors to a travel portal created and managed by the National Tourism Organization of the country under study and the duration of site use using web analytics software. In addition, activity on social networks such as Facebook, Twitter, Google Plus, and Instagram is determined based on the number of regular commenters relative to their members and news.

Discussion

Competitiveness of national tourism brands of Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan, classification of the above-mentioned tourist area by brand composition, quality of slogans of tourism brands Pike S. was determined using 7-level evaluation methods developed by the results are shown in Table 2.

Table 2 Comparative analysis of national tourism brands of CIS countries *

National tourism brands	Brand composition classification methodology (Ibragimov N.S.)	7-level methodology for determining the quality of a slogan (Pike S.)	Bloom Consulting regional brand rating		
			Asian rating (44)	World Rating (180)	RBS Rating
Armenia	LOGO + TOURIST NAME + SLOGAN (MOTTO)	**Level 3B** is an offer that is specific to many other regions;	35	121	BBB
Azerbaijan	LOGO + TOURIST NAME + SLOGAN (MOTTO)	**Level 3A** is an offer that suits the desired tourist area	30	101	BB
Kyrgyzstan	LOGO + TOURIST NAME + SLOGAN (MOTTO)	**Level 3B** is an offer that is unique to many other regions	40	147	B

Kazakhstan	LOGO + TOURIST NAME + SLOGAN (MOTTO)	**Level 3B** is an offer that is specific to many other regions;	26	85	BB
Tajikistan	LOGO + TOURIST NAME + SLOGAN (MOTTO)	**Level 3A** is an offer that suits the desired tourist area	44	177	B
Uzbekistan	LOGO + TOURIST NAME + SLOGAN (MOTTO)	**Level 3B** is an offer that is unique to many other regions	-	-	-

*author's work

According to the results of the analysis, according to the composition of all national tourism brands surveyed, it corresponds to the category LOGO + TURKISH REGION NAME + SLOGAN. In other words, the national brands of Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan are fully compatible in terms of composition.

According to the 7-level methodology for determining the quality of the slogan, the slogans of Armenia, Tajikistan and Uzbekistan corresponded to **the 3B level**, and it was concluded that the phrase chosen as a slogan is a proposal specific to many other regions. It was found that the phrases in the slogans of the Azerbaijani and Kyrgyz brands correspond to level 3A and are an offer that corresponds to the desired tourist area. Only the Kazakh national tourism brand slogan was found to have a grade 0 quality and there was no clear offer in the slogan.

According to the ranking of regional brands published by Bloom Consulting in 2015, Armenia ranks 35th out of 44 countries in Asia and 121st out of 180 countries in the world. Azerbaijan ranked 30th and 101st, Kyrgyzstan 40th and 147th, Kazakhstan 26th and 85th, and Tajikistan 44th and 177th, respectively. According to **the region's brand strategy,** Armenia is "*very good*," Azerbaijan and Kazakhstan are "*good*," and Tajikistan and Kyrgyzstan are "*partially good*." Uzbekistan is not included in the ranking of 180 regional brands, and Bloom Consulting will not determine the country's ranking if it does not regularly submit tourism statistics to the World Tourism Organization (UNWTO) or does not have an official National Tourism website.

V.Conclusion

A comparative analysis was carried out on the classification of national tourism brands of 5 neighboring countries by brand composition, methods for determining the quality of offer in the phrase used in the slogan, regional brand strategy and the results of the national brand rating. The following conclusions and proposals have been made to sustainably increase the competitiveness of the national brand of Uzbekistan:

1. Slogan (Symbol of the magic East, Symbol of magic East, and symbol of the Magic East) promoted in different languages through the website of the State Committee for Tourism Development (uzbektourism.uz). It is a medium-quality phrase in terms of its methodology, which is similar to the definition

given to Uzbekistan, without a clear proposition. However, it is advisable that the slogan is not in the form of a description of the state, but in the form of a creative promise to a potential visitor that other regions have not offered. The word "**Sharq"** means a very wide geographical area that distracts potential tourists. That is, the word "east" used in the slogan of the national brand does not allow a potential visitor to imagine the place of Uzbekistan on the world map. In our opinion, using the phrase **"Silk crossroads"** in the slogan of our country, we can point out that Uzbekistan is a geographical area where the main intersections of the Great Silk Road are located.

2. In fact, the slogan is not just a combination of words expressing the geographical location, characteristics and competitive advantages of the country, but the PROMISE of the country, which wants to give to potential tourists, investors and others in order to implement the strategy of positioning in the market and consumer consciousness! The clearer this promise is based on the competitive advantages of tourism, a country that other regions of the world cannot offer, the faster and more efficient it will be in the minds of consumers. In other words, in exchange for adding the word INSPIRATION to the above-mentioned phrase, we offer a new slogan of the national tourism brand of Uzbekistan, INSPIRING SILK CROSSROAD.

3. Promoting Uzbekistan to the world at the crossroads of the Great Silk Road, "the country and its travels will lead to creativity, new ideas for scientists, inventions for innovators, new works of art, interest in living in depressed people." It is recommended to carry out a complex of advocacy work based on the same strategic brand tags (#).

As a result, Uzbekistan as a tourist destination in the minds of world markets and the population, in return for inculcating the belief that travel to this country "*inspires, inspires to live, create, create, invent, creativity*" in 2019-2025. I am confident that we will achieve the stability of tourism competitiveness by implementing all the tasks related to the national brand strategy, which provides for the "Concept of tourism development in the Republic of Uzbekistan."

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STRATEGIC PLANNING OF THE DEVELOPMENT PROCESS OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP

X.X.Bozorov[1]

ABSTRACT

The work carried out in the field of strategic planning of the production process of small business and private entrepreneurship and their systematization, as well as its current importance. Also, strategic planning of the development process of small business and private entrepreneurship were investigated as the whole.

Keywords: *strategic planning, production, small business and private entrepreneurship, financial market, competitive product.*

Introduction

It is well known that corporate finance is the most important part of the overall financial system. The main part of the country's GDP is corporate finance. Effective management of financial and economic activities of enterprises, in turn, is important in increasing the state budget, employment, improving the country's foreign trade balance, the development of competitive products. In this regard, the President said: "Uztadbirkoreksport" and "Uzsanoateksport" joint-stock companies, as well as small business and private entrepreneurship entities in the direction of the Export Support Fund for Small Business and Private Entrepreneurship under the National Bank. It is related to exports, "he said. Therefore, our country is constantly implementing economic reforms to effectively manage the financial and economic activities of enterprises. For example, in recent years, as a result of tax reforms in the country, the corporate income tax rate was reduced from 9% in 2013 to 8% in 2014 and 7.5% in 2016. As a result, companies have been able to save money on taxes and produce more competitive and export-oriented products.

Theoritical background

Small business entities operating under the laws of a market economy must have a clear idea of their current and future strategy, because the market does not tolerate mistakes in the organization and planning of production, careless actions.

Similarly, before starting a business, a small business manager thinks about how to start it, what will be achieved as a result of this business, and how it can be done.

The more sustainable a business is, the more likely it is to have a long-term program.

For example, when Kids at Large was founded in Massachusetts, USA, the main goal of its strategic plan was to find "its own consumer" in the market. They set a goal to produce clothes for children aged 4-14, given that one in four children in the United States is overweight (obese). The ad worked well because parents of overweight (obese) children had a hard time finding clothes. Kids at Large's strategy was to trade across the state through online mail orders, rather than using traditional wholesale and retail networks. As a result of a well-developed business strategy, the company was able to receive 130,000 orders through online sales at a given time.

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The essence of the concept of strategic planning is that it is forward-looking, takes into account the high level of uncertainty in the development of the economy, is aimed at achieving huge quality goals, and requires a wide range of management options. Predicts the gap between goals and outcomes.

Main part

The main difference between strategic planning and long-term planning is that it is not possible to use the development trends identified in the past in strategic development. It focuses on analyzing and evaluating all marketing risks and opportunities. Economic-mathematical methods and models are widely used in strategic planning in small business.

A firm's strategy is a general plan of action through which the firm seeks to achieve its goals (an algorithm for achieving goals). A small business strategy is a set of quantitative and qualitative indicators and directions of activity in the market, detailing the main part of the firm's strategy, and principal decisions that focus on specific marketing measures that can more fully implement the firm's strategy.

- A strategic plan is a set of operations, and from the point of view of the head of the firm, their implementation leads to the implementation of his strategy.
- Tactics are developed over a short period of time (for example, year, quarter, month) and, if necessary, adjusted to address the strategic objectives of the business. Creating an effective strategic plan requires the following steps:
- clear definition of the purpose of the firm;
- analysis of the competitive situation in the market, the conditions of doing business, including distributors and suppliers, their financial condition;
- have a clear idea of the business and the process of joining it;
- Considering external threats and advantages, internal opportunities and vulnerabilities, competitive advantages[1].

The purpose, tasks, strategy of a small business, how to implement and control it determine the amount of profit from this business. This should be considered and planned in advance. Clear goal setting in planning is the key to small business success.

As you know, goals are always based on certain constraints. These can be internal or external restrictions on a small business. External restrictions may include changes in legislation, inflation, competition, changes in economic priorities, changes in incomes, the financial condition of debtors, and so on. Internal constraints include the small business's cost level, production capacity, marketing and management status, various levels of incompatibility, and so on. Therefore, in the process of developing the mission, goals and objectives of a small business, it is necessary to assess a number of factors that affect its activities.

Data analyses

Information about Merrymed Farm LLC Development History and Market Share.

MERRYMED FARM LLC was established on 01.01.2010 in Namangan district of Namangan region. The company is engaged in the production of pharmaceutical products. The company initially produced drugs in the form of INBULK (semi-finished product), and then launched the production of tablets, candles, galenic drugs in a full cycle.

By 2014, the company plans to launch the production of injectable drugs in full, and will invest 3 million US dollars to launch 3 lines for the production of injectable drugs. Taking into account the high demand for injectable drugs in the Uzbek market and its prospects, it registers more than 30 drugs and facilitates their delivery to the domestic market.

By 2015, the company will begin construction of a workshop for the production of powdered antibiotics. In the same year, the company will complete this project and by 2016 will begin production of powdered antibiotic drugs.

In addition to the implementation of its projects, the company will implement a number of projects in order to create favorable conditions for about 700 employees. By 2017-2018, dormitory and kitchen buildings for 700 employees will be commissioned.

The company implemented one of its largest projects in 2017-2019. According to him, the construction of 7 lines for the production of infusion drugs will begin and the project will be completed. As a result of the launch of this line, the company has the opportunity to pour ampoules, infusion drugs in polyethylene containers.

When we look at the history of the enterprise, we can see that its development indicators are very impressive. Today, the company produces 176 types of drugs. This, in turn, is the largest in Uzbekistan. There are more than 150 pharmaceutical companies in Uzbekistan, with a market share of 17-20%. The share of medicines imported to Uzbekistan is 4.5-5%. As of December 24, 2020, the amount of drugs sold by the company amounted to 265 billion. Sum. forming.

Table 1. The structure of the types of drugs produced by the enterprise

№	By types of drugs	Types	Considering %
1	Injectable drugs	53	25,24
2	Suspensions and syrups	14	6,67
4	Tablets and capsules	44	20,95
5	Infusions	18	8,57
6	Mazlar	20	9,52
7	Eye drops	10	4,76
8	Antibiotics	8	3,81
9	Candles	9	4,29
10	New drugs	34	16,19
	Total	**210**	**100%**

All medicines produced by the company are import-substituting medicines, and 34 types of medicines have been put into production. In the coming days, these medicines will be registered and the number of medicines will reach 210.

At the same time, the company has launched projects to export products. At present, exports to the Islamic Republic of Afghanistan, the Republic of Turkmenistan, the Republic of Kazakhstan, the Kyrgyz Republic and the Republic of Tajikistan are organized. The company's export figures are given in the table below.

Table 2. Exports made by the company over the years.

№	Country name	2018 y. U.S. Doll.	2019 y. U.S. Doll.	2020 y. U.S. Doll..
1	Islamic Republic of Afghanistan	319 486,26	96 894,60	87 350,00
2	Republic of Turkmenistan	0	0	963 973,42
3	Republic of Kazakhstan	0	0	844 897,68
4	Kyrgyz Republic	0	0	523 530,02
5	Republic of Tajikistan	0	0	36 405,61
	In total	**319 486,26**	**96 894,60**	**2 456 156,73**

Increasing the company's export potential is one of the main goals for the next year, and in the coming years it is planned to reach 5 million US dollars.

Discussions

Entrepreneurship is the basis of any business initiative. For it to be constantly evolving, it must have entrepreneurial skills, the necessary knowledge about the production of a particular product, and an understanding of trade, finance, brokerage, and innovation. For an entrepreneurial idea to be effective, it is necessary to develop a business plan, a basic program that identifies the priority issues of the important resources that need to be implemented.

The elements that support and organize the development of entrepreneurial ideas include:
- Identify the importance of small business in the economy;
- Competitiveness, that is, making sure that it is able to meet the needs and demands of consumers compared to other business systems;
- Implementation of ideas under certain conditions;
- product - analysis of development strategy, goods for sale or services arising from the needs of the buyer;
- Resources - current costs and investment;
- Markets - to determine where, how, to whom and at what price to sell the product, and at the same time to determine the purpose of the buyer[1].

Structural (systemic) changes in the enterprise - the establishment of branches and branch enterprises; development program - describes the economic activity and market directions in which goods are sold, increases business activity, improves economic activity based on the adaptation of the enterprise, entrepreneurship to the external market environment. To ensure the adaptability of a small business, it is

necessary to develop an overall business plan, determine the cost system, list of products or services to be provided.

When running a business, a small business manager needs to be aware of the alternative ways and opportunities to implement his plan and choose the best one. In particular, the most sensible business project is that it should use the capital raised and cash to achieve an efficient, accurate and fully planned outcome, and to carry out economic matters in a reasonable manner. The viability of a project is defined by economic and technical indicators, as well as by the selection of the best conclusions and the correct assessment of appropriate actions.

The analysis of the effectiveness of trade proposals is carried out at the initial stage on the basis of general hypotheses and assumptions about future business transactions. They are selected in the following approximate order: the qualitative dimensions of a particular set of products and services are evaluated; the time and means of delivery of the product are determined; costs and estimates for the period of the transaction are predicted; revenue or business income from the supply of goods or services; the amount of potential income is determined. At the same time, when more capital is required to carry out business transactions, it is necessary to compare them with the expected income growth and calculate the profitability and know the payback period of these funds.

Involving reviewers of small business entrepreneurship projects is especially important. While large enterprises have design bureaus, experimental rooms, marketing departments, and conduct the necessary research, small business systems often use the services of intermediaries. It is especially important to use the services of an entrepreneur-manager consultant for a small business. The consultants' approach to the business idea or attitude to the implementation of these business decisions, rich experience and multifaceted skills will help to determine the reasons for success and failure. This will help the consultants to evaluate their ideas and increase the reputation of the businessman. In order to reduce the risk, it is useful to invite outside consultants who are experts in their field in business activities, as well as in areas where there is a high economic risk.

There are two major types of business ventures. One of the most common (classic) forms is to direct the business structures to get the most out of the available financial resources. In this case, the work style of the entrepreneur or manager of the enterprise is: the calculation of cash, the study of the goals to be achieved in the implementation of business ideas, and other actions aimed at maximizing profits. The most convenient ways to earn money when starting a business are: a fund of money from the sale of goods and services, the purchase and sale of goods to go to distant countries, to make a profit by buying and selling consumer goods, types, dividends of shares, interest on bonds, inheritance of money and property, profits from bank deposits, profits from leased real estate, proceeds from charity and sponsorship.

The second model is "Innovation". It seeks to seize every opportunity to develop production, even if it does not have the capacity to do so. The innovation model requires the use of the following financial sources in addition to its own funds: borrowed funds, government subsidies, local budget funds, bank loans, securities issues, investment interest, foreign investment.

Conference

In short, the planning of small business and private entrepreneurship is one of the first steps, which determines the direction of the goal, its development. The survival and profitability of any business depends

on careful and well-planned business. Clear goal setting, feasibility study of business projects, use of consulting services are of great importance in planning.

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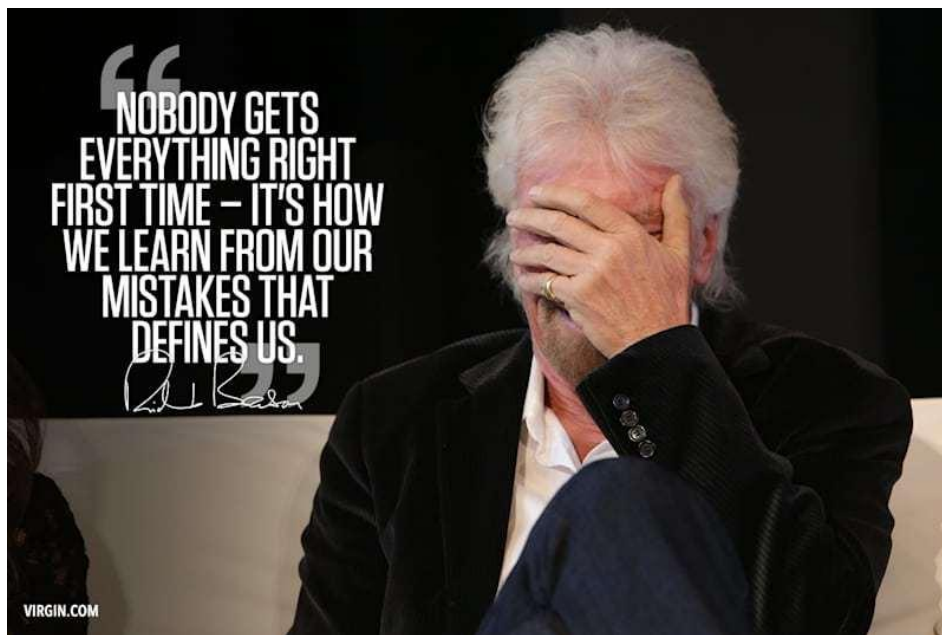
ANALYSIS OF EDUCATIONAL TOURISM SERVICES IN UZBEKISTAN AND ABROAD

Ibragimova Madina[1]

ABSTRACT

This article reflects the ways to use educational tourism in the transformation of tourism into a strategic sector of the economy in our country, educational tourism is a rapidly developing sector of the tourism economy, recognized around the world. It also provides an analysis of educational tourism services around the world. The author highlights the penetration of the processes of globalization of international relations in Uzbekistan, the development of two sectors - education and tourism in a harmonious, interdependent relationship and the possibility of obtaining appropriate benefits from this relationship.

Keywords: *education, quality of education, tourism, educational tourism, educational programs*

Introduction

Educational tourism is one of the components of the service sector and has now become one of the fastest growing important sectors under the strong influence of various social and economic factors. Given the multiplier effect of tourism development, its development will also stimulate the development of all sectors of the economy.

