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**Dr. P. S. Bhadouria**

# ANALYSIS OF THE METHODOLOGY OF ACCOUNTING FOR ECONOMIC RISKS IN DETERMINING THE FLEET OF CARS IN THE CONDITIONS OF THE UZBEK RAILROADS

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## ABSTRACT

The problem of estimating a reasonably necessary wagon fleet based on the expected volume of transportation is undoubtedly important. It is important to choose a method of wagon fleet calculation, as well as to take into account the dependence of the rational number of wagon fleet on the volume of freight traffic, wagon turnover and static load, which allows to accurately forecast the volume of transportation. One of the most important and complicated issues for railroads is the problem of estimating the required wagon fleet according to such parameters as the timeliness of freight delivery with regard to cost or profitability and freight delivery reliability. This article considers the aspect of taking into account the risks affecting the required volume of the wagon fleet.

**Key words:** wagon fleet, car turnover, financial risk, economic risk

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## INTRODUCTION

In today's rapidly changing market economy, there is no opportunity for proper planning of transportation volumes, which results in a shortage of cars and, in some railroads, an oversupply of cars. This has a negative effect on the competitiveness of rail transport as a whole. As a result, there is a decrease in confidence in rail transport. The quality of the transportation process, as well as the reliability of transportation services, can be assessed by several parameters: cost of transportation, terms of cargo delivery, level of its safety. Transportation reliability depends on the level of reliability of all links in the logistics chain of cargo delivery. On average, in modern conditions the reliability of the whole process of transportation through the railroad network is 50%.

Because of the untimely delivery of goods by rail and, as a consequence, the slow turnover of working capital, cargo owners suffer. A railroad company (and in some countries several such companies) may be forced to purchase and maintain an excessively expensive fleet of railroad cars if the volume of transportation is not planned properly. This is because it requires the railroad company to make large, unprofitable capital investments in railcar purchases, rolling stock maintenance, and additional operating expenses for traffic control. The costs of empty railroad rolling stock transportation are not included in freight rates, i.e., the costs of empty railroad car mileage should be covered by the owner of the railroad car.

Many scholars have conducted research on the methodology used to calculate the number of train car fleet. For example, Badalyan (2017) considered the impact of the increase in car fleet operators on the total number of cars and came to conclusions by analyzing the dynamics of statistical indicators. The scientific works of the researchers and scientists Cherednichenko (2009), Karamarenko et al (2010), Korolevskaya & Morozova (2013), Leinova (2013), Romanova et al. (2011) present specific procedures and methods for determining the fleet of cars, taking into account changing conditions of freight flow in order to realize the necessary volume of transportation. The research work of Senko and Gurskiy (2009), Skalozub et al. (2007) the correlation and regression method was used to estimate the freight car fleet; the methods of individual and collective expert

evaluation were also used in the evaluation. Tereshina et al. (2013), Petrov et al. (2008) gives a general description of the wagon fleet, and also explains what is included in the wagon fleet.

Today, rail transport is of strategic importance to the economy of Uzbekistan. In general, not only today, rail transport has always been an integral system of economic and social life in Uzbekistan. It is a unique system in the unified economic system. It ensures the stable work of industrial enterprises and the timely delivery of vital goods to remote corners of our country. This is the cheapest transport for millions of citizens of Uzbekistan. Cargo transportation by rail has a number of advantages, which determined their dominant development in the world. Rail transport, for example, is characterized by versatility, high carrying capacity and throughput, the relative cheapness of transportation. Therefore, this article reviews statistical data on the dynamics of the freight car fleet in the railway transport of Uzbekistan, and also develops a calculation methodology that takes into account many factors to calculate the required fleet.

If we consider the example of JSC Uzbekistan railways, the company is currently experiencing a shortage of cars. But the company is actively pursuing a policy of buying or producing new railcars to prevent a shortage of railcar fleet. It would be advisable if in reality the number of additional wagons would be determined by real factors affecting the indicator and would be reflected in the policy of purchase and production of new wagons. Therefore, the level of organization and management of the transportation process is crucial for full and quality satisfaction of the needs of the economy and population of the Republic of Uzbekistan in freight transportation, ensuring storage and timely delivery of goods.

Unitary enterprise 'Uzrailrepirmachine' is considered to be the leading enterprise in wagon building industry of Uzbekistan. The company has such subsidiaries as Andijan Mechanical Plant and Foundry-Mechanical Plant. Design and technological bureau of 'Uzrailrepirmachine' develops freight cars and non-standard devices.