It should be noted that the economic literature of developed countries has long covered the development of educational tourism services, as well as in-depth and extensive research on this topic by a number of reputable organizations, scientists and researchers. In this regard, the research conducted by the World Tourism Organization (UNWTO), the World Confederation of Students and Tourism Education (WYSE) in the field of educational tourism, the measures taken to develop it are particularly noteworthy. S. Taylor (Sh. Taylor), a foreign scholar, also studied B.W. Leading scholars such as Ritchie (Brent Ritchie), K.M.Kalinowski and B.Weiler (K.M.Kalinovsky, B. Weiler) are seriously engaged in the theoretical and practical problems of educational tourism and have skillfully reflected their scientific views in the published literature.

There is a lot of research and scientific research in this area in the CIS countries as well. In particular, MB Birjakov, AS Kuskov, Yu.A. Djaladyan, M.V. Sokolova, I.V. Zorin, T.P. Kaverina, V.Yu. Voskresensky provided in-depth and extensive information on educational tourism services. comprehensive scientific research has been conducted.

In Uzbekistan, during the years of independence, as a result of the great attention paid to the tourism sector in a short period of time, sufficient opportunities and conditions have been created for the formation of a modern tourism industry, and this process continues today. Even during the severe crisis in the world economy caused by the pandemic, Uzbekistan is taking measures to restore and develop tourism. In particular, the Decree of the President of the Republic of Uzbekistan PF-4861 dated December 2, 2016 "On measures to accelerate the development of tourism in the Republic of Uzbekistan", the Resolution of August 16, 2017 "On priority measures to develop tourism in 2018-2019" , Decree of February 3, 2018 "On

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[1] Samarkand institute of economic and services, Uzbekistan

additional organizational measures to create favorable conditions for the development of tourism potential of the Republic of Uzbekistan", Resolution of February 6, 2018 "On measures to develop inbound tourism", February 7, 2018 "On domestic tourism" Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated June 30, 2017 "On measures to accelerate the development of tourism potential of Samarkand and Samarkand region in 2017-2019" adverse effects The Presidential Decree No. PF-5969 of 19.03.2020 "On priority measures for the elimination of corruption" is a clear proof of our opinion.

Currently, under the direct influence of the macroeconomic policy pursued by the state in Uzbekistan, positive changes are taking place in the field of tourism, its volume is expanding and the quality of services provided to tourists is improving. But the economic crisis caused by the coronavirus pandemic in the world economy has had a huge negative impact on the development of industries and sectors, leading to the breakdown of economic ties formed over the years, often leading to recession processes. Tourism is at the forefront of the list of industries that have suffered the most from the global economic crisis.

According to the World Tourism Organization, the negative impact of the coronavirus was reflected in a 67 million decrease in international tourist flows in the first quarter of 2020 and an export loss of $ 80 billion. In Italy, their total has exceeded 20 billion euros.

In our country, too, there has been a decline in foreign and domestic tourism due to the pandemic. As a result, more than 1,500 tour operators and about 1,200 hotels were closed. The negative impact of this has damaged the incomes of more than 250,000 people working in the system[1].

Nevertheless, in the context of the pandemic, a comprehensive approach to the development of tourism in our country, improving the structure of tourism, the formation of modern tourism infrastructure, the full and effective use of existing potential in the regions to restore the lost status of tourism.

The analysis showed that in 2019, in most countries, including Uzbekistan, the growth rate in the field of tourism will be higher than the growth rate of GDP. However, it is clear that tourism in Uzbekistan lags far behind other countries in terms of the share of tourism in GDP and employment (Table 2.1.1).

Table 2.1.1 Comparative analysis of tourism development in the world and in Uzbekistan

т/p	Country name	Growth rates in the country (2019 compared to 2018),%		Growth rates in the country (2019 compared to 2018),%)	
		GDP volume	including tourism services	GDP structure	GDP structure
1.	United States	2,3	2,3	8,6	10,7
2.	China	6,1	9,3	11,3	10,3
3.	Japan	0,9	1,6	7,0	8,0
4.	Germany	0,6	1,8	9,1	12,5
5.	Italy	0,1	2,2	13,0	14,9
6.	United Kingdom	1,3	1,3	9,0	11,0

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[1] https://review.uz/post/vnutrenniy-turizm-pozvolyaet-vosstanovit-otrasl (мурожаат қилинган сана: 29.12.2020)

7.	France	1,2	1,9	8,5	9,4
8.	Turkey	0,1	10,1	11,3	9,4
9.	Spain	2,0	1,8	14,3	14,6
10.	Thailand	2,3	1,8	19,7	21,4
11.	Philippines	5,9	8,6	25,3	24,1
12.	Australia	1,8	0,8	10,8	12,8
13.	Russia	1,1	0,6	5,0	5,6
14.	Uzbekistan	5,7	12,3	4,5	4,6
	Around the world	**2,5**	**3,5**	**10,3**	**7,5**

The data in the table show that tourism in Uzbekistan is significantly lower than the level achieved by the world economy in terms of critical macroeconomic indicators, ie GDP and the number of people employed in the economy. For example, if the share of tourism in GDP in the world economy was 10.3, the share of the employed population in the economy was 7.5%, in Uzbekistan these figures were 4.5% and 4.6%, respectively. The share of tourism services in Uzbekistan's GDP is almost 3 times lower than in Italy, 3.2 times lower than in Spain, 4.3 times lower than in Thailand and 5.6 times lower than in the Philippines. The same situation can be observed in the structure of employment in the tourism services sector in the economy. These figures show that Uzbekistan, with its huge tourism potential, is not able to effectively use the opportunities to realize it and turn it into one of the main sources of national income.

At the same time, another important conclusion can be drawn based on the table data. The conclusion is that in the framework of large-scale economic reforms, the remarkable policy of the state to turn tourism into one of the most developed sectors of the national economy is yielding positive results. This is due to the fact that the growth rate of tourism services in 2019 increased by 12.3% compared to the previous year. According to this indicator, Uzbekistan ranks first among the countries of the world. It should be noted that while the growth rate of tourism services was 0.6% in Russia, 0.8% in Australia, 1.3% in the UK and 3.5% worldwide, this figure was 12.3% in Uzbekistan. Such a rapid growth in the volume of tourism services and the consistent implementation of the objectives set out in the concept of tourism development in Uzbekistan allowed us to conclude that in the future it will inevitably become one of the leading sectors of the national economy.

Another important feature that distinguishes the tourism sector of Uzbekistan from the rest of the world economy is the ratio of domestic and foreign tourism in the total tourism services. If the share of domestic tourism in the total world tourism turnover is 73%, and in some countries it is 80-85% (USA, China, Japan, Germany, Great Britain, Philippines), in Uzbekistan it is 30%.

On the contrary, in terms of the share of foreign tourism in the turnover of tourism services, Uzbekistan ranks first in the world. The figure was 14 percent in the United States and Germany, 16 percent in the United States, 17 percent in the United Kingdom, 15 percent in the Philippines, and 27 percent in the global economy. At present, it is 70% in Uzbekistan **(Table 2.1.2).**

Table 2.1.2 The structure of the volume of tourism services in the world and Uzbekistan in 2019 on domestic and foreign tourism,%

т/p	Countries	Volume of tourism services, %	From that	
			Domestic tourism	**External tourism**
1.	United States	100	84	16
2.	China	100	86	14
3.	Japan	100	81	19
4.	Germany	100	86	14
5.	Italy	100	76	24
6.	United Kingdom	100	83	17
7.	France	100	66	34
8.	Turkey	100	36	64
9.	Spain	100	44	56
10.	Thailand	100	29	71
11.	Philippines	100	85	15
12.	Australia	100	78	22
13.	Russia	100	71	29
14.	Uzbekistan	100	30	70
	Around the world	100	**73**	**27**

The main reasons for the weak development of domestic tourism in Uzbekistan, in our opinion, are low incomes, lack of favorable conditions for domestic tourism, shortcomings in organizational matters.

Table 2.1.3 Exports of tourist services in the world in 2019

т/p	Countries	Export of tourist services	
		export of services, bln.	**share in total exports,%**
1.	United States	256,1	10,1
2.	China	40,4	1,5
3.	Japan	45,3	4,9
4.	Germany	60,3	3,2
5.	Italy	51,6	7,9

6.	United Kingdom	48,5	5,5
7.	France	73,1	8,0
8.	Turkey	37,1	15,6
9.	Spain	81,3	16,3
10.	Thailand	65,2	19,9
11.	Philippines	9,7	10,8
12.	Australia	47,3	14,5
13.	Russia	18,7	3,7
14.	Uzbekistan	1,3	9,3
	Worldwide	**1313,0**	**7,0**

Uzbekistan also ranks last in terms of exports of tourist services. In 2019, the share of global tourism services in total exports was 7.0%, and the share of services in exports was 29%.

2.1.4-жадвал The number of international tourists in Uzbekistan in 2010-2019 and

dynamics of revenues from international tourism [1]

т/р	Years	Number of international tourists, mln	Revenues from international tourists (tourism exports) billion soums
1.	2010	952,0	975,0
2.	2015	1196,0	1202,0
3.	2016	1241,0	1225,0
4.	2017	1329,0	1346,0
5.	2018	1401,0	1451,0

According to the World Tourism Organization, 3.5 percent of the world's population travels internationally. By 2020, the figure was expected to be 7.0%. But as a result of the pandemic, this figure was not achieved. The analysis showed that the number of international tourists is constantly growing. The average annual growth rate of the number of foreign tourists born in the last 20 years has been about 5%, while foreign exchange earnings have been 15%. If in 2010 the number of tourists worldwide was 952 million and revenues from international tourism amounted to 975 billion dollars, by 2018 these figures will reach 1401.0 million, respectively. people and amounted to 1451 billion dollars (Table 2.1.4).

The development of international tourism and such a rapid growth in demand will inevitably affect the increase in the number of international trips and their costs. The number of travelers is expected to reach

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[1] UNWTO. Tourism Highlights: 2019 Edition, p. 8// http://www.unwto.org

1,062 million by 2020, up from 563 million in 1995. At the same time, in 1995, 401 bln. If the revenue is $ 2,000 billion in 2020. dollars in revenue. 70% of the developed countries are involved in international education tourism development policy in the XXI century, development of intergovernmental friendship and cooperation as a symbol of peace and tranquility for humanity, reduction of obstacles to free travel, ensuring health and safety of tourists, promoting sustainable development of tourist centers. which is a priority policy. Based on the analysis of World Bank data, it can be considered as a basis for the conclusion that by 2010 the trend of the international education tourism market began to change, which has an impact on international tourism policy.

The use of educational tourism is the most important and urgent task today in transforming tourism into a strategic sector of the economy in Uzbekistan. Educational tourism is a rapidly growing sector of the world-renowned tourism economy. Many researchers consider it one of the leading and most promising sectors of tourism. It is no secret that in the current process of socio-economic globalization, educational tourism is becoming one of the most effective ways to earn national income for many countries.

It is known that Uzbekistan has chosen a new course in the economic sphere, ie the path of innovative development aimed at increasing the efficiency of the economy. This, in turn, implies structural changes, qualitative changes and new approaches to the formation and development of the education system. It pays more and more attention to creativity, the ability to process information quickly, and most importantly, the professional use of acquired skills. Therefore, the existence of a fully and effectively functioning market of educational services is a necessary condition for the development of the country and ensuring a high level of production and competitiveness in the world market.

Research has shown that the structure of tourism services in Uzbekistan is imperfect. In particular, as educational tourism is a relatively slow-growing type of tourism, its share in the total tourism services is not very high (6.1%). The following table data is a clear proof of our opinion:

Table 2.1.5 The share of tourism in total tourism services[1]

№	Types of tourism	The share of tourism in total tourism services, %
1	Historical and cultural tourism	60,1
2	Business tourism	13,8
3	Health tourism	11,0
4	Educational tourism	9,0
5	Shopping tourism	6,1
In total		**100,0**

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[1] http://hxperlink.ru bor/ykm/html (мурожаат қилинган сана: 07.03.2020 й.)

Within the framework of the measures implemented in accordance with the Action Strategy and the priorities managed, a number of important decisions and decrees have been adopted to develop education in Uzbekistan on the basis of radically improving the quality of education and make it a solid foundation of socio-economic development. In particular, the Decree of the President of the Republic of Uzbekistan dated February 27, 2017 "On further improving the system of postgraduate education", April 20, 2017 "On measures to further develop the system of higher education" PQ-2909, July 27, 2017 " Resolution No. PQ-3151 "On measures to further expand the participation of industries and sectors of the economy in improving the quality of training of higher education", Resolution No. PQ-3276 of September 15, 2017 "On measures to further develop the provision of non-governmental educational services", 2017 Resolution No. QPQ-3289 of September 17, 2018 "On measures to further improve the system of training, retraining and advanced training of teachers", January 25, 2018 "On radically improving the system of general secondary, secondary special and vocational education" The decree "On measures to improve" was adopted. These decisions and decrees address the issues of improving the quality of education and scientific activity by further reforming the education system, strengthening the scientific capacity of higher education institutions, further increasing the efficiency and results of research activities, attracting talented young scientists and students to scientific activities. helps to do.

In short, the development of education, on the one hand, and the policy of accelerated development of tourism, on the other hand, are reflected in the joint development of educational tourism in the framework of the priorities implemented in Uzbekistan in accordance with the strategy of action.

The number of educational tourists around the world is huge, according to statistics, but the number of foreign students in the Republic of Uzbekistan is lower than in a number of countries around the world.

Table 2.1.6 Number of citizens arriving in the Republic of Uzbekistan in 2019 for travel purposes, thousand people

	Total	Reasons of travel									
		According to work	Job	Education	Travelling	Relatives visiting	treatment	Permanent residence	business	Transit	others
Total	**8279,0**	**53,1**	**21,4**	**54,0**	**1043,9**	**5520,7**	**55,7**	**53,6**	**53,9**	**883,0**	**540,0**
From CIS countries	7661,0	23,5	19,5	31.1	689,6	5457,5	55,4	47,8	14,7	869,5	452,9
From other foreign countries	617,6	29,6	1,9	22,9	354,3	63,2	0,1	5,8	39,2	13.5	87,1

The main purpose of travel of foreign nationals to the Republic of Uzbekistan is to visit relatives, which is 66.7%. In turn, for tourism - 12.6%, transit - 10.7%, for treatment and employment - 0.7%, for commercial, permanent residence and services - 0.6%, education - 0.3% and for other purposes - 6.5% were visited by foreigners. The distribution of foreign nationals arriving in the Republic of Uzbekistan in 2019 by travel purposes shows that 21.4 thousand of them (42.5% of them are men, 57.5% are women), 54.0 thousand (75.8% are men) 24.2% of women) for work, 53.1 thousand (82.3% men, 17.7% women) for service, 55.5 thousand (43.3% men, 56.7% women) for treatment , 1043.9 thousand (47.4% men, 52.6% women) came for tourism purposes, 5520.7 thousand (47.2% men, 52.8% women) came to visit relatives.

Table 2.1.7 Number of citizens of the Republic of Uzbekistan who left for the purpose of travel in 2019, thous [1]

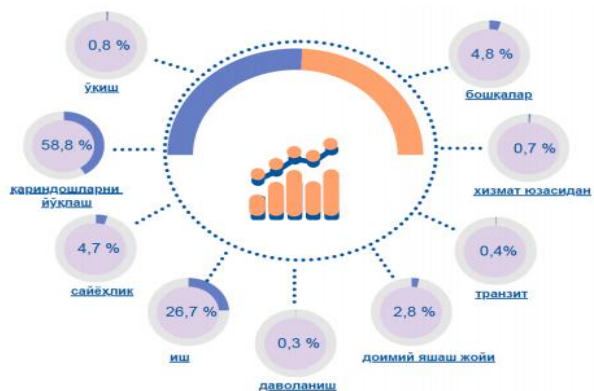|	total	Purposes of the trip								
		According to work	education	Job	travelling	Visiting relatives	treatment	Permanent living	Business	transit
Jami	**12932,6**	**90,8**	**104,4**	**3452,5**	**606,1**	**7599,3**	**37,2**	**369,2**	**53,7**	**619,5**
From CIS countries	12305,6	83,4	89,5	3364,4	216,0	7559,4	29,5	364,5	53,3	545,7
Other foreign countries	627,0	7,4	14,9	88,1	390,1	39,9	7,7	4,7	0,4	73,8

Figure 1. Distribution of citizens of the Republic of Uzbekistan who left in 2019 by purpose of travel [1]

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[1] Ўзбекистон Республикасининг ижтимоий-иқтисодий ҳолати. Ўзбекистон Республикаси давлат статистика қўмитасининг статистик тўплами. Расмий сайт: stat.uz

Figure 1 shows the distribution of citizens of our country by purpose of travel in 2019. It includes 0.3% for medical purposes, 0.4% for transit, 0.7% for services, 0.8% for study, 2.8% for permanent residence, 4.7% for tourism and 26.7% for work. , 58.8% went for the purpose of visiting relatives and 4.8% for other purposes.

The distribution of citizens of the Republic of Uzbekistan who went abroad in 2019 by travel purposes shows that 90.8 thousand of them (90.7% of them men, 9.3% women) on service, 104.4 thousand (60.5% men), 39.5% of women) for study, 606.1 thousand (51.9% of men, 48.1% of women) for tourism, 3452.5 thousand (76.4% of men, 23.6% of women) for work , 7599.3 thousand (47.5% men, 52.5% women) went to visit relatives, 37.2 thousand (44.2% men, 55.8% women) went for treatment.

The development of educational tourism requires identifying the problems and shortcomings that hinder the strengthening of the status of this type of tourism in the national economy, its transformation into one of the leading sectors of services exports, a worthy contribution to improving the quality of education. This will require sufficient statistical data, figures, more precisely, an analytical base to analyze and evaluate the scope of educational services, its status, development trends, its role in the socio-economic development of the country. It should be noted that the theoretical and practical issues related to educational tourism have no place in the macroeconomic policy pursued by the state. The official statistics do not contain any statistics specific to educational tourism, reflecting some of its aspects and useful for analyzing the state and development trends of educational tourism, the causes and consequences of economic events and realities in the field of educational tourism. No special statistical reports or other collections describing the processes taking place in this area will be published. However, the situation is different in countries that pay serious attention to educational tourism and its development. For example, the Australian state of New South Wales has developed a report and strategic program on educational tourism. It lists the following key indicators of educational tourism, including Australia, which occupies an important place in the international education market and is one of the top 5 destinations. 14% of young people in the world education market visit this country for language learning. New South Wales accounts for 36 percent of the international education market based on Australia's long-term and short-term education programs.

This strategic program outlines the contribution of visitors to the state's socio-economic development, ways to strengthen and expand it for educational purposes.

According to the World Bank's economic statistics, about 85% of industrialized Western countries, members of the Organization for Economic Co-operation and Development (OECD), are engaged in international educational tourism. As a result of long-term specialization, many developed countries are able to build complex educational tourism systems. Therefore, the institutional changes in the financial markets and the new situation in the post-2015 years also create the need for new specialization in the field of international education tourism. In particular, the new trends and changing market trends in the national tourism sector in our country today require financial investors to reconsider their investment initiatives and move away from traditional methods to new ones. Because in the XXI century it is necessary to establish new types of tourism, or more precisely, new types of tourism products, such as rural tourism, ecological and educational tourism.

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[1] Ўзбекистон Республикасининг ижтимоий-иқтисодий ҳолати. Ўзбекистон Республикаси давлат статистика қўмитасининг статистик тўплами. Расмий сайт: stat.uz

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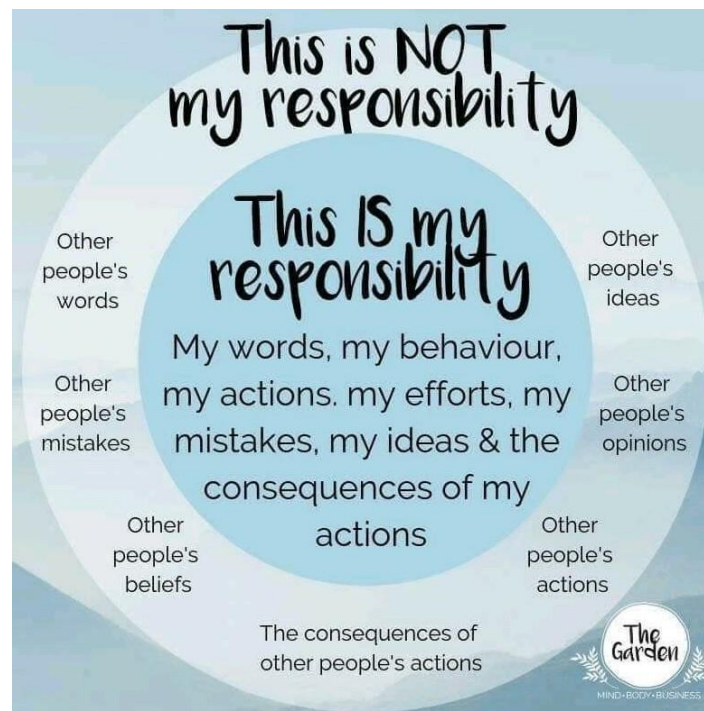
ECONOMIC METHODS IN THE MANAGEMENT OF PRESCHOOL EDUCATION

Salikhov Nodir Djamolovich[1]

ABSTRACT

The article describes the formation of the management of the preschool education system, the importance of economic methods in the management of the preschool education system, changes in the management of the primary education system by periods, changes in the management of preschool education during independence.

Key words: *preschool education, preschool education organization, education management, preschool education system, economic methods of management.*

I.Introduction

In most countries, the government pays great attention to the early education and upbringing of children, the effective management of the preschool education system in the country, the enrichment of the content of preschool education. Bringing up young children as mature people, imparting knowledge and skills on world knowledge is the basis for the future development of the country. From ancient times, the Republic of Uzbekistan has paid great attention to preschool education and upbringing. After the country gained independence in 1991, the principles and methods of managing the pre-school education system have improved. Economic methods were introduced instead of administrative-command methods of managing the pre-school education system. In his Address to Supreme Council (Oliy Majlis) on December 29, 2020, President of the Republic of Uzbekistan Shavkat Mirziyoyev identified pre-school education as a priority and stated the following about the current state of the system: The number of kindergartens has tripled to more than 14,000. This year, the parameters of admission to higher education have increased 2.5 times compared to 2016, the coverage of our youth with higher education has increased from 9% to 25% ”[3, p. 2]. Given the importance of quality education and upbringing from birth, the importance of preschool education in this process, as well as the relevance of research on the effective management of the preschool education system.

II.Literature review

The article uses the methods of logical thinking, induction and deduction, statistical grouping, econometric modeling, logical analysis, theoretical and methodological basis is the general strategy for the development of preschool education in the country, the decrees of President Sh.M. Mirziyoyev on preschool education and scientific and methodological literature on the research topic.

The database used data from the Ministry of Preschool Education of the Republic of Uzbekistan and the Statistics Committee of the Republic of Uzbekistan.

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III.Analysis

Since the early days of independence in our country, the elements of administrative-command methods in the management of preschool education have decreased, and the elements of economic methods inherent in a market economy have increased. The government has focused on radical reform of the pre-school education system, first of all, strengthening the material and technical base of pre-school education institutions, changing the amount of parental fees for children, reforming the procedure for admission of children to pre-school education institutions.

The model regulations of the ministry of public education of the republic of Uzbekistan № MY-306 of February 17, 1997 "On preschool and primary education" provided sufficient information on the activities of preschool educational institutions in the country for that period. Decree of the cabinet of ministers of the republic of Uzbekistan № 313 of June 24, 1999 "On measures to establish and develop a network of non-state preschool institutions" describes in detail the activities of non-governmental preschools and the benefits provided by the government to such institutions. In the early years of independence, preschools and related organizations became part of the Ministry of Public Education of the Republic of Uzbekistan, which is responsible for preschool and secondary education, making it difficult for the government to complete the reform of preschool education.

There has been a decline in the focus on pre-school education, a lack of reform in the pre-school sector, a sharp decline in the coverage of preschool children and a lack of attention to the quality of education, upbringing and health of children in educational institutions.

As a result of the great attention paid to the pre-school education system from the first days of Sh.M.Mirziyoyev's presidency, he ensured positive changes in the management of the pre-school education system. Decree of the President of the Republic of Uzbekistan dated December 29, 2016 № PQ-2707 "On measures to further improve the system of preschool education in 2017-2019" and the responsible organizations are described in detail.

In accordance with the Decree of the President of the Republic of Uzbekistan dated September 30, 2017 No PQ-3305 "On the organization of the Ministry of Preschool Education of the Republic of Uzbekistan", the Ministry of Preschool Education of the Republic of Uzbekistan was established.

In order to radically reform and improve the system of preschool education, to form an effective system of public administration of preschool education and to strengthen its material and technical base, as a result of recent measures taken, the ministry and its local branches have been established. Quality changes were observed. Improving remuneration and incentives for employees of the system, construction of new public preschool educational institutions, strengthening their material and technical base, further development of the non-governmental sector of preschool education services, expanding the network of preschool educational institutions and strengthening the material and technical base, The work on ensuring wider coverage and creating favorable conditions for public-private partnership in the field of preschool education has begun to bear fruit.

As a result of the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated August 24, 2018 № 681 "On the establishment of a modern preschool educational institution on the basis of public-private partnership" there was a sharp increase in the number of non-governmental preschool educational institutions.

Analysis of changes in the number of preschool educational institutions in the country and regions in 2010-2020 shows that during this period the number of PEOs in the country increased by 729 units or 111.7% (Table 1).

(Table 1). Number of preschool institutions, units

Regions	Years						2020 is a change from 2010	
	2010	2012	2014	2016	2018	2020	+,-	%
Republic of Karakalpakstan	397	330	319	320	317	466	69	117,4
Andijan	554	460	460	461	456	657	103	118,6
Bukhara	425	349	348	344	343	482	57	113,4
Jizzax	189	168	169	171	176	217	28	114,8
Kashkadarya	387	363	337	332	329	482	95	124,5
Navai	189	134	130	129	131	245	56	129,6
Namangan	612	474	478	468	474	643	31	105,1
Samarkand	659	571	554	565	566	743	84	112,7
Surkhandarya	385	295	295	293	286	412	27	107,0
Sirdarya	190	149	157	151	152	186	-4	97,9
Tashkent	501	457	456	440	452	569	68	113,6
Fergana	865	697	686	678	665	874	9	101,0
Khorezm	371	263	257	251	253	360	-11	97,0
Tashkent city	515	511	514	523	586	632	117	122,7
Total:	6239	5221	5160	5126	5186	6968	729	111,7

Source: Based on data from the State Statistics Committee of the Republic of Uzbekistan.

In 2010-2020, the highest increase in the number of state PEOs is observed in Tashkent (117 units or 117.4%) and the lowest decrease in the number of PEOs is observed in Khorezm region (-11 units or 97.0%). The next places are taken by Andijan (103 units or 118.6%), Kashkadarya (95 units or 124.5%), Samarkand (84 units or 112.7%), the Republic of Karakalpakstan (69 units or 117.4%), Tashkent (68 units (113.6 percent), Bukhara (57 units or 113.4 percent), Navoi (56 units or 129.6 percent), Namangan (31 units or 105.1 percent), Jizzakh (28 units or 114.8 percent).), Surkhandarya (27 units or 107.0 percent), Fergana (9 units or 101.0 percent), Sirdarya (-4 units or 97.9 percent) regions.

The number of children attending preschool education varies across the country. The highest number of children attending PEO was registered in Fergana region (130,269 people) and the lowest in Sirdarya region (30,359 people). It is known that the number of children attending PEOs is influenced by factors such as the size of the population in the area, population density, the number of PEOs, the conditions created in them,

the proximity of the population to the area of residence.

The analysis of the number of children attending PEOs in the country and its regions in 2010-2020 shows that during this period the number of children attending PEOs in the country increased by a total of 588,587 or 211.7% (Table 2).

Table 2).Changes in the number of foster children in the Republic of Uzbekistan in 2010-2020, per capita

Regions	Years						Change in 2020 compared to 2010	
	2010	2012	2014	2016	2018	2020	+,-	%
Republic of Karakalpakstan	31401	48963	31962	39677	50507	82737	51336	263,5
Andijan	41069	42304	44171	53099	58446	111478	70409	271,4
Bukhara	25629	25440	28069	31902	40105	67260	41631	262,4
Jizzax	25546	25454	25741	23668	20367	45110	19564	176,6
Kashkadarya	28995	26983	26637	30339	58388	66035	37040	227,7
Navai	18913	15042	19564	21104	24732	34777	15864	183,9
Namangan	43669	44558	45440	48650	57444	104569	60900	239,5
Samarkand	45542	47138	50203	61167	65550	126285	80743	277,3
Surkhandarya	24199	20916	24754	26912	29021	53712	29513	222,0
Sirdarya	14340	13399	15295	15775	19131	30359	16019	211,7
Tashkent	49360	46131	56087	62714	67494	81045	31685	164,2
Fergana	65130	62143	74432	75767	85092	130269	65139	200,0
Khorezm	22115	20254	20388	22009	33502	55250	33135	249,8
Tashkent city	90942	94952	113062	121269	123073	126551	35609	139,2
Total:	526850	533677	575805	634052	732852	1115437	588587	211,7

Source: Based on data from the State Statistics Committee of the Republic of Uzbekistan.

Tashkent (126,551 people), Samarkand (126,285 people), Andijan (111,478 people), Namangan (104,569 people), the Republic of Karakalpakstan (82,737 people) and Tashkent region (81,045 people) are in the second place in terms of the number of children attending PEO, Bukhara (67,260 people), Kashkadarya (66,035 people), Khorezm (55,250 people), Surkhandarya (53,712 people), Jizzakh (45,110 people), Navoi (34,777 people) regions.

During this period, the highest increase in the number of children attending PEOs was recorded in Samarkand region (80,743 or 277.3%) and the lowest in Navoi region (15,864 or 183.9%). Andijan (70,409 people), Fergana (65,139 people), Namangan (60,900 people), the Republic of Karakalpakstan (51,336

people), Bukhara (41,631 people), Kashkadarya (37,040 people) are in the next place in terms of the growth of the number of children attending PEOs, Tashkent city (35,609 people), Khorezm (33,135 people), Tashkent region (31,685 people), Surkhandarya (29,513 people), Jizzakh (19,564 people), Sirdarya (16,019 people) regions.

Parental payments for preschool education are based on humanitarian principles and are regulated by the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated February 28, 2020 No 114 "On approval of parental payments for public preschool education for 2020" is filled. Pursuant to this Decree, the parental fee for the provision of children attending preschool institutions is developed in accordance with the average income of the population in the area where the parents live (Table 3).

(Table 3).The amount of parental payment for the maintenance of children in preschool education, in the amount of one thousand soums

s/n	Time to be on children's per day, hours	The amount of payment per child in the family participating in the organization				If more than one child from the family participates in the organization, the amount of payment for each child in the family			
		Tashkent city	Regional center	District center	Other regions	Tashkent city	Regional center	District center	Other regions
	4-5	33	31	25	23	23	22	17	16
	9	179	173	117	83	128	123	89	67
	10,5	214	207	159	145	152	147	120	116
	12	242	229	181	170	171	162	136	128
	24	255	243	192	179	182	173	144	135

Source: According to the decree, prepared on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.

According to the table, due to the high average income of the population in the capital Tashkent, parental payments in this area are 1.5-2.0 times higher than in rural areas with relatively low incomes.

The average amount of parental payment specified in this Decree was calculated for the one-hour period of the child's stay in the preschool institution (Table 4).

(Table 4). Amount of parental payment for the maintenance of children in preschool institutions for an average of one hour, in soums

s/n	Time to be on children's per day, hours	The amount of payment per child in the family participating in the organization				Average payment per hour across regions
		Tashkent city	Regional center	District center	Other regions	
1	4-5	7333	6889	5556	5111	6222
2	9	19889	19222	13000	9222	15333

3	10,5	20381	19714	15143	13810	17262
4	12	20167	19083	15083	14167	17125
5	24	10625	10125	8000	7458	9052
The average pay per hour according to the time the child is in the organization		15679	15007	11356	9954	12999

Source: According to the decree, prepared on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.

According to the table, the average payment for all regions is 15,333 soums when a child is in preschool for an average of 9 hours. According to the average amount of time spent in preschool education, the average parental fee per hour for child support is 15,679 soums in Tashkent, 15, 07 soums in regional centers, 11,356 soums in district centers and 9,954 soums in other regions. The cost of an hour of pre-school education for a child in the country is 12,999 soums.

The Decree reduces the amount of parental payment in the event that two or more children in the family attend a preschool organization, the humanitarian principle of parental payment for the maintenance of children brought up in preschool educational institutions. Such a humanitarian principle increases the coverage of preschool children with pre-school education and provides financial support to foster parents.

The average hourly parental payment for the provision of two or more children in a family attending preschool will be in different amounts for each region, depending on the income of the population, according to Table 4 (Table 5).

(Table 5). Amount of parental payment for maintenance of two or more foster children in a family on average per hour in preschool educational institutions, in soums

s/n	Time to be on children's per day, hours	The amount of payment per child in the family participating in the organization				Average payment per hour across regions
		Tashkent city	Regional center	District center	Other regions	
1	4-5	5111	4889	3778	3556	4334
2	9	14222	13667	9889	7444	11306
3	10,5	14476	14000	11429	11048	12738
4	12	14250	13500	11333	10667	12438
5	24	7583	7208	6000	5625	6604
The average pay per hour according to the time the child is in the organization		11887	10732	8847	7804	9818

Source: According to the decree, prepared on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.

According to the average length of stay of two or more children in a preschool institution, the average parental payment per hour for child support is 11,887 soums in Tashkent, 10,732 soums in regional centers, 8,847 soums in district centers and other regions, 7 thousand 804 soums. The cost of an hour of pre-school education for a child in the country is 9,818 soums.

IV.Discussion

Bukhara region of the Republic of Uzbekistan has 13 regions, 2 cities and 11 districts, and 9,658 teachers work in 482 preschool educational institutions in the region (Table 6).

(Table 6). Information on pedagogical staff of the State Preschool Education Organization under the Bukhara Regional Department of Preschool Education

№	Name of the region	Total pedagogical staff	Age of pedagogical staff						information of pedagogical staff			
			18 – 24 years	25 – 30 years	31 – 39 years	40 – 49 years	50 – 54 years	55 years and older	High	Incomplete higher	Medium special	Medium
1	Bukhara c.	1789	334	357	351	328	294	125	798	114	877	0
2	Kagan c.	608	146	137	176	120	29	0	153	50	405	0
3	Bukhara d.	530	42	219	172	59	29	9	195	51	284	0
4	Vabkent d.	629	96	131	203	127	67	5	159	50	420	0
5	Jondor d.	634	245	158	119	60	39	13	227	53	354	0
6	Kagan d.	215	29	65	55	46	15	5	44	31	140	0
7	Olot d.	233	37	69	48	50	24	5	156	15	59	3
8	Peshku d.	703	135	171	169	155	51	22	186	73	444	0
9	Romitan d.	769	239	167	186	120	47	10	232	95	441	1
10	Shofirkon d.	1161	225	222	311	232	101	70	347	92	722	0
11	Karakul d.	607	207	183	110	78	29	0	215	31	361	0
12	Karovulbazar d.	186	12	43	90	34	7	0	65	27	94	0
13	Gijduvan d.	1594	256	467	636	125	93	17	384	103	1107	0
Average		743	154	184	202	118	63	22	243	60	439	0
Total		9658	2003	2389	2626	1534	825	281	3161	785	5708	4
As a percentage of the total,%		100	20,7	24,7	27,2	15,9	8,5	2,9	32,73	8,13	59,10	0,04

Source: According to the decree, prepared on the basis of data from the State Statistics Committee of the Republic of Uzbekistan.

The table shows that a total of 9,658 teachers work in preschools in Bukhara region, with an average of 743 teachers in each region. Bukhara city and Gijduvan district have the largest number of teachers and Karavulbozor district has the lowest number of teachers.

The highest proportion of teachers of preschool education institutions (27.2%) is 31-39 years old, and the average age of teachers of preschool education institutions is 32.8 years. The highest share of teachers of preschool education institutions (59.1%) is secondary special education; the share of higher education is 32.7%.

Our government pays great attention to raising the level of education of teachers of preschool education, i.e. the training of many teachers with higher education. Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated May 18, 2019 No 418 "On measures to further improve the training of personnel for the preschool education system" created a great opportunity for preschool education organizations to train specialists with higher education. According to the decision, preschool educators were set at three years instead of four years for full-time education, with the learning process intensified. Also, teachers of preschool education institutions with secondary special education, in accordance with the recommendations of the leaders of the organization, have the opportunity to receive higher education in absentia for three years, without leaving the production. One of the most important measures taken by the government to improve the quality of pre-school education is to use economic methods of preschool education management, differentiate the salaries of teachers with higher education and higher education and skills, pay high salaries and provide financial incentives.

At present, remuneration of teachers of preschool education organizations is approved by the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated March 9, 2020 No 135 "On measures to further improve the remuneration of employees of public preschool education" amounts of basic tariff rates of payment" (Table 7).