According to the plan Uzbekistan Railways (2020) also plans to produce finished products and spare parts worth 284.32 billion sums in 2022 within the localization program. As part of the localization program, 983 freight cars were planned to be built at the Company's plants in 2021 (Tab. 1).

Table 1. Production of freight cars, wagon.

Name	2021	2022
Covered wagons	1	10
Gondola cars	435	350
Tank wagons for the transport of petroleum products	17	150
Tanks for transportation of cement products	268	150
Hoppers for transportation of mineral fertilizers	62	80
Hoppers for grain products transportation	50	100
Dumper trucks	50	50
Hoppers - dispensers		40
Tank wagons for industrial enterprises		
Platforms with a long base for the transport of containers	100	70
Total	983	1000

As can be seen from this table, in 2022 the volume of wagon production is planned to increase by almost 2% compared to 2021. In 2021, the share of open wagons, hoppers for the transportation of cement products and long platforms for the transportation of containers in the total production of wagons is higher than that of other types of wagons. In 2022, the share of tank cars for the transport of petroleum products and hoppers for the transport of grain products also increased in the total number of cars planned for production.

The volume of work on the shipment (loading) of goods in tons is determined on the basis of consignors' orders. The dynamics of shipment volumes is presented in Table 4.



Table 2. Sending freight from stations.

Performance	2019	2020	2021	2022
Sending freight, (million tons)	70,14	70,65	72,03	72,5
Growth rate, %	102,8	100,7	102	100,6

As can be seen from this table, freight volume increased by 3.3% compared to 2019 and the target for 2022. A sharp increase was observed in 2021. In 2022, there is a planned increase of 0.7% over 2021. Therefore, it is reasonable to determine the planned volume of railcar fleet depending on the probability of realization of the planned volume of transported cargo. Fig. 1 shows the distribution of freight traffic by type of cargo.

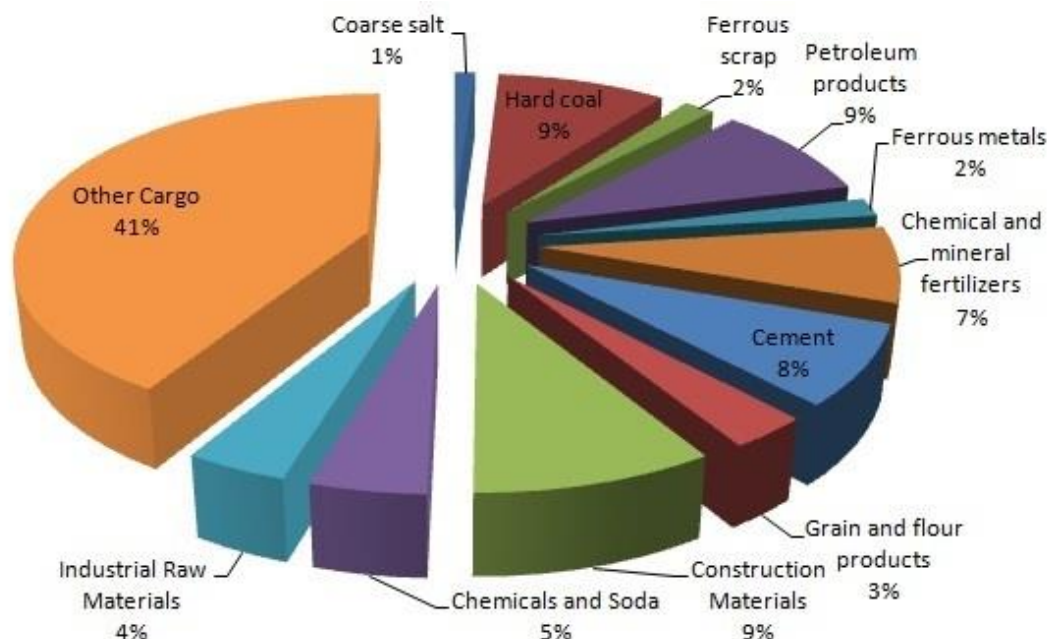


Figure 1. Distribution of freight transportation by type of freight. The concept of development of railway transport of the Republic of Uzbekistan until 2033. (Uzbekistan Railways, 2020)

Looking at this chart, we can say that hard coal, petroleum products, and construction materials have the largest shares in total shipments. In addition, cement, chemical and mineral fertilizers account for a large share of shipments.

## Materials and Methods 2

The aim and objectives of the study are - the analysis of the specific aspect of the definition of the wagon fleet, the study of the system approach to accounting factors and economic risks in the definition of the wagon fleet.