(Table 7). Amounts of basic rates of remuneration of employees of the state preschool education system

s/n	Position name	Amount of base tariff rate (UZS)				
		higher category	first category	second category	higher educated	secondary special (vocational) education
3.	Higher education: educators of the preparatory group (from 5 to 6-7 years), language teachers, teacher-defectologist, teacher-speech therapist, psychologists	2095874	1975627	1850054	1727603	x
4.	Preschool teacher (except for item 3)	1620021	1510347	1403920	x	1203660
5.	Educator-methodologist, educator (except for educators of higher	1 510 347	1 403 920	1 301 738	1 203 660	1 111 444

s/n	Position name	Amount of base tariff rate (UZS)				
		higher category	first category	second category	higher educated	secondary special (vocational) education
	education group (from 5 to 6-7 years))					
6.	Musician, choreographer, instructors of all specialties	1329081	1222677	1120510	1023015	930302
7.	Assistant educator with higher or secondary special, professional pedagogical education	1 014 333				
8.	Assistant educator with higher, secondary special, professional non-pedagogical education and general secondary education	845 278				

Source: Annex 1 to the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated March 9, 2020 No 135 "On measures to further improve the procedure for remuneration of employees of the state preschool education system."

According to the schedule, the higher education of pedagogical staff, based on their knowledge and experience, is encouraged by our government to receive higher categories.

Remuneration of pre-school staff is differentiated based on the knowledge, skills and experience of the staff, which encourages the pedagogical staff of the institution to have higher education and work skills.

Also, the Regulation "On the procedure for remuneration and financial incentives for employees of the state preschool education system" approved by the Decree of the Cabinet of Ministers of the Republic of Uzbekistan dated January 5, 2018 No 10 "On improving the procedure for remuneration of employees of the state preschool education system" Chapter 8 states that "financial incentives for conscientious, enterprising and highly qualified employees of public pre-school educational institutions shall be provided at the expense of a special fund for financial incentives for employees of budgetary institutions and organizations established in public pre-school educational institutions". This is a sign of respect and consideration for employees who work conscientiously, honestly and with high discipline in the institution.

As a result of the introduction of economic methods aimed at raising the level of education of teachers, in a short period of time the level of education of teachers increased from 20.0% to 32.7%.

The widespread use of economic methods in the management of the pre-school education system in Uzbekistan will improve the quality of pre-school education and upbringing, and the level of enrollment of young children in pre-school education institutions will increase sharply. In his Address to the Supreme Council on December 29, 2020, the President of the Republic of Uzbekistan Shavkat Mirziyoyev outlined the urgent tasks for the pre-school education system:

Therefore, our strategic goal for the development of preschool education in the coming years is to create the necessary conditions for the full coverage of every child of kindergarten age in this area of education.

We need to increase the coverage of preschool education to 65% by the end of next year and 75% by the end of 2023. An additional 2,000 non-governmental kindergartens will be established with a budget subsidy of 600 billion soums, bringing the share of the private sector to 25 percent. Also, in 2021, 560,000 6-year-old children or 82% of them will be covered by the free school preparation system" [3, p. 2].

In 2020, the coverage of young children in preschool education will be 55.0%, and as a result of the measures taken in the system, it is planned to reach 65.0% by the end of 2021. For comparison, in 2016, the coverage of preschool children in preschool education was 33.0%, and the measures taken by the government to the preschool education system, as a result of the introduction of economic management methods increased by 22.0% to 55.0%.

V. Conclusion

Given that pre-school education is important for the future development of the country, the government will develop measures for the effective management of the pre-school education system.

Since 2016, Uzbekistan has been accelerating the reform of the pre-school education system. The Ministry of Public Education of the Republic of Uzbekistan took over the pre-school education system and formed the Ministry of Preschool Education of the Republic of Uzbekistan. This new ministry is the state body responsible for preschool education in Uzbekistan.

The Law of the Republic of Uzbekistan "On Preschool Education and Upbringing" was adopted, which fully reflects the aspects of preschool education, the principles of education, the rights and responsibilities of preschool education organizations and foster children and their parents.

In recent years, economic methods have been widely used in the management of preschool education instead of administrative methods. First of all, attention was paid to the establishment of many state and non-state preschool organizations in the regions of Uzbekistan, including the introduction of non-governmental and public-private partnership preschools in cooperation with state preschools.

In order to increase the number and expand the activities of non-governmental and public-private partnerships in preschool education, a number of economic tools have been developed. For example, vacant government buildings were given to companies at zero cost to set up preschools. Long-term tax breaks and low-interest loans from banks were provided to companies engaged in pre-school education.

In the spirit of humanity, the Uzbek government has set different amounts of parental fees for children attending preschools, based on the income of the population, which has made it possible for parents in all regions to send their children to preschool.

The use of economic management methods in the preschool education system has ensured that the coverage of preschool children in preschool education will increase from 33.0% in 2016 to 55.0% in 2020.

In order to improve the quality of pre-school education, the Uzbek government has introduced a system of remuneration and financial incentives for pre-school education, which encourages teachers to have higher education and to improve their knowledge and skills. At the same time, the salaries of pre-school teachers will increase in line with the increase in the level of education of teachers, as well as the change in the categories of teachers in accordance with their qualifications will ensure higher salaries. In addition, the

government's ability to train pre-school education specialists has ensured that the level of education of pre-school teachers in the short term will increase from 20.0% in 2016 to 32.7% in 2020.

In order to increase the level of education of teachers working in preschool education and to improve the quality and content of preschool education, I make the following proposals:

- It is necessary to increase the amount of small one-time bonuses given by the head of the organization by 2-3 times, taking into account the work discipline, knowledge of pedagogical staff working in the preschool organization, the activities carried out in the organization;
- Increase the small difference between the salaries of teachers with higher and secondary special education by 2-3 times in determining the amount of salaries paid in accordance with the level of education of teachers of preschool education, the share of higher education is 32.7 percent in case the government facilitates access to higher education.
- It is expedient to establish bonuses for the next year for educated, experienced and active pedagogical staff that has been following labor discipline for a year.

In order to further develop pre-school education in the Republic of Uzbekistan, it is necessary to study modern economic methods from the experience of developed countries with a developed pre-school education system and introduce them into the pre-school education system of Uzbekistan.

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THE QUALITY FORECAST OF PROJECT CASH FLOWS AS A KEY FACTOR DETERMINING THE EFFICIENCY OF INVESTMENT

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ABSTRACT

In the article, the problems related to cash flow forecasting, with cost planning in modeling of the investment projects and their negative influence in project development in future are identified. As well as, the scientific proposals on reduction of this negative impact are developed.

Keywords: "cash flow", "business plan" or "feasibility study", "business idea", "project performance", "investment phase", "project viability", "project initiator", "receivables", "creditor indebtedness".

INTRODUCTION

In the literature on the investment activities of commercial banks and its effectiveness, various scientific and theoretical views have been put forward by scientists, including domestic scientists.

Investments are funds, securities, other types of property, including property and other rights of value, which are directed as an investment in business activities for the purpose of obtaining a profit or other beneficial effect.

Investment activity is the act of making an investment and taking practical action in order to obtain a profit or other effective benefit.

The main purpose of the investment project is to get the maximum benefit from the minimum investment. It is well known that in the implementation of high-risk projects to achieve this goal, the level of profitability is high, and competition is low. But timely detection of high-level risk, development of measures to eliminate it and skillful management is a complex process and requires a professional approach at each stage.

Obstructing the implementation of the project, reducing the efficiency of the investment, even the identification of risks that would completely eliminate the project and the development of measures to reduce their impact do not lose their relevance as an urgent task.

LITERATURE REVIEW

When we turned to scientific research and studies on the subject, we came across the following opinion of V.V. Kovalev, a foreign scientist: "The fact is that the analysis of investment projects is based on forecast data, and therefore the conclusions are based on a certain risk. For example, if there are errors in forecasting cash flows and the cash flow is overstated (especially for the last years of the project), to what extent does it affect the decision on the effectiveness of the project?" [3]. With this in mind, V.V. Kovalev emphasizes the importance of cash flow forecasting in assessing the effectiveness of investment projects.

On the importance of the effectiveness of investment projects, S.K. Jumaev commented on the "Improving the economic efficiency of investments is one of the important tasks of the state, organizations and enterprises. The essence of the problem of increasing the economic efficiency of investments is to produce more products, services, profits and national income at the expense of material, labor and financial costs per unit." [4]. Also, one of the important conditions for the development of international

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entrepreneurship is the financing of investment projects and increase their efficiency [6, pp. 1-7]. In general, the development of entrepreneurship is important in ensuring the financial and economic security of the country. Tax support, tax security by increasing the efficiency of investment in the implementation of investment projects, expanding opportunities to increase the efficiency of investment projects [7, pp. 64-69; 8, pp. 124-128].

The above considerations demonstrate the relevance of the effectiveness of investment projects and the importance of cash flow forecasting for analysis.

THE MAIN FINDINGS AND RESULTS

As mentioned above, identifying risks and mitigating their impact is especially important for commercial banks, which are leaders in financing investment projects.

Over the past period, it is no secret that the main emphasis in reducing the level of risk in the financing of investment projects by commercial banks has been given to the practice of collateral and insurance. However, the analysis of the effectiveness of the project should be a key factor in reducing the level of risk, the provision of collateral should increase the responsibility of the project initiator, and insurance policies should serve in case of force majeure.

The volume of loans issued by commercial banks in Uzbekistan in 2017 amounted to 107.2 trillion soums, of which investment loans amounted to 16.1 trillion soums, or 15.0% of the total, while in 2018 this figure amounted to 161.0 trillion soums. soums, of which investment loans amounted to 38.7 trillion soums, or 24.0% of the total.

Compared to 2017, the growth of total loans in 2018 was 1.5 times, while the growth of investment loans was 2.4 times. The above statistics show that the share of investment loans in total loans is growing rapidly.

In Uzbekistan, serious attention is paid to sharply reducing the share of non-performing assets by bringing the banking system in line with international standards, including increasing the efficiency of investment activities. In particular, the Action Strategy for the further development of the Republic of Uzbekistan identifies important tasks aimed at strengthening reforms in the banking system, such as "... further expansion of promising investment projects and lending to small businesses and private entrepreneurship" [1], "... effective use of foreign investment and loans."

Based on the topic, a poor quality business plan that reduces project efficiency, or even eliminates the project altogether, is more specifically the risks associated with an incorrect cash flow forecast.

Timely implementation of construction, reconstruction and overhaul works by determining the amount of investment required for the project and the timing of its implementation, first of all, a thorough forecast of cash flows at the investment stage; technology and equipment, timely purchase of raw materials and start production at full capacity on time.

A clear forecast of current assets at the operational stage ensures the fulfillment of the company's obligations to creditors, banks, partners and employees by showing the required amount of raw materials and supplies in a timely manner.

Cash flow is the ratio of the amount and timing of funds received by the enterprise to the amount and timing of the enterprise's expenses.

Cash flow statement:

1. Formation of sources of financial resources;

2. Displays information on the use of these resources.

In any project, cash flow is more important than profit, because an enterprise can operate at a profit, but a cash flow deficit leads it to a crisis.

Example:

Profit and loss statement (million soums):

Profit from sales	75
Expenses	65
Income	**10**

Cash flow statement (million soums):

	Month 1	**Month 2**	**Month 3**	**Total**
Profit from sales	20	35	20	75
Payments	40	20	5	65
Cash flow	***(20)***	***15***	***15***	***10***
Cumulative cash flow	**(20)**	**(5)**	**10**	**10**

The above example shows that the company earned 10 million soums in three months and the total cash flow was positive by 10 soums, but the company had a deficit of 20 million soums in the first month and a negative balance of 5 million soums in the second month.

If we look at the cash flow during the project implementation phases, the amount of money invested by investors in the project at the investment stage must match the costs incurred at this stage in terms of amount and duration, otherwise the project launch period may be extended and lead to additional costs.

The amount and timing of cash flows from the sale of products during the period of operation must allow the company to cover current expenses in a timely manner, to settle accounts with creditors and investors; otherwise the company will reduce production capacity, default on creditors, delays in mandatory budget payments, overdue work can lead to situations such as employee dissatisfaction due to wage arrears.

The following aspects should be taken into account when making a cash flow forecast.

1. Net profit. Interest payments on borrowings and loans are not reflected in the cash flow statement because they are included in the expense statement in the financial results statement, payments on the main part of the loan are not carried to the cost of goods sold and are therefore reflected in the cash flow statement.

2. Depreciation allowances. Although the statement of financial performance is included in expenses and excluded from net profit, it has a positive effect on the increase in cash flows as the funds remaining at the disposal of the enterprise are calculated.

3. Change in current assets - current assets (cash, raw materials and supplies, finished goods balance, accounts receivable and accounts payable) in any operating enterprise change continuously from one type to another.

If the increase in receivables of the enterprise, the increase in the balance of raw materials and finished products in the warehouse leads to a decrease in cash flows, the increase in accounts payable has a positive effect.

Example:

In million soums

	Beginning	**Month 1**	**Month 2**	**Month 3**
Accounts receivable	-	10	12	15
Residues of raw materials and supplies	52	20	24	28
Finished product residue	-	18	22	25
Lender indebtedness	-	**(5)**	**(8)**	**(12)**
Total current assets	**52**	**43**	**50**	**56**
Current asset change		*9*	*(7)*	*(6)*

In our example above, it can be seen that the change in current assets in the 2nd month leads to a decrease in cash flows by 7 million soums and in the 3rd month by 6 million soums.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, a negative cash flow indicator will inevitably lead to the loss of solvency of even a profitable enterprise.

Today, we can observe a superficial approach to cash flow forecasting on the basis of a business plan or feasibility study developed by project initiators, and this is clearly evidenced by the fact that future real cash flows of the enterprise do not correspond to business plan indicators.

The cash flow forecast for project financing by banks is based on the forecast indicators given in the business plan without in-depth analysis.

Poor cash flow forecasting leads to the following consequences:

1. Delays in the implementation of the project due to delays in funding at the investment stage will lead to an increase in costs;

2. Because cash flows are forecasted at the turn of the year rather than at the end of the month, the months in which the cash flow deficit exists remain hidden, and the imposition of credit payments on the exact months of the deficit leads to overdue loan repayments;

3. The seasonality of cash flows is neglected in the development of the schedule of loan repayments on loans provided by banks to customers engaged in seasonal activities;

4. When forecasting cash flows for projects aimed at the production of goods for the domestic market and dependent on imports, it is also incorrect to forecast cash receipts and expenditures in national and foreign currency in the same currency in an equivalent form. The reason is that the fact that future cash inflows will be only in the national currency will create a shortage of raw materials and supplies to be purchased on an import basis;

5. Cash flow forecasting does not take into account changes in current assets at all. In other words, the incorrect determination of the terms of collection of receivables, the period of storage of raw materials and finished products in the warehouse, as well as the periodicity of accounts payable, leads to the fact that the forecast results are far from reality.

Based on international experience, we consider it expedient for banks, as the main financiers of projects, to take the following measures to address the shortcomings in this area.

1. Establish cash flow forecasting in the process of analysis of submitted projects by equipping the structures of banks working with investment loans with qualified specialists and training them on a regular basis;

2. Separate implementation of the forecast of cash flows in national and freely convertible currencies in export-oriented and import-dependent projects;

3. Establishment of a database of bank customers' performance indicators for use in the implementation of cash flow forecasting of new projects;

4. Strict adherence to cash flow forecast indicators made by bank employees when developing payment schedules for allocated loans;

5. In determining the total repayment period of the loan, rely not on the business plan provided by the client, but on the indicators of cash flow forecast made by the bank.

6. To compare the real situation with the forecast indicators in the implementation of project monitoring and identify the causes of the negative differences and take measures to eliminate them together with the project initiators.

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THE IMPORTANCE OF INSTITUTIONAL CHANGES IN THE CONTEXT OF INNOVATIVE DEVELOPMENT OF THE ECONOMY

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ABSTRACT

The article highlights the importance of institutional reforms at the current stage of economic development, in the context of the growing role of innovative and digital technologies in the economy. Definitions of institutional reform by many economists and its impact to the national economy have been studied. It also addresses the issues of improving the implementation of institutional changes in the context of innovative development of the economy, including the development of the use of scientific achievements.

Key words: *national economy, innovation, innovative economy, modernization, institutional change, economic growth, development.*

Today, reforms aimed at ensuring sustainable economic growth, increasing the competitiveness of the national economy and balanced development of society are being consistently implemented in our country. Despite the large-scale reforms aimed at increasing the competitiveness of the economy during the years of independence, life and the fiercely competitive environment in the world economy, as well as the accelerating integration processes in our region require qualitative development of production processes and economic growth. At the same time, it is becoming an objective necessity to continue the institutional changes that are making radical changes in socio-economic life.

In the context of innovative development of the economy, the implementation of institutional changes is becoming increasingly important. It's essential to study theoretical and methodological basis of institutional changes in the implementation of economic reforms. Because it clearly shows the importance of institutional change. Therefore, it is worthwhile to study the definitions and theory of institutional reforms given by many economists.

The Russian economist R.M. Nureev in his scientific researches highlights that the main factor in ensuring economic growth in the country is the implementation of institutional changes [2]. He praised the significance of institutional change, among other factors of economic growth.

G.I. Khanin analyzed a systematic analysis of the initial stage of transformation of the Russian economy, ie institutional changes and economic growth trends in 1992-1998 [3]. He pointed out some of the factors and conditions that influenced these changes.

The researches conducted by V.L. Tambovtsev on the activities of institutions and the directions of institutional change is also noteworthy. He studied the types of institutions and the characteristics of their functioning and showed their role in institutional change [4].

In the world experience, it has been observed that the model of institutional change, including changes in procedures, has a significant impact on the prosperity of members of society. However, this effect ended with different results in different countries. It is known from the experience of some developing countries that

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although economic growth is sometimes achieved, this situation does not always have a direct impact on the prospect of the population and solve the social problems.

At this point, when it comes to institutional factors of economic growth, it is important to distinguish the following four economic systems:

a technical sector of production that represents the real sector of the economy and the technological level

a financial system that ensures the rational circulation of resources; as well as the monetary system

institutional system - laws, rules, model of behavior, formal and informal norms; this system enhances the impact of the institutional structure of society on accelerating the development of sectors of the economy

social system-this system describes the social structure of a society. It also determines the lifestyle, quality and standard of living of the country's population. It also affects the development opportunities and directions of human capital

Figure 1. Economic systems for determining economic growth [1]

It can be said that they determine the quality of economic growth, structural changes and growth rates. This, in turn, determines the opportunities for economic growth, the lifestyle and quality of the population, the conditions for innovation and the formation of an innovative type of economic growth.

Institutional changes have had different effects on economic growth and prospects at different historical stages. It also depends on the direction of socio-political changes in society, the acceptance of these changes by the general population and the corresponding supportive actions, the rate of accumulation of human capital, the acceleration of industrialization due to the balanced development of high knowledge capacity, resource demand and labor capacity.

In order to interpret the theory of development from an institutional point of view, it is necessary to systematize state-owned enterprises and households. With this in mind, it is appropriate to focus primarily on the main variants of development theory and the role of institutional factors in them. First, the neoclassical version of development theory focuses on long-term growth factors such as capital

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[1]Prepared by author by summarizing the information from scientific literature

accumulation, changes in deposit rates, population growth, human capital accumulation, and technical progress [8].

Institutional factors in this case should include only human capital, because its reconstruction is carried out through the joint efforts of households, enterprises and the state.

While it is possible to interpret each of the factors presented by the neo-Keynesian theory of development from an institutional point of view, the interpretation of the maximum efficiency of capital has aroused great interest. The main reason for this interest is the relationship between the highest efficiency of capital and the process of formation of expectations of economic agents [9].

Third, Schumpeter's theory of economic development, at the heart of which is the image of an innovator-entrepreneur as the author of new combinations of factors of production, new products, new markets and new technologies [10]. These factors temporarily destabilize the economic system and stimulate economic growth. From an institutional point of view, it is not the image of the entrepreneur himself that attracts the attention, but the external environment, the institutional structure of the market in which he operates.

It is important to develop infrastructure that will ensure competitiveness through the widespread introduction of innovations in the production process, the acceleration of innovation in enterprises and the constant renewal of products and services.

Because today, in the process of globalization and integration in the world economy, the prospects for its development are determined by the pace of scientific and technological progress, access to capital and human resources. In the world, special attention is paid to achieving more quality indicators through the development of production based on technical progress and innovation, increasing the competitiveness of the economy and ensuring sustainable development.

In the context of globalization, innovation is a key factor in competitiveness. Not only in the example of one enterprise, but also in a particular sector, national and global economy, in the context of limited natural resources, innovative activities are aimed at developing their alternatives, creating resource-saving technologies and reducing environmental damage and it allows you to increase sales volume and profits.

Innovation is the key to development. Indeed, countries that have developed innovative activities are not only gaining technological leadership, but also achieving economic success and positive dynamics of macroeconomic indicators.

Even during the global financial and economic crisis and its aftermath, we can see a steady increase in the cost of innovation in countries that have experienced economic difficulties in the manufacturing, financial and banking sectors and are in recession (Japan, USA, Europe).

Over the past decade, expenses on research and development has increased 4.3 times in China, 2.4 times in South Korea, and more than 1.5 times in countries such as the United States, France and Germany.

The expenses for science (innovation) relative to GDP is one of the highest in the world. (Percentage of innovations in GDP).

Table 1 Innovetion Expenses (In relation to GDP, in percent)[1]

No	Country	2000	2005	2010	2015	2016	2017	2018	Changes
1	Israel	3,9	4,1	3,9	4,3	4,5	4,8	5,0	+1,1
2	South Korea	2,2	2,6	3,5	4,2	4,2	4,6	4,8	+2,6
3	Sweden	-	3,4	3,2	3,3	3,3	3,4	3,2	-0,2
4	Japan	2,9	3,2	3,1	3,3	3,2	3,2	3,3	+0,4
5	Austria	1,9	2,4	2,7	3,0	3,1	3,1	3,2	+1,3
6	Germany	2,4	2,4	2,7	2,9	2,9	3,0	3,1	+0,7
7	Denmark	-	2,4	2,9	3,1	3,1	3,0	3,1	+0,7
8	USA	2,6	2,5	2,7	2,7	2,8	2,8	2,8	+0,2
9	Belgium	1,9	1,8	2,1	2,5	2,6	2,7	2,8	+0,9
10	Finland	3,2	3,3	3,7	2,9	2,7	2,8	2,8	-0,4
12	China	0,9	1,3	1,7	2,1	2,1	2,1	2,2	+1,3
30	Russia	1,0	1,1	1,1	1,1	1,1	1,1	1,0	0
62	Uzbekistan	0,4	0,2	0,2	0,2	0,2	0,2	0,1	-0,3
64	Kazakhstan	0,2	0,3	0,2	0,2	0,1	0,1	0,1	-0,1
66	Tajikistan	-	0,1	0,1	0,1	0,1	0,1	0,1	0

Despite the significant differences, the common denominator in the transformation of the real sector in many developed countries is that industrialization has occurred in them. These countries relied not on copying the experience of other countries, but on their own capabilities, the development of their own domestic markets. According to Porter, the large companies start to unite when goods find their buyers within the country and this process will automatically intensify because modern and strong companies occur in the country, which are the core of the unification[2].

At the same time, it is important to strengthen its financial system, clearly formulate a strategy for the country's participation in the global division of labor.

Integrative transformation processes ensure the stability of the emerging economic system (strengthening integrity, quality confidence, internal system connections and interactions), its safe operation (integrity, integrity, ability to withstand disruptive effects due to synergistic effects), as well as provides justice conditions for members of society. Special social incentives will also be created for the most active

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[1] Summarized by the author on the basis of data from the official site "Organisation for Economic Co-operation and Development". Electronic resource. https://stats.oecd.org/
[2] Porter M. E. Towards a Dynamic Theory of Strategy // Strategic Management Journal. 1991. № 12.

members of society to find their place, regardless of their origin. This change is aimed at improving the quality and efficiency of the economic system.

Today, a real attention is paid to the process of adding the country to the list of developed countries. The concept of complex socio-economic development of the Republic of Uzbekistan until 2030 has been adopted, according to which the task is to double the GDP per capita by 2030.

In the process of gradual economic and institutional reforms implemented since the first years of independence of Uzbekistan, completely new institutions have been created in the socio-economic life of our country.

At the same time, an institutional environment has been created that includes formal rules for conduct and development of society and the economy.

The existing institutional environment has had a strong impact on property, production and distribution relations, as well as the establishment of a new management system as a general institutional model that determines the development of the Uzbek economy. As a result, the economic development of our country has gradually stabilized and high economic growth has been ensured.

Institutional norms and mechanisms provide the basis for increasing the effectiveness of the factors influencing economic development, as well as the conditions for economic growth in the long run. Problems related to the formation of the institutional environment and the emergence of institutional constraints reduce the opportunities for economic development.

Therefore, it is necessary to assess the quality of the institutional environment in the country for economic development and the impact of institutional change on economic growth, as well as to improve the structure and mechanisms of institutions that promote sustainable economic development.

From the point of view of institutional development, one of the main functions of the state is to protect property rights. Private property is the main driving force of economic competition. Therefore, it is necessary to improve the institutional mechanisms for the protection of private property rights and state guarantees for the implementation of contracts. These include institutions, institutional norms and mechanisms for the protection of foreign investment and investors, support and encouragement of business entities.

In the context of increasing market relations and fierce competition, economic growth is largely dependent on the execution of transactions and the costs incurred for them. Research on these issues is theoretical in nature and does not take into account the practical aspects of transaction costs of economic development. Thus, it is necessary to assess the institutional factors and optimize the development of transaction costs at the macro and micro levels in government and market structures.

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ECONOMETRIC MODEL OF IMPROVING THE QUALITY OF PUBLIC UTILITIES

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ABSTRACT

Analyzing development processes of each sector of the service utility, the sequence of choosing and modeling the main factors which influence their development are represented through simulation schemes in this article. Multifactorial empirical models were built on the example of the service utility which is provided to the population of Kashkadarya region, forecasts were given through them and suggestions and recommendations were given on the basis of obtained results.

***Key words:** service sector, complex modeling, econometric modeling, differential equations, static and dynamic parameters, structural analysis, synthesis, optimization, multifactorial empirical models, regression equation, correlation coefficient, Darbin-Watson criterion, Fisher and student criteria.*

Introduction

The development of digital (information) technologies at the present stage affects almost all spheres of economic activity. The article highlights the results of research and forecasting the quality of utility service to the population of the territory based on empirical models.

The aim of the study is to increase the efficiency of using the "digital information system in the utility service sector of the territory's population" and to develop an empirical forecasting model. The research was carried out using analysis and generalization tools to determine and classify the boundaries of the problem area. When forming an empirical forecasting model and describing its individual elements, a systematic approach and digital information technologies were used.

The spread of digital technologies in Uzbekistan today is reflected in the" strategy of action on five priority areas of development of the Republic of Uzbekistan in 2017-2021", presented in Annex 1 to the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No. 4947, which States that"by expanding the scale of modernization and diversification of the regional economy, social growth will be ensured - accelerated development of comparable districts and cities by reducing differences in the level of economic development and, above all, improving the quality of public services".

In the implementation of these tasks, in terms of further deepening reforms, " ... in the future, there should be important tasks for the comprehensive development of not only the basic sectors of the economy, but also, above all, the regions, ensuring the vital interests of all citizens of the country and increasing their incomes»[1; 2].

Over the past 30 years, the issues of empirical modeling, the information technologies' influence on the activities of the service sector and the optimal management of the economic system of the territory have received much attention in the scientific works of foreign and domestic scientists.

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Of the foreign scientists in this field, the research was conducted by an English economist M.Keynes and one of the Russian scientists V.M. Granberg[5; 14], but the research of scientists of our country has studied some aspects of optimal regulation of the economic system of regions. In particular, the theoretic and methodological aspects of the complex and proportional development of the territories were considered in the works of Kh. S. Mukhitdinov [19]. Despite many years of research, the issue of accurate forecasting of the development of the economic system remains relevant.

Methods

Interest in regressive complex-numerical econometric models and complex-numerical variable functions with statistical observation arose in the 50-60s of the XX century. G. N. Tavares and L. M. Tavares in their research they also focused in this direction. Only in 2004, the Russian economist scientist S.G. Svetunkov for the first time created the theory of constructing complex numerical econometric models[16; 17; 18; 21]. There have been many discussions about building an empirical model for predicting the provision of services to the population of a territory using digital technologies In the scientific studies of **Muxitdinov H. S., Muxitdinov Sh.H.,3Khudoyorov L. N., Norqobilova F. A.** and **, Ochilov M. R**, it was noted that the use of complex numerical econometric models in forecasting economic growth is one of the most promising methods[15].

Mukhitdinov Kh.S., Juraev F. D., in his studies, "the advantages of complex numerical econometric modeling lie in the fact that with their help there are opportunities for solving complex problems that cannot be solved by functions with real variables." An important factor in the territorial system is the theory of optimal regulation. Its distinctive feature is analyzed and the corresponding scientific conclusions are drawn on the need for consistent application of the principle of optimality in solving the entire complex complex of problems of regulation and management of the economic process in the region[20].

According to the famous American researcher P. Strassman, investments in information technology are most closely related to such indicators of service enterprises as administrative and management costs[6]. Media and technology can reduce the cost of internal governance in the industry. In his works, P. David[7]. argues that information technologies are "General-purpose technologies". Harvard Business School professor G. Loveman[8] . also emphasizes a similar point of view. Information technology creates the potential for the development of other digital technologies, but technologies that do not exist without digital technologies will not bring immediate benefits by themselves. Information technology provides a platform for improving organizational processes and introducing fundamentally new tools into the existing service sector.

The complexity of public service systems (systems based on the use of information technologies) requires taking into account the specifics of digital technologies. It is responsible for intelligent processing of information about changes in the state (efficiency) of complex objects and provides the choice of management decisions[3; 4].

Results and Discussion

There are two approaches to creating a digital economy: planned and market-based. For developing countries, the development of the service sector is one of the most effective ways to improve the living standards of the population. The main issue is not only to increase the share of the service sector in GDP, but also to expand its structure, increase employment, and develop modern forms and technologies of providing services that more fully meet the needs of the population. In developed countries, the service sector accounts for the bulk of the employed population, including " in the United States-80%, in Japan-more

than 70%." While a number of American companies own at least 50% of the profits from production, selling services related to production[23; 24].

If we consider the process as a system in the modeling of service utility, we must choose the main influencing factors, namely, input indicators. When modeling a process, we will choose the type or appearance of the model to be generated, if we choose which type of service sector. It is not impossible to take into account all factors in modeling, so we must choose the main influencing factors and take into account the ongoing socio-economic reforms which have been carried out in this field. The outcome factor and evaluation criteria are determined from the generated model (Figure 1).

Figure 1. Systematic analysis, synthesis and optimization in the modeling of service utility

It should be noted that the attitude of the population to the service utility is formed in the conditions of social ownership to production tools, a single centralized system of economic movement, limited economic independence of enterprises.

The importance of econometric modeling of public service utility is reflected in the followings:

The material, labor and monetary resources are rationally used;

It serves as a leading tool in the analysis of economic and natural processes;

it will be possible to make some adjustments during the forecasting of the development of public service utility;

It gives opportunity not only in-depth analyzing service utility , but also discovering their unexplored new laws. They can also be used to predict the future development of service utility;

It facilitates mental work along with the automation of computational work, creates the opportunity to organize and manage the work of personnel of service utility on the scientific basis.

In our opinion, there are the following actual issues which are waiting for their solution, in the development of the service utility : identifying classification of the types of services which are provided to the population, evaluating the nature of the service utility, developing a system of indicators of service utility in current situation, improving the process of econometric modeling of development of public service utility and forecasting it through them.

Human creates and serves the object of service to himself. Because of this, it is possible to introduce the belief that services are for the human and performing the service is also a human. This means that both the producer of the services and its consumer are also human. This can be expressed as follows:

It is known that as a result of the service, the GDP of country will increase. This will be done in the following directions: a gross domestic product will be created in the conditions of market relations, as a result of service, irrespective of creating or non-creating a material wealth. Therefore, it is expedient to look at services not from the point of view of the creation of material wealth, but from the point of view of the creation of gross domestic product.

In the modern era of development of social and service sectors, the provision of services is gaining popularity. Therefore, the labor efficiency per unit of achieved output is required to be able to calculate fixed assets, material and financial costs.

In the condition of market economy, utility service enterprises operate in a variety of forms of ownership, full economic independence and competitiveness. This market involves the flexible use of different methods of householding management and the choice of econometric models of service utility, in this case, it creates opportunity for rapid adaptation to changes in the external environment in a competitive environment.

Our goal consists of analyzing the service utility in the region and improving its models.

I. First of all, modeling gives opportunity to express a large and complex system using a simple model. The process of providing utility services to the population is a very complex system. It can be expressed through a systematic analysis scheme (Figure 2).

The mechanism of public service utility can be described graphically. Of course, this creates many problems.

II. The wide field is created for making experiments with the structure of the econometric model of public service utility. We can determine the most optimal state of activity of service utility enterprises by changing several times the parameters of the model. We can experiment on electronic computing machines through this model and then we can apply it in life.

Experimenting on real objects can lead to many mistakes and huge costs.

III. The service utility will be studied and analyzed in detail in order to create a model. After the model is created, it can be obtained new information about processes of service sectorwith using it. Thus, the process of service sector becomes a continuous process.

A systematic methodology of complex problems in the field of services is developed on the basis of a systematic approach and general concepts. During the analysis, we take into account the internal and external environment of the service utility . This means that it must be taken into account not only internal

factors, but also external factors such as economic, geopolitical, social, demographic, environmental and other factors.

Each system of the service utility includes its own service elements, while at the same time it reflects the low-level subsystem elements. In other words, the elements of the service sector will be interconnected with different systems in many ways, without interfering with each other.

The systematic approach is expedient for each element of its structural structure in ensuring the completeness of the public service utility .

In order to do this, the service utility is considered as a complex system, quantitative and qualitative aspects of its expression laws are studied. Imitation has important role in the analysis of the activities of the service sector which is considered as a complex economic process.
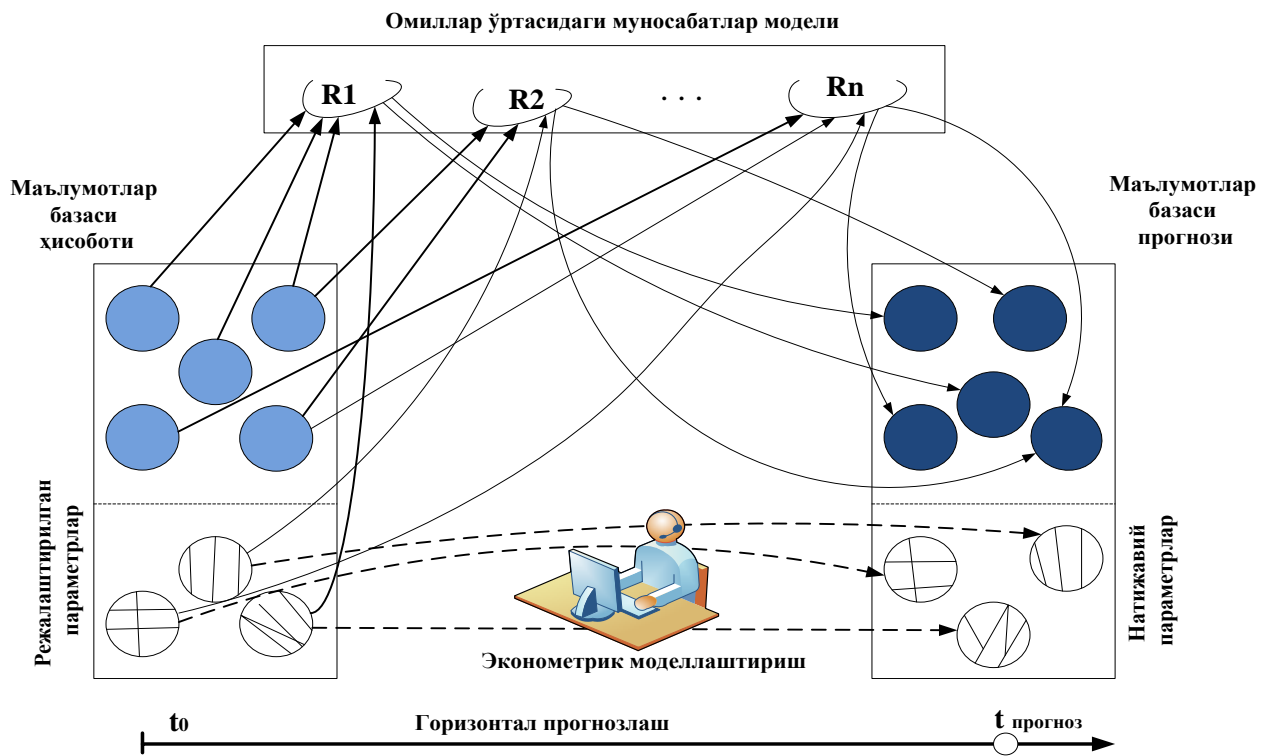
Figure 2. Scheme of systematic imitation of econometric modeling of the public service utility

The imitation model is constructed for each sector to predict the future state of the public service utility . The following tasks should be done in order to do this (Figure 3):

forming database of service utility networks and factors which influence it;

identifying the relationship between each service utility and the factors which influence it, the factors which influence it;

developing a separate model for each service utility ;

examining developed models according to evaluation criteria;

forming a database forecast on the basis of certain legitimacies of factors which influence forecasting

through models which are considered significant;

achieving outcome factors on the basis of databases and models.