The work applies the method of observation, abstract-logical thinking, system analysis of technical and economic indicators.

Observation is a method of collecting primary information by direct and direct recording of events and conditions on the ground by the researcher. According to the place of observation are divided into two varieties: field observations; laboratory observations. Field observations are carried out in natural conditions, and laboratory observations are carried out in artificial, i.e. pre-created conditions. Laboratory observations are widespread in psychology, including social psychology. (Chernyak, 2014, p. 33)

Laboratory observations are used at work. The laboratory research method was used to gather information about the methodology of calculating the wagon fleet.

With the help of abstract-logical thinking we relate different phenomena to each other and build them into a general picture in order to use the conclusions obtained in practice. According to the Afanasev et al. (2019, p. 154) abstract-logical thinking consists of concepts, judgments, and inferences. When one begins to think abstractly, one goes through all three forms in sequence and



comes to a general conclusion as a result.

The method of abstract-logical thinking was used to compare the results of information collection, that is, an abstract-logical analysis of the parameters of wagon fleet definition and economic risks was carried out.

As stated in Chernyak (2014, p. 87) in the method of techno-economic calculation the indicators are calculated directly with an in-depth analysis, based on economic norms. With the help of technical and economic methods the methodology of economic risks determination was developed for calculation of wagon fleet of Uzbek railways JSC.

### Result 3

According to the Tereshina et al. (2013, p 557) there are several ways of determining the wagon fleet that we can use for the calculation:

- (1) The number of cars used depending on the planned volume of work is determined by multiplying the volume of work performed by the railroad by the number of cars (the number of loaded and accepted freight cars per day) by the rate of turnover of cars ( $O_w$ ):

$$n_{wfl} = (\sum U_{ld} + \sum U_{rp.ld}) * O_w \quad (1)$$

- (2) The number of cars in use depending on the ton-km of useful work performed is determined by dividing the volume of ton-km of net work performed on the railroad by the daily volume of car output:

$$n_{wfl} = \frac{\sum Pl_n}{365 * F_w} \quad (2)$$

- (3) The number of cars used depending on the distance traveled by cars is determined by dividing the total distance traveled by cars by the indicator of the daily mileage of cars:

$$n_{wfl} = \frac{\sum n_{Stot}}{365 * S_w} \quad (3)$$

- (4) The number of cars used is determined by the following formula, depending on the time spent in cars:

$$n_{pa6} = (\sum nt_{sec} + \sum nt_{co} + \sum nt_{tech}) / (24 * 365) \quad (4)$$

Where:

$\sum nt_{sec}$  – wagon-hours in trains on the section;

$\sum nt_{co}$  – detention of car under freight operation, car-hours;

$\sum nt_{tech}$  – car-hours of detention time at technical stations.

The whole problem is that more factors should be taken into account when determining one of the main operational indicators of rail transport - the car fleet.

The car fleet is one of the important components of the work of the railroad, as well as the material and technical base. The wagon (car) fleet - provides railroads with the wagons, which are the subject of railroad labor, necessary for the implementation of the operational activity.

The wagons of the wagon fleet must be transportable to the extent that they can ensure traffic safety and safety of the transported goods. Besides its main tasks are: provision of high productivity in conditions of continuous growth of freight cars and intensity of their use; fulfillment of the set plan of cars repair; economical usage of technical means; achievement of the highest efficiency in the work of repair enterprises and their subdivisions. (Petrov et al., 2008, p 236)

Determining the number of cars sufficient for the operational activities of rail transport is one of the pressing problems. The presence of an excessive number of cars also leads to costs associated with maintaining an excessive number of cars.

Increasing the number of cars can have a negative impact on a number of key railroad operating indicators. That is:

- sectional speed is reduced;
- locomotive performance is reduced;
- wagon turnover increases;
- freight loading decreases;
- wagon detention time at technical stations increases;

- wagon detention time at freight operations increases.

According to Leinova (2013, p. 81) one of the most important such indicators is car turnover. It is the calculation of the car fleet by car turnover that is considered relevant today. For the railroad network, car turnover is the average time from the completion of loading or reception of a car in loaded condition until the next loading or delivery of cars. Wagon turnover includes: time a wagon stays at a station after loading; time a wagon moves in trains from loading station to unloading station; time a wagon is processed at marshalling and forming stations; time a wagon stays at unloading station; time an empty wagon runs to a new loading station (if a wagon was loaded at a station different from the station it was unloaded at); time of loading in a wagon. Wagon turnover rate is a general comprehensive indicator of the quality of railroad operation. It reflects the results of technical, economic and organizational activities of all railroad sections, characterizes the level of wagon utilization, complexity, discipline and organization of railway workers' work.