In this case, special functions are reviewed, attention is paid to the algorithms of system operation. It is implied the properties which lead to the goal as function. In this case, performing functions of the system are evaluated on the basis of a functional approach. It creates opportunity to determine the activity of the system, to determine its status, to mark the management legitimacies of systems. An important aspect of this is considered appearing hierarchical subordination among these parts and reflecting it in the relative independence of these parts. This will help the population to develop an integrated systematic imitation model of all elements of its service sector on the basis of a single system.

We selected information which belong to the reporting years 2004 - 2018, these information identified the areas of service and the factors which influence them, on the basis of certain signs (Table 1).

In this case, the factors which influence the development of each service utility are separately divided in the modeling. Therefore, we took the development of some service sectors as a factor which influences to other service sectors. The impact of influencing factors affects service sectors in different degrees. Selected factors may be involved in modeling once or more. Because we consider one factor as the main factor which influences each service sector, and we can consider another factor as the main factor which influences only one service utility.

Table 1. Service sectors for the population of Kashkadarya region and the factors which influence them

Km_x − providing real estate services utility to the population of the region (in billion soums)	Y1
A_s − total number of the population of region (thousand people)	X_1
I_{ba} − employed part of the population of the region (thousand people)	X_2
A_d − total income of the population of region (in billion soums)	X_3
U_i − total consumption of the population of the region (in billion soums)	X_4
SH_i − personal consumption of the population of the region (in billion soums)	X_5
I_i − social consumption of the population of the region (in billion soums)	X_6
TFO_{bx} − total expenditures related to improving the welfare of the population of the region (in billion soums)	X_7
Uyk_{xx} − housing expenditures for the population of the region (in billion soums)	X_8

For example, if the total income of the population of the region becomes factor which influences all service sectors, the expenditures for the regional health care will be considered the factor which only influences the development of the health care sector for the population of this region.

We created the following functional view on the basis of the service utility in Table 1 and the factors which influence them (Table 2).

$$Km.. = \omega_e (A_{\lrcorner}.K_{\ldots}.Uvk_{\ldots}.M_{..}) + \varepsilon_e$$

A_d – total income of the population of region (in billion soums)

Km_x – providing real estate services to the population of the region

Uyk_{xx} – housing expenditures for the population of the region (in billion soums)

M_x – providing financial services to the population of region (in billion soums)

One of the main rules of constructing a multi-factorial empirical model is considered to determine the connection densities among the factors which are selected for the model, namely, to investigate the problem of multicollinearity of the connection among the selected factors. To do this, the correlation coefficients among the factors are calculated in order to do this, and when x_i and y_i variables accept the values of $i = 1,...,n$, they are considered the most common indicator which shows the linear relationship between x and y, and the correlation coefficient. It is calculated as follows[25]:

$$r_{xy} = \frac{Cov(x, y)}{\sqrt{Var(x)}\sqrt{Var(y)}}. \tag{1}$$

The value $Cov(x, y)$ in the dividend of the fraction of equation (1) is determined by the following ratio:

$$Cov(x, y) = \frac{1}{n-1}\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y}) \tag{2}$$

and it is called the covariance of the variables x and y and it is found as follows:

$$Cov(x, x) = Var(x), \; Cov(y, y) = Var(y). \tag{3}$$

The linear multi-factorial econometric model has the following view:

$$Y = a_0 + a_1 x_1 + a_2 x_2 + \cdots + a_n x_n \tag{4}$$

Here: y - the outcome factor; $x_1, x_2,..., x_n$ - Influencing factors.

The following system of normal equations is constructed to find the unknown parameters a_0, a_1, a_2, ... , a_n in the model (4):

$$\begin{cases} na_0 + a_1 \sum x_1 + a_2 \sum x_2 + ... + a_n \sum x_n = \sum y \\ a_0 \sum x_1 + a_1 \sum x_1^2 + a_2 \sum x_1 x_2 + ... + a_n \sum x_n x_1 = \sum yx_1 \\ \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots \\ a_0 \sum x_n + a_1 \sum x_1 x_n + a_2 \sum x_2 x_n + ... + a_n \sum x_n^2 = \sum yx_n \end{cases} \tag{5}$$

The hierarchical multi-factorial econometric model has the following view:

$$Y = a_0 * x_1^{a_1} * x_2^{a_2} * \cdots * x_n^{a_n} \tag{6}$$

Here: y - the outcome factor; $x_1, x_2, ... x_n$ - Influencing factors.

If we take the substitution in the model (6) by the natural logarithm, then we have the following view:

$$\ln(y) = \ln(a_0) + a_1 \ln(x_1) + a_2 \ln(x_2) + ... + a_n \ln(x_n). \tag{7}$$

In   model   (7),   if   we   make   the   definitions $\ln(y) = y'$, $\ln(a_0) = a_0'$, $\ln(x_1) = x_1'$, $\ln(x_2) = x_2'$,..., $\ln(x_n) = x_n'$ then we get the following view:

$$y' = a_0' + a_1 x_1' + a_2 x_2' + ... + a_n x_n'. \tag{8}$$

The following system of normal equations is constructed to find the unknown parameters $\grave{a}_0, \grave{a}_1, ... , \grave{a}_n$ in the model (8):

$$\begin{cases} n\grave{a}_0 + \grave{a}_1 \sum x'_1 + \grave{a}_2 \sum x'_2 + \cdots \grave{a}_n \sum x'_n = \sum y' \\ \grave{a}_0 \sum x'_1 + \grave{a}_1 \sum x'^2_1 + \grave{a}_2 \sum x'_1 x'_2 + \cdots \grave{a}_n \sum x'_1 x'_n = \sum x'_1 y' \\ ....\\ \grave{a}_0 \sum x'_n + \grave{a}_1 \sum x'_n x'_1 + \grave{a}_2 \sum x'_n x'_2 + \cdots \grave{a}_n \sum x'^2_n = \sum x'_n y' \end{cases} \tag{9}$$

If this system of normal equations (9) is solved analytically by several methods of mathematics, then the values of the unknown parameters $\grave{a}_0, \grave{a}_1, ... , \grave{a}_n \grave{a}_0, \grave{a}_1, ... , \grave{a}_n$ are found.

In order to have multi-factorial empirical models of the processes, several options were calculated in the Eviews 9 program and appropriate results were obtained. For example, builds an empirical model for providing quality educational services to the population of the region is built in table 6 and it is shown their importance using criteria in the evaluation of this model and its parameters.

If there is not autocorrelation in the residuals of the outcome factor, then the value of the calculated DW criterion will be around 2.

The results of the analysis of the empirical models constructed for each sector of the public service sector in the region are presented in Table 7.

Table 7. Empirical models which were built for each sector of the service sector to the population of the region

№	The view of empirical models	R^2	F	DW
6.	$Y_6 = \quad -16,856 + 0,088 * X_3 - 0,028 * X_7 - 0,472 * X_{13} + 0,087 * Y_2$ $t \quad (-4,771) \quad (8,456) \quad (-5,193) \quad (-4,717) \quad (4,797)$	0.8971	863.141	1.909

The parameters which were taken into account in the models which were built for each service sector (for linear regression equations) consist of different indicators. Therefore, it is necessary to calculate the coefficients of elasticity in the analysis. For example, we calculated the coefficients of elasticity in the analysis of the model built for the sector of communication and information services to the population of the region (Table 8).

The multifactorial empirical model which is built for providing services related to the real estate services sector to the population of the region (Y_6) gives the following results: if total income of the population of the region increase 1 billion soums, providing services related to the real estate services sector to the population of the region (Y_6) will increase 0,088 billion soums, if the capital investments of the population of the region (X_7) increases 1 billion soums, providing services related to the real estate services sector to the population of the region (Y_6) will decrease 0,028 billion soums, if housing expenditures to the population of the region (X_{13}) increases 1 billion soums, providing services related to the real estate services sector to the population of the region (Y_6) will increase 0,472 billion soums and if providing financial services to the population of the region (Y_2) increases 1 billion soums, providing services related to the real estate services sector to the population of the region (Y_6) will increase 0,087 billion soums.

Table 13.

Forecast of service sectors for the population of Kashkadarya region (billion soums / thousand soums)

Indicators	2019 (real)	Forecast years					
		2020	2021	2022	2023	2024	2025
	89,36	*105,62*	*122,18*	*138,89*	*155,59*	*172,1*	*188,4*
Km_x – providing real estate services to the population of the region Y_6/ per capita	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*
	23,86	*30,51*	*39,46*	*51,52*	*67,81*	*89,8*	*119,4*

Providing real estate services (Km_x) will increase by 1,13 times in 2020 compared to 2019, and by 2,20 times by 2025;

Conclusions

It is expedient to separate econometric modeling of each service utility. Because development of each sector of the service sector has a positive impact on development of another sector. Therefore, the use of econometric models in the form of interconnected equations system has particular importance in development of service sectors. Together with this, the organizational-economic mechanism of development of service sectors represents a hierarchical system of interconnected elements and groups (subjects, objects, principles, forms, methods and tools) at different levels, as well as their interrelationships, innovative infrastructure form relationships with market participants.

It is expedient to pay essential attention to the innovation factor for the sustainable development of the service utility for the population of the region in the future. It is necessary to encourage innovative ideas and newly opened service sectors, to encourage the factors which create conditions for the development of high-quality service sectors for developing and organizing service sectors on the basis of innovation in the region.

It is necessary to econometrically model the management plans for the elimination of imperfections in the way of achieving the social goals which are set for the economic growth and living standards of the population and the development of the living conditions of the population. During 2017-2021 years (also, in next periods), it is expedient to develop long-term forecasts (2020-2025) in order to plan policy and projects

which will be accepted as the part of action strategy of regional development of the region, plan technologic modernization and service utility, intensive development of infrastructure, orient them to the welfare of the population.

In the current situation, the service sector to the population offers a variety of additional services, the main content of these services composed of releasing the population from the anxieties in living conditions, improving the quality of services and achieving to live in meaningful daily life.

As a result of the research, recommendations are made on forming the methodology and development goals of the service utility, choosing options for decision-making methods and evaluation criteria variants, developing optimal options.

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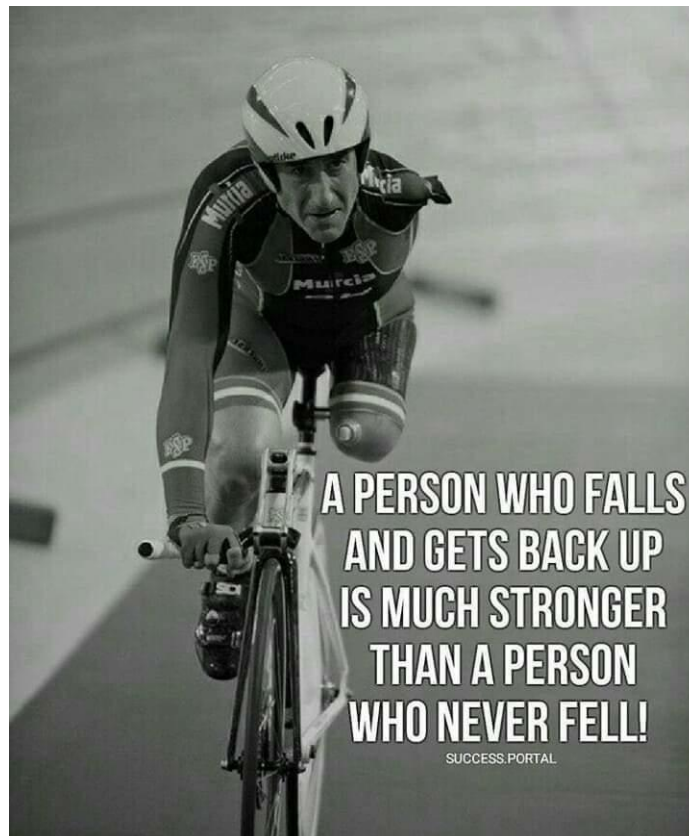
IMPROVING THE QUALITY OF TRAINING OF HIGH QUALIFIED PERSONNEL ON THE BASIS OF COMPETENCE LEVEL ASSESSMENT

M.D.Zaripova [1]

ABSTRACT

The article describes the issues of assessing the quality of training highly qualified personnel and improving the quality of education. Also, approaches are analyzed that make it possible to quantify the level of formed competencies using testing and methods of the theory of pedagogical measurements.

***Keywords**: competence, educational quality assessment, testing, theory of pedagogical measurements, Spearman Brown's formula, methods of regression analysis, forecasting.*

INTRODUCTION

The level of socio-economic development of the country, the success of the national economy, its position in the international arena, its full partnership in the world economic system directly depends on the education system. It is clear that the education system plays a crucial role in modern society.

It is clear that the education system plays a crucial role in modern society. The issue of quality of training, in turn, is closely related to the issue of assessing the quality of education and is one of the priorities in today's society.

As evidence of this, in Chapter 3 of the concept of development of the system of Higher Education of the Republic of Uzbekistan up to 2030, "training of highly qualified, creative and systematic-thinking, capable of independent decision-making on the basis of international standards, creating the necessary conditions for their manifestation of their abilities and formation as a spiritual harmonious person..."as a strategic goal and expanding the coverage of higher education in Paragraph 1, to improve the quality of training of specialists with higher education "to improve the technologies of the system of assessment of students ' knowledge and to ensure objectivity, including the development of forms of assessment without direct contact with students; development of healthy competition among students in the development of disciplines;..."it is also worth noting that the rule is defined as one of the directions [1].

If we pay attention to the content of this concept, we will see that the ongoing reforms in the Republic of Uzbekistan are seen as an urgent task to improve the quality of education, modernization of the country, training of highly qualified personnel for sustainable socio-economic development.

Analysis of the relevant literature

The issues of improving the quality of education and its evaluation, including the quality of training, are widely studied and introduced in the developed countries of the world as an object of scientific research. Currently, relatively well-known systems for assessing the quality of education are widely used in the United States, France, and the United Kingdom. Such systems have existed in the United States since 1969, in France since 1979, and in the United Kingdom since 1948.

In Chile, the national education quality assessment system has been in place since 1978 and is still in use. All of these systems mentioned above are well designed to allow you to gather the necessary information in a systematic way. In other countries, such systems emerged relatively later [2,3,12-15].

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The development of national systems to assess the quality of education in most countries began in the 1990s. The main purpose of such national systems, which allow to assess the quality of education, is to determine the mastery of students in relation to the learning process [15].

Assimilation related to the learning process includes:

• determine the level of mastery of a particular subject or course;

• identify the strengths and weaknesses of the knowledge, skills and competencies acquired by students;

• identify group students with learning problems;

• identify factors related to mastering;

• Maintain the dynamics of assimilation.

Similarly, in determining the quality and rating of higher education institutions of the country, based on the reforms and practices of developed countries in the field of education, the practice of relying on various specific standards to ensure the quality of the higher education system.

Relevance of the topic

The transition to new state educational standards based on a competency-based approach to assessing the quality of education requires the use of quantitative methods to assess the level of competencies being formed. [4,17].

Unfortunately, neither the new state education standards nor the existing professional standards include criteria and objective assessment methods for assessing the quality of training based on a competency approach. The standards stipulate that higher education institutions should rely on professional standards of training developed by employers.

However, the current situation with regard to professional standards requires that higher education institutions, as in the educational process, ultimately develop independent tools for assessing the quality of mastering basic education programs.

The content of the issue. This article discusses the approaches that allow quantitative assessment of the level of competencies formed using the methods of tests and the theory of pedagogical measurements.

According to scientific pedagogical and psychological sources, competence is a very complex, multifaceted concept that is common to many disciplines. There are a wide variety of definitions of the term competence.

This is due to the fact that his interpretations are diverse in terms of volume, content and semantic content. The meaning of the term is also based on such concepts as "efficiency", "flexibility", "success", "readability", "success", "comprehensibility", "efficiency", "hocca", "feature", "quality", "quantity". described[6].

If we pay attention to the definition included in the basis of the state educational standards of the Republic of Uzbekistan, it gives the concept: "Competence - the ability to apply existing knowledge, skills and abilities in everyday activities."

If we look at the definition of the Russian Federation, which is based on state educational standards, it is described as: "Competence - the ability to successfully apply knowledge, skills and practical experience in the workplace."   It is clear from these definitions that competence can only be manifested in a person's actual activities. Therefore, the level of knowledge of students cannot be measured directly in the learning process [7,8].

Thus, the task of assessing the level of competence is to develop a methodology that allows the future specialist to predict the level of competence, based on some indirect measurements that can be used during the training phase.

As a form of pedagogical measurement, tests have traditionally been used in higher education institutions mainly to determine knowledge and, to a certain extent, skills and competencies. [9,10,13,16].

Assessment of the level of competence through tests for higher education institutions of the Republic of Uzbekistan is a new task.

Therefore, in developing approaches to measuring the level of competence, it is advisable to rely on the experience of foreign countries that have been using such measurements effectively for a long enough period of time.

The proposed methodology is based on the methods of the theory of pedagogical measurements, as well as approaches to the international assessment systems PISA, TIMSS, used in foreign research on the quality of education. Relying on and studying international experience in assessing the quality of education, a comprehensive comparative analysis will lay the groundwork for improving an appropriate national assessment system that meets modern requirements.

Competency assessment in PISA, TIMSS, and similar studies is based on the design of specific types of assignments.

For example, a test consists of complex tasks, regardless of which competency (mathematics, science, literacy, or problem-solving ability) is emphasized in the PISA survey.

Each assignment is a separate text that usually describes a vital, specific situation or problem. For this test, one to six questions of different difficulty levels are formed.

Based on the results of their implementation, students' ability to understand the situation under consideration in the text, to solve the problem, in one way or another, using their knowledge in a particular field of science is assessed. However, for the person being tested, the knowledge gained in science is only a source to help him in a life situation.

The solution to the problem

This set of intellectual abilities, which allows the student to complete the task, is achieved by artificially reducing the complexity of the science material and, in parallel, carefully thought out and tested requirements [18].

To ensure the objectivity of the tests and the high quality of the measurements, the test assignments must meet the requirements of Pedagogical Measurement Theory (IRT).

- The level of difficulty for each task should be determined, the system of tasks should be organized in a uniform sequence of increasing complexity (it is desirable to have an interval of 0.5 logits).
- The test should not have an assignment that everyone knows the answer to or no one knows the answer to.
- The correlation coefficient of the task with the sum of the final scores must always be greater than zero.

The assessment of the level of competence differs from the traditional indicator of the level of knowledge, because the test subject must demonstrate in practice the knowledge, skills and abilities available to him in a non-standard situation. [18].

Therefore, the result may depend not only on the complexity of the material, but also on the non-standard situation in which the student must demonstrate their knowledge. It is suggested to take into

account the randomness and non-standardity, as well as the difficulty of the task to measure such a more complex quality as the level of competence.

That is, the tasks in the test should differ from each other not only in the level of difficulty, but also in the level of non-standard situation measured in the logs.

Statistical analysis of the test results conducted in accordance with the standard methodology shows that at least 30 assignments with the required level of reliability are required to assess the level of readiness of the student.

Reduce test time and level of competence $r_H{}^{\backprime} = \frac{kr_H}{1+(k-1)r_H}$ test duration can be optimized to increase measurement accuracy [8].

TIMSS is encouraged to use international research experience. The testing process can consist of two stages. In the first measurement process, the range in which the estimated level of competence is located is determined.

For the second stage, test options will be developed, which will be distinguished by the level of difficulty and stratification (ability, ability). Depending on which group the student is assigned to, he or she will be given a second test. This test allows you to determine the level of competence with a certain accuracy. To determine the required test duration, Spearman Brown's generalized formula is used for the expected reliability of the test:

$$r_H{}^{\backprime} = \frac{kr_H}{1+(k-1)r_H}$$

where k is the frequency with which the test duration increases; (how many times the test is multiplied); rH is the test reliability coefficient until the test duration is increased; (rH) 'is the test reliability coefficient after increasing the test duration.

The results obtained are analyzed after the process of measuring and determining the main characteristics of the test and test subjects.

Since the difficulty of the task is divided into two (complexity and non-standard) components, it is proposed to add an additional a to the exponent of the classical model of Rash.

Appendix a corresponds to the non-standard level of the additive task and the task is added to the additive b corresponding to the difficulty level.

Then, the formula for finding the probability that the test subject will answer correctly will look like this:

$$P(\theta) = \frac{\exp 1{,}7(\theta - (\beta + \alpha))}{1 + \exp 1{,}7(\theta - (\beta + \alpha))}$$

where P(θ) is the probability that a particular test subject with a level of preparation (θ)will respond correctly to a task of a certain level of difficulty;

θ - level of preparation (knowledge), latent variable;

β,α- the difficulty and non-standard levels accordingly of the specific task of the projected test. Using this formula, it is possible to find the probability of demonstrating the competence of the learner in different situations. For example, a test individual with 1 logit competency level can be graphically represented as the probability of correctly responding to tasks that differ in difficulty and standard level
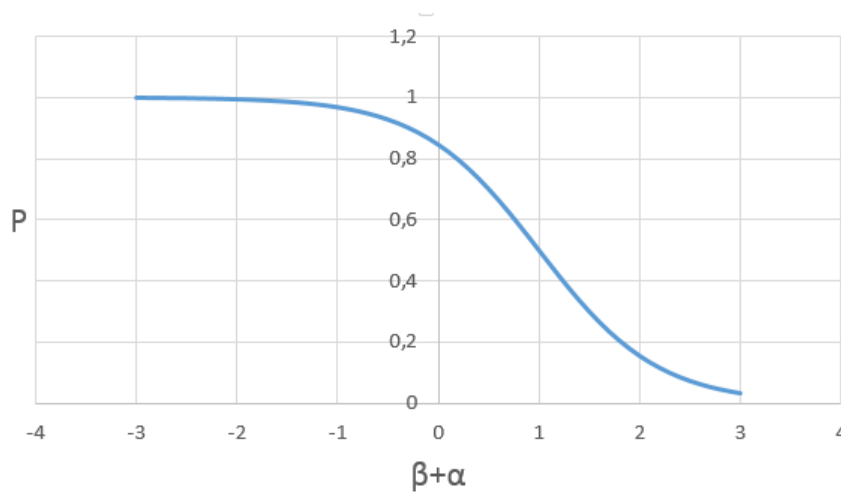
(Figure 1).

Figure 1. Graph of the probability that the competence of the learner is expressed with a logit degree of θ = 1.

Horizontally, a general indicator describing the task is highlighted. The point found in the graph corresponds to the probability that competence will be demonstrated in solving a problem of a certain difficulty and non-standard level (problem solving).

So, if this level is 3 logits, then this student will do it with almost 100% probability. The higher the difficulty and non-standard performance of the task, the less likely the test taker is to complete it.

The question arises, is it better to do easy but non-standard tasks or difficult but standard? How to assess the competencies of professionals in this situation.

In our opinion, to answer this question, it is necessary to conduct an analysis of the content of the student's knowledge. Apparently, both specialists are needed, albeit in practical activities. Tests, unlike traditional means of control, allow to show not only the level of competence, but also the content of knowledge of learners at the beginning of the planned training by the teacher, more precisely the degree of deviation from the perfect content.

Assessing the content of students' knowledge seems particularly appealing when it comes to evaluating the effectiveness of a group of teachers or individual teachers who are being certified by educational institutions.

Against the background of various existing attestation models, methods, technologies, indicators and criteria, the assessment of the quality of graduate training remains an important indicator of the effectiveness of teaching. At the same time, of course, the level of preparation is the focus of attestation commissions operating under traditional schemes.

While the level of preparation depends on the diligence of the learner, his desire and ability to learn, the content of knowledge in many respects reflects the peculiarities of the organization of the learning process.

The formation of the content of students' knowledge is influenced by the teacher's ability to correctly design and articulate the training program, his responsibility to identify and eliminate gaps in the knowledge of students, as well as the application of an individual approach.

To date, a system of didactic units has been used to accredit a particular field of study to assess the quality of students 'knowledge. Students were required to master each of them at a minimum acceptable level [10,11]. The new state standards do not specify this system. Instead, there is a requirement to

measure the level of competence. The existing methodology for assessing the quality of student training does not deserve to be used as a tool for measuring competencies within the new educational standards.

The article recommends the use of the method S-P lines method to assess the quality of the educational process.

The structure of knowledge shows how structured and complete it is.

To do this, a knowledge profile (Guttman profile) representing the sequence 0 and 1 is created. In this case, 0 is incorrect and 1 is correct. Since each task has two properties, a profile can be created for each of them, as well as for the whole. The value below is a measure of the "accuracy" of the profile [5].

$$C_i = \frac{\sum_{j=1}^{x_i}(1-Z_{ij})R_j - \sum_{j=x_i+1}^{k}Z_{ij}R_j}{\sum_{j=1}^{x_i}R_j - \sum_{j=k+1-x_i}^{k}R_j},$$

where xi is the number of correct answers of the i-th test subject, Rj is the number of correct answers to the j- task, k is the number of correct answers in the test, Zij is the number of correct answers of the i- test subject to the j-th test, 0 (incorrect answer) and can take values of 1 (correct answer).

The more balanced the student knowledge content, the smaller the Ci value.

Ci = 0 in students with a perfect "correct" profile, and Ci = 1 in students with an absolutely "wrong" profile.

Regression analysis methods make it possible to predict the assessment of the actual scores of the subjects on the basis of the reliability coefficient of the test and the distribution of the observed scores.

The prognosis is based on the individual score of the test subject, the average score of the test subjects, and Dj. The test in the Stanley regression equation is obtained by substituting the reliability coefficient [14]:

$$T_i = \overline{X} + r_H(X_i - \overline{X}),$$

where, T_i is the actual score; X_i is the individual score of the i-th test subject; ¯X - average score of the test subjects; r_H is the test reliability coefficient. On the basis of measuring the level of individual competencies, it is possible to create some aggregate indicators of the level of student readiness, which include specific competencies with their own weight [5].

As long as the application of IRT results in comparable absolute values, it is possible to obtain an overall figure for several competencies, for example, using a linear combination of them. The weight for each competence can be determined depending on the requirements of the customer or the expert opinion:

$$K_{j,o} = \sum e_i K_i.$$

Conclusions and suggestions. Thus, the proposed methodology allows not only to measure the level of student competence with a given accuracy and reliability, but also to predict its professional necessity, as well as to assess the quality of the learning process using a competency approach.

As a result, the quality of training of personnel with intellectual potential in higher education institutions will increase, the national assessment system of the country will be improved to determine and measure the quality of education that meets modern requirements.

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A STUDY ON CHILDREN WITH HEARING IMPAIRMENT ATTENDING EDUCATIONAL INSTITUTION IN NORTHERN INDIA

Nishant Bhola[1] Bhakti Bhola[2]

ABSTRACT

As per Census-2011, Persons with Disabilities (PWDs) constitute 2.21 per cent of India's total population. In Northern India, i.e. Jammu and Kashmir, Himachal Pradesh, Punjab, Chandigarh (U.T), Uttarakhand, Haryana, NCT of Delhi (U.T.), Uttar Pradesh and Rajasthan, there are total 78,73,064 persons with disabilities. Among the states/U.T. considered in this study, Uttar Pradesh has maximum population of PWDs i.e. 41,57,514 persons, following by Rajasthan where there are 15,63,694 PWDs. For a child school going age is 5-19 years. In Northern India, there are total 4,74,686 Persons with Hearing Impairment who are in the age of 5-19 years of age. Among them 66% are going to school and 34% are not going to school.

0riginally presented at National Conference on "Empowering Deaf through Indian Sign Language" organized by ISLRTC, New Delhi from 20-03-2017 and 21-03-2017

Introduction:

An individual through different channels receive information and interpret, perceive things in a unique way. This process formally starts in a special physical setting called school. This lifelong learning process is termed as education. Over centuries, it has become apparent that quality of education received by an individual played a significant role in the overall development.

Educational needs of Children with Hearing Impairment:

A need arises out of necessity or due to lack of something. Education helps in achieving the needs which are lacking in an individual. DSE (HI) Manual, education of children with hearing impairment states that it was believed that education is necessary only for abled bodied children. Due to the hidden nature, hearing impairment often went unnoticed resulting in ignorance of the society towards educational needs and social participation of children with hearing impairment. Society viewed disability as a manifestation of mysterious or ruthless fate or displeasure of God. The indifferent attitude kept children with hearing impairment away from education. Meanwhile, western countries identified that , like hearing children, children with hearing impairment also have needs and devoted their effort in educating and training them. Their actvities realized the fact that children with hearing impairment have similar needs as that of their hearing peers, which can only be met through special education.

As per The Rights of Persons with Disabilities Act, 2016 notwithstanding anything contained in the Rights of Children to Free and Compulsory Education Act, 2009, every child with benchmark disability between the age of six to eighteen years shall have the right to free education in a neighbourhood school, or in a special school, of his choice. According to Census-2011, India's total population was 1,21,01,93,422 among that there are 2,68,14,994 persons who are suffering from disabilities which becomes 2.21 per cent of India's total population.

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Figure 1: Disabled and Non-disabled Population of India
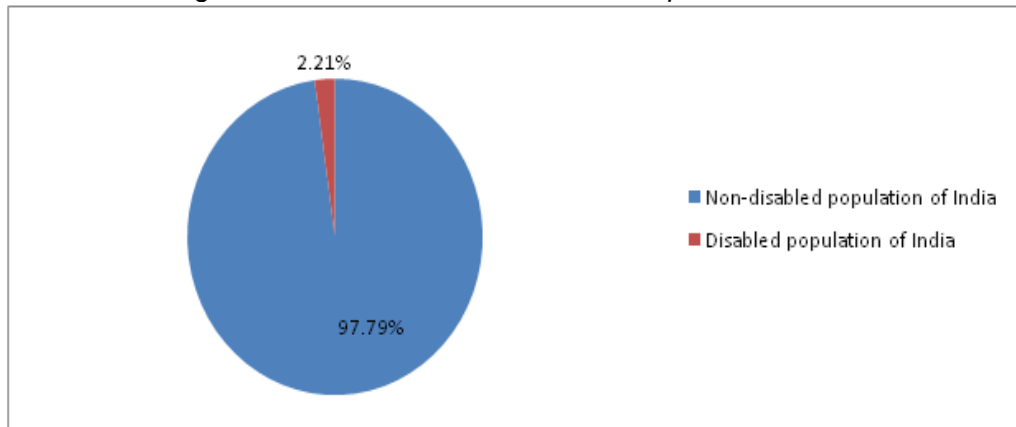
Source: Compiled on the basis data of Census-2011

In Census-2011 following disabilities have been covered for the study (i) In seeing, (ii) In hearing (iii) In speech (iv)In movement (v) Mental Retardation (vi) Mental Illness, (vii) Multiple disabilities (viii) Any other.

*Figure 2: Disable population of India-Disability wise*
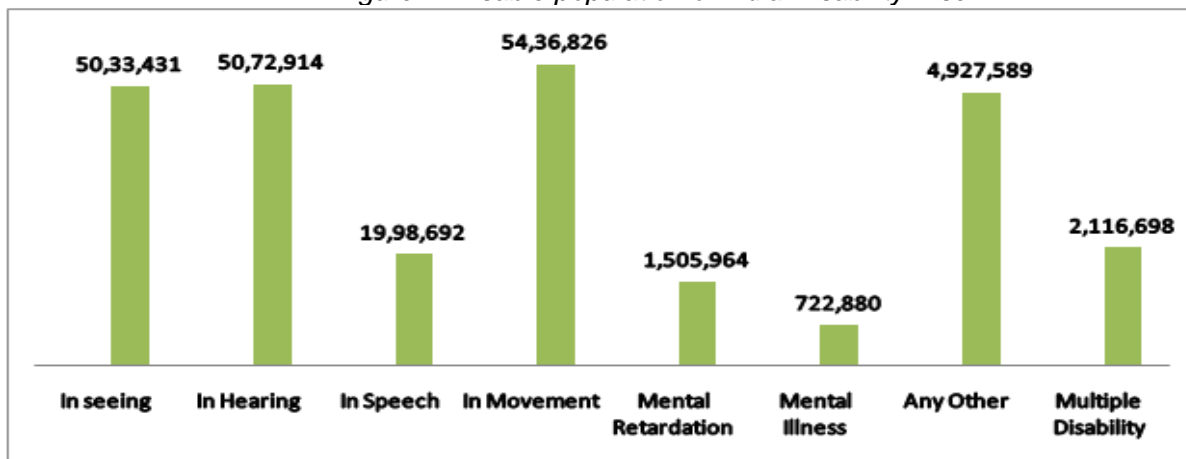
Source: Compiled on the basis data of Census-2011

   In India, among the population who are disabled, maximum numbers of Persons are suffering from disabilities related to Movement, which is 20.3 per cent of total population of persons with disabilities in India. Persons with hearing impairment are around 19 per cent.

Figure 3: Proportion of Each Disability in Total Population of Persons with Disabilities
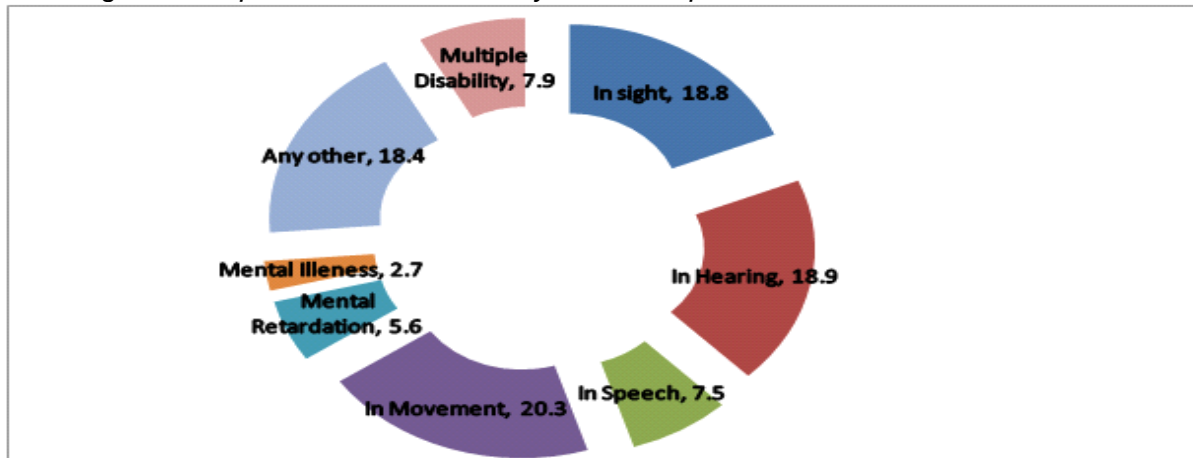
Source: Compiled on the basis data of Census-2011

Need for the Study:

Education is the utmost tool for overall development of a person. For a child with special needs it becomes difficult to even reach to this tool for preparing oneself for the process. Though times have changed there have been much of awareness campaigns and legal proceedings by the Government like No Rejection Policy but still there is a long way to go.

Now a child with hearing impairment undergo many challenges as the disability remains hidden till the education process gets start and meanwhile the appropriate age for language acquisition gets unutilized, leaving behind a child with no option for communication except sign language.

So the present study aims at finding the no. of children with hearing impairment who are attending school between the age group of 5-19 yrs. Study might be of help for further finding out the reasons behind the children not attending school so that policies may be made to overcome the problem.

Objective of the study:

- To identify persons with disabilities in total population in Northern India

- To ascertain Proportion of each disability in total population of persons with disabilities in Northern India.

- To discover Children with hearing impairment in the age of 5-19 years who are attending/not attending educational institution in Northern India.

- To identify Children with hearing impairment in the age of 5-19 years who is attending/not attending educational institution in different states of Northern India.

Research Methodology:

In order to meet the desired objectives data of Census: 2011 is taken and analysis is done on its basis.

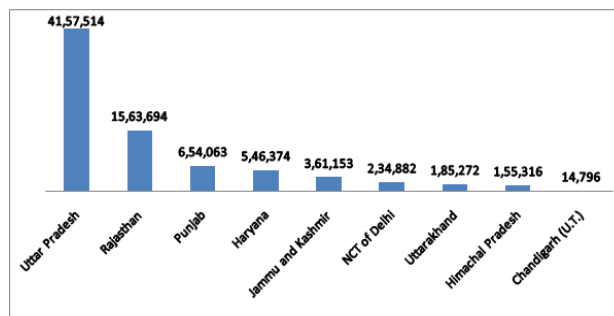For the study following States/Union territory are considered as part of Northern India.

- Jammu and Kashmir
- Himachal Pradesh
- Punjab
- Chandigarh (U.T)
- Uttarakhand
- Haryana
- NCT of Delhi (U.T.)
- Uttar Pradesh
- Rajasthan
- Data of following disabilities are taken in consideration for the study:
    (i) In seeing,
    (ii) In hearing
    (iii) In speech
    (iv) In movement
    (v) Mental Retardation
    (vi) Mental Illness,
    (vii) Multiple disabilities
    (viii) Any other.

Results:

The objectives and results of the study are discussed as follows:

Objective 1: To find out the number of persons with disabilities in Northern India.

Figure 4: Person with disabilities in Northern India

Source: Compiled on the basis data of Census-2011

In Northern India, i.e. Jammu and Kashmir, Himachal Pradesh, Punjab, Chandigarh (U.T), Uttarakhand, Haryana, NCT of Delhi, Uttar Pradesh and Rajasthan, there are total 78,73,064 persons with disabilities. Maximum disabled population is in Uttar Pradesh and thereafter in Rajasthan.

Objective 2: To ascertain Proportion of each disability in total population of persons with disabilities in Northern India.

Figure 5: Proportion of Each Disability in Total Population of Persons with Disabilities
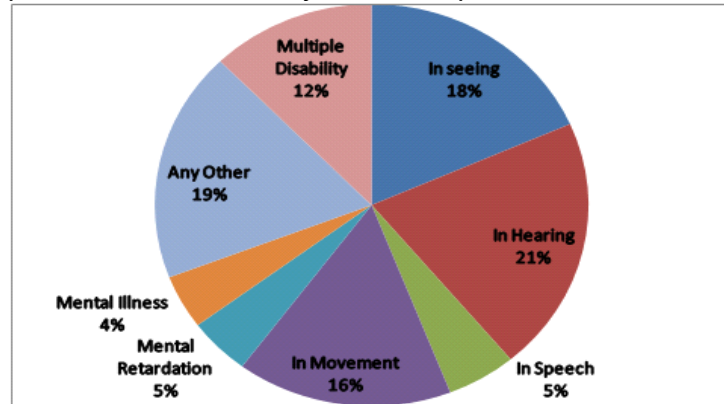
Source: Compiled on the basis data of Census-2011

In Northern India, among the Persons who are suffering from disabilities are maximum in Hearing impairment. Persons who are visually impaired are 18 %.

Objective 3: To discover Children with hearing impairment in the age group of 5-19 years who are attending educational institution in Northern India.

Figure 6: Children with Hearing Impairment in the age of 5-19 years who is attending/not attending educational institution in Northern India.
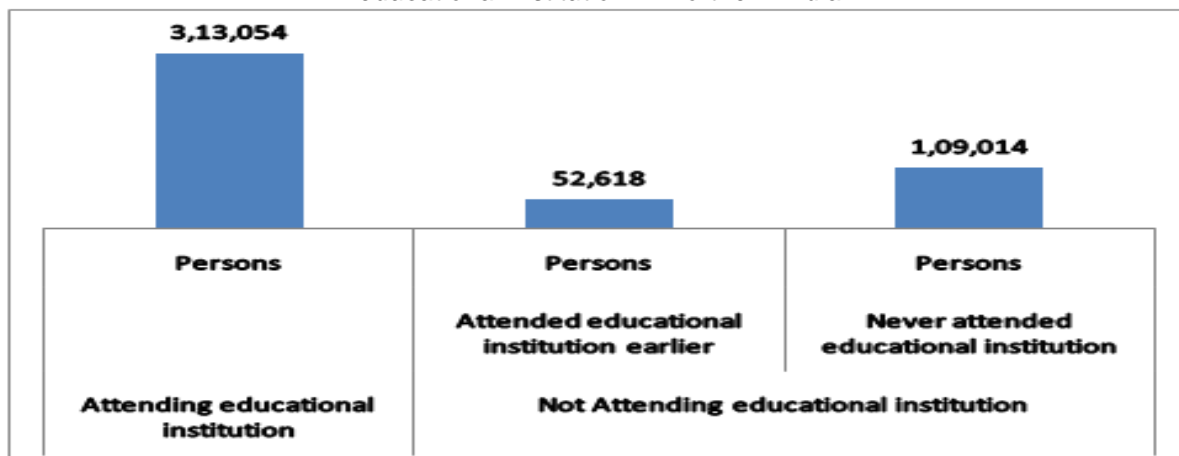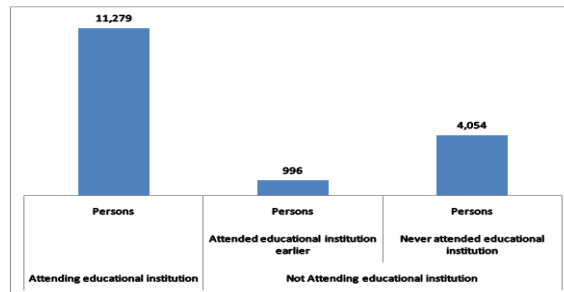

Source: Compiled on the basis of Census-2011

In Northern India there are total 78,73,064 persons with disabilities. There are 4,74,686 children's with hearing impairment who are in the age of 5-19 years. This is 6% of total disabled population of Northern India.

66% of total children with hearing impairment who are in the age of 5-19 years are attending educational institution. 34% of total children with hearing impairment who are in the age of 5 to 19 years are not attending educational institution. 11% of total children's with hearing impairment who are in the age of 5-19 years are not attending educational institution but attended educational institution earlier.

Objective 4: To identify Children with hearing impairment in the age of 5-19 years who is attending/not attending educational institution in Northern India (State wise).

1) Jammu & Kashmir:

Figure 7: Children with Hearing Impairment in the age of 5 to 19 years who is attending /not attending educational institution in Jammu and Kashmir
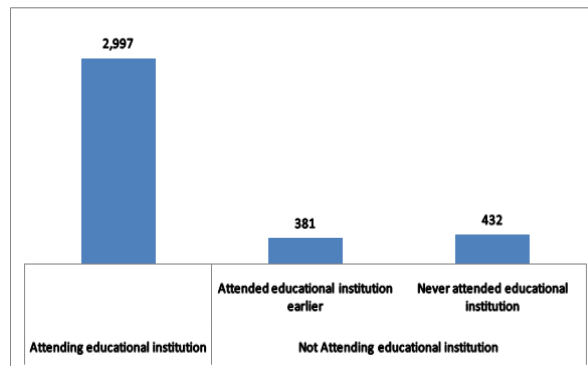

Source: Compiled on the basis of Census-2011

In Jammu and Kashmir there are 16,329 children with hearing impairment who are in the age of 5-19 years. 11,279 persons with hearing impairment are attending educational institution. 996 persons with hearing impairment have attended educational institution earlier but in present time they are not attending any educational institute. 4,054 persons with hearing impairment have never attended educational institution.

2) Himachal Pradesh

Figure 8: Children with Hearing Impairment in the age of 5-19 years who is attending /not attending educational institution in Himachal Pradesh
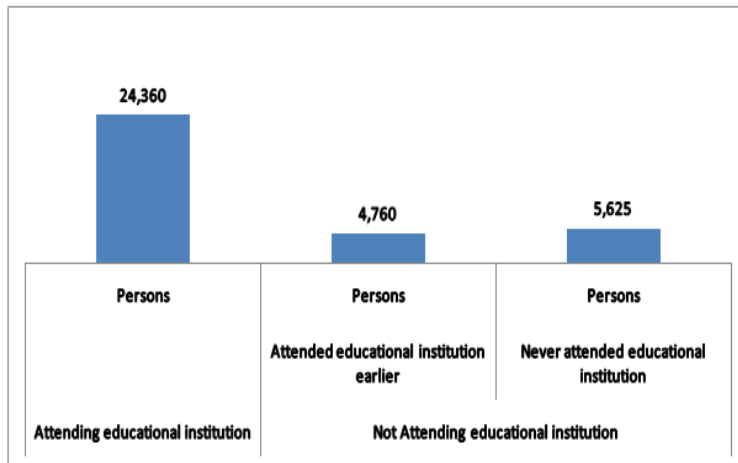

Source: Compiled on the basis of Census-2011

In Himachal Pradesh there are 3,810 persons with hearing impairment are in the age of 5-19 years.2,997 persons with hearing impairment are attending educational institution.381 persons with hearing impairment have attended educational institution earlier but in present time they are not attending educational institute.432 persons with hearing impairment have never attended educational institution.

3) Punjab

Figure 9: Children with Hearing Impairment in the age of 5-19 years who is attending /not attending educational institution in Punjab
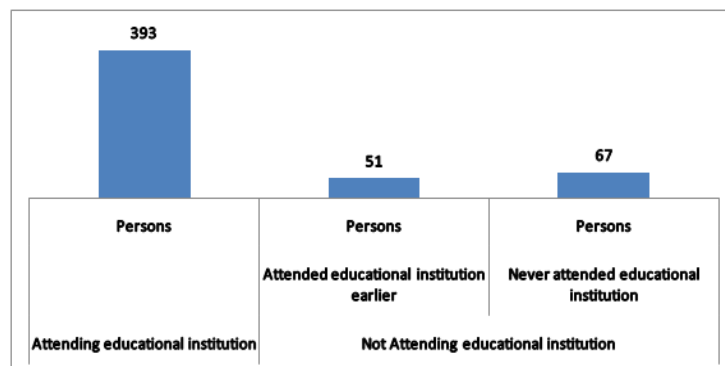

Source: Compiled on the basis of Census-2011

In Punjab there are 34,745 persons with hearing disability are in the age of 5-19 years.24,360 persons with hearing disability are attending educational institution.4,760 persons with hearing disability have attended educational institution earlier but in present time they are not attending educational institute.5,625 persons with hearing disability have never attended educational institution.

4) Chandigarh (U.T.)

Figure10: Children with Hearing Impairment in the age of 5-19 years who is attending /not attending educational institution in Chandigarh (U.T.)
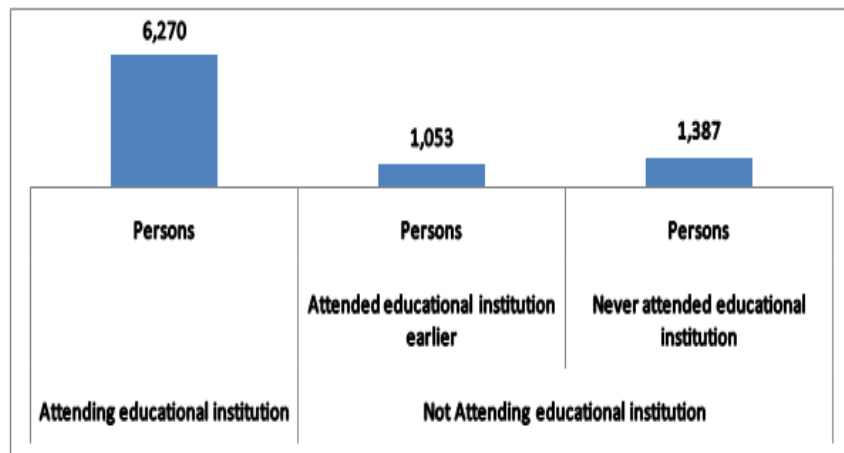

Source: Compiled on the basis of Census-2011

In Chandigarh there are 511 persons with hearing disability are in the age of 5-19 years.393 persons with hearing disability are attending educational institution.51 persons with hearing disability attended educational institution earlier but in present time they are not attending educational institute. 67 persons with hearing disability have never attended educational institution.

5) Uttarakhand

Figure 11: Children with Hearing Impairment in the age of 5- 19 years who is attending/not attending educational institution in Uttarakhand
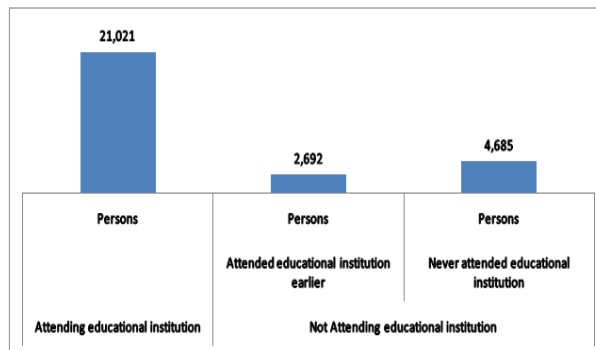

Source: Compiled on the basis of Census-2011

In Uttarakhand there are 8,710 persons with hearing disability are in the age of 5-19 years.6,270 persons with hearing disability are attending educational institution.1,053 persons with hearing disability have attended educational institution earlier but in present time they are not attending educational institute.1,387 persons with hearing disability have never attended educational institution.

6) Haryana

Figure 12: Children with Hearing Impairment in the age of 5-19 years who is attending /not attending educational institution in Haryana
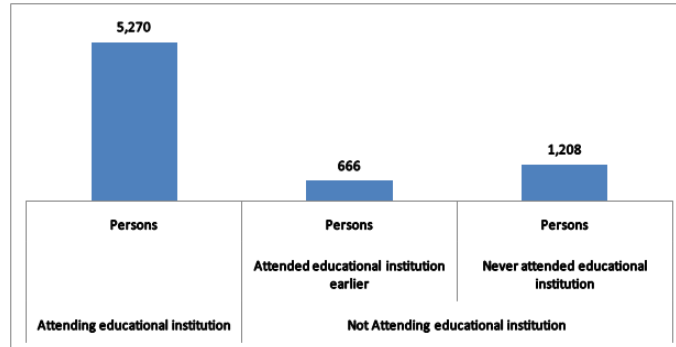

Source: Compiled on the basis of Census-2011

In Haryana there are 28,398 persons with hearing disability are in the age of 5-19 years.21,021 persons with hearing disability are attending educational institution.2,692 persons with hearing disability attended educational institution earlier but in present time they are not attending educational institute. 4,685 persons with hearing disability have never attended educational institution.

7) NCT of Delhi (U.T.)

Figure 13: Children with Hearing Impairment in the age of 5- 19 years who is attending /not attending educational institution in NCT of Delhi
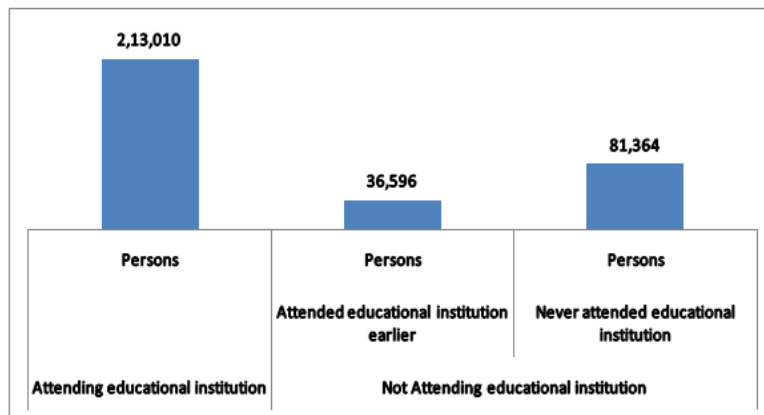

Source: Compiled on the basis of Census-2011

In NCT of Delhi there are 7,144 persons with hearing disability are in the age of 5-19 years.5,270 persons with hearing disability are attending educational institution.666 persons with hearing disability attended educational institution earlier but in present time they are not attending educational institute.1,208 persons with hearing disability have never attended educational institution.

8) Uttar Pradesh

Figure14: Children with Hearing Impairment in the age of 5-19 years who is attending /not attending educational institution in Uttar Pradesh
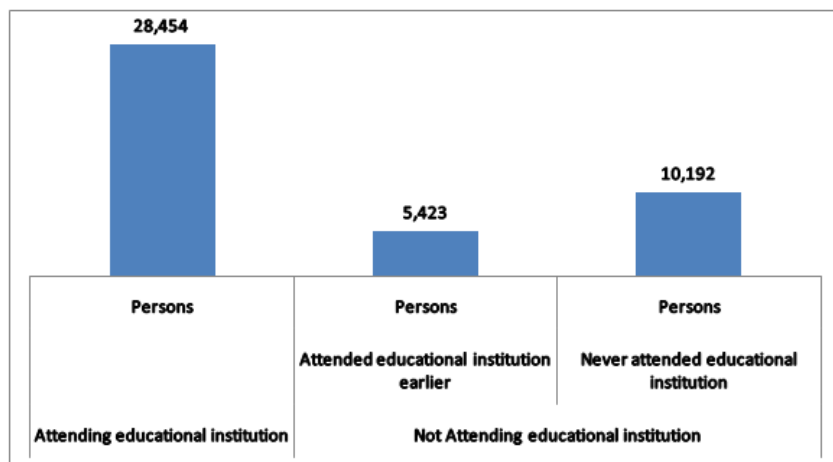

Source: Compiled on the basis of Census-2011

In Uttar Pradesh there are 3,30,970 persons with hearing disability are in the age of 5-19 years.2,13,010 persons with hearing disability are attending educational institution.36,596 persons with hearing disability

attended educational institution earlier but in present time they are not attending educational institute.81,364 persons with hearing disability have never attended educational institution.

9) Rajasthan

Figure15: Children with Hearing Impairment in the age of 5-19 years who is attending /not attending educational institution in Rajasthan

Source: Compiled on the basis of Census-2011

In Rajasthan there are 44,069 persons with hearing disability are in the age of 5-19 years.28,454 persons with hearing disability are attending educational institution.5,423 persons with hearing disability attended educational institution earlier but in present time they are not attending educational institute.10,192 persons with hearing disability have never attended educational institution.

Findings:

- There is 2.21 per cent of India's total population suffering from disability.
- In Northern India, i.e. Jammu and Kashmir, Himachal Pradesh, Punjab, Chandigarh (U.T), Uttarakhand, Haryana, NCT of Delhi, Uttar Pradesh and Rajasthan, there are total 78,73,064 persons with disabilities.
- In Northern India, Uttar Pradesh has maximum population of persons with disabilities i.e. 41,57,514 followed by Rajasthan where 15,63,694 persons are with disabilities. In Chandigarh (U.T.) there are only 14,796 persons are with disabilities.
- There are 4,74,686 children's with hearing impairment who are in the age of 5-19 years. This is 6% of total disabled population of Northern India.
- 66% of total children's with hearing impairment who are in the age of 5-19 years are attending educational institution. 34% of total children's with hearing impairment who are in the age of 5 to 19 years are not attending educational institution. 11% of total children's with hearing impairment who are in the age of 5-19 years are not attending educational institution but attended educational institution earlier.

Conclusion:

The results of the present study reveal that children with hearing impairment are lagging behind in attending schools. So we can conclude that:

- There is great need for bringing a change in attitude of others towards disability and education. Positive and optimistic attitude must be promoted towards the educability of this group. Parents must understand the abilties and disabilities and needs of children with hearing impairment.
- The attitude of children with hearing impairment also needs to change and they should develop a healthy attitude towards themselves and reach to educational process.
- Early identification and early intervention plays a crucial role in the educational achievement of children with hearing impairment. So different educational programs must be promoted to make use of the critical period efficiently.
- There arises a great need for a least restrictive environment for learning. The school surroundings must be noise free and classroom acoustics should also be modified according to needs of children with hearing impairment.
- Vocational training must also be provided as opportunity of earning for living. Vocational training given to these children should help in realizing the need and to become a productive and an earning member of the society.

Limitations of the study:

- The present study is limited to children with hearing impairment who belong to the age group of 5 -19 years from the period of Census-2011.
- There lies a geographical limitation also as only selected states of northern India are taken in the study.
- The focus of the study is only on the enrolment of children with Hearing Impairment and not on other types of disabilities.
- The data collection of the present study is done through electronic media only.

Scope of Future work:

- The present study may act as a platform for studying the drop out rate of children with hearing impairment during the schooling.
- The results of the present study can help further research on discovering the reasons behind the children with hearing impairment to not attend school.
- The present study may help policy makers to introduce new Schemes and campaigns for uplifting the educational process for children with hearing impairment.
- Similar studies on children with other disabilities can also be conducted.
- This research can be extended to larger geographical area.

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4. http://ayjnihh.nic.in/RPWD_ACT2016.pdf
5. http://www.censusindia.gov.inl

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