Wagon turnover for the whole network and branches can be defined as an average for the working fleet of cars. Wagon turnover determines the need for cars in the working fleet for freight transportation. The faster the car turnover rate, i.e. the faster it reaches the second loading, the lower the car turnover time, and therefore, even with a small fleet of cars it is possible to meet the specified transport dimensions based on the car turnover rate. Accordingly, the number of cargoes that can be transported simultaneously by the existing fleet of cars will also increase.

The acceleration of car turnover is the most important task in the struggle to improve the operation of rail transport. The acceleration of wagon turnover has been influenced by the widespread introduction of the following measures on the railroad transport: electric networks and diesel traction, strengthening and reconstruction of the track, transfer of rolling stock to automatic coupling, introduction of automatic and telemechanical devices. In addition to technical reconstruction, it is important to further improve the technology of stations, to ensure the work of all departments of the railroad, to widely promote advanced methods of work. Ways to further accelerate the turnover of cars: reduction of empty cars by excluding irrational transportation; comprehensive mechanization of loading and unloading operations and reduction of car stops during freight transportation; further increase in the speed of freight trains; reduction of their idle time at stations; formation of trains with the maximum cargo weight, improvement of the whole railroad transport management system.

With the increase in the number of cars, railway sections, branch lines, station tracks are filled with cars. The detention time for many cars to enter the transportation process increases, which in itself can lead to an increase in the turnaround time of cars.

In addition, the volume of transportation is not always the same. If the volume of freight traffic decreases, then the surplus of the wagon fleet will increase even more.

It is reasonable to calculate the number of freight cars required for rail transport operation by types of cars and transportation routes. The daily load capacity can be calculated on the basis of the need for freight transportation during the month. Calculation is carried out on the basis of the turnover of the car, which is a comprehensive indicator, reflecting not only the time spent on the transport cycle, but also characterizing all the losses. Having an optimal fleet of cars on the rail network helps optimize the logistics of empty car traffic, reduce inefficient working time in the infrastructure of public roads and branches, as well as stabilize and predict the operation of cars.

In today's rapidly changing market economy, there is no opportunity for proper planning of transportation volumes, which results in a shortage of cars and, in some railroads, an oversupply of cars.

#### **Discussion 4**

The problem of estimating a reasonably necessary car fleet based on the expected volume of transportation is undoubtedly important. An important calculation in this case is determination of a rational number of car fleet depending on the volume of cargo, car turnover and static car load, which is necessary for transportation by the railway enterprise. The wagon fleet allows forecasting. The proposed methodology of wagon fleet calculation, which is undoubtedly important for organization of rational work of railway companies, is not absolutely complete and unique. For example, it is not

necessary to carry out the entire transportation plan using a railroad company's own cars, especially if in the future, for example, the number of transportation companies increases, the need for each transportation company's car fleet may change. The planning here must take into account the risk of acquiring an excess or insufficient fleet of cars in the future, which may be associated with the cost and partial use of inventory cars. Therefore, it should be compared with other transportation conditions.

The quadratic model, which allows establishing the dependence between the reasonable size of the organized car fleet and the average daily traffic intensity, can be used to assess the financial risks associated with the planning of the number of car fleet of the railway company. (Cherednichenko, 2009, p 188)

One of the main indicators in the study of the efficiency of the organization of the car fleet of a railway company is the accounting of various parameters of car turnover, as well as payment for the transportation of empty cars.

Wagon turnover includes the time of cargo delivery from the departure station to the designated station, the period of empty wagons delivery (load on own axles). Reducing this indicator allows to reduce the number of cars needed to transport the planned amount of cargo, reduce the cost of transportation and increase profits of the railway company - owner of the rolling stock.

The fee for the waiting time of cars is calculated from 24 hours or more or less (depending on conditions) from the date of acceptance for transportation. Other carriers or cargo owners are fined for untimely delivery of empty wagons. The established rules make it possible to estimate financial risks arising in the process of railway transportation.

Next we will move on to the development of mathematical models and methods for assessing the rational necessary structure of traffic, based on the need to apply some rules.

Taking into account the economic risks associated with obtaining an excessive or insufficient fleet of cars in the future, the criterion of choice is the minimum overall economic risk in the organization of the transportation process.

When developing the methodology, we take into account the possibility of performing freight runs in several directions, the statistical nature of rail transport parameters, and the economic risks of using the wagon fleet.

As written in Karamarenko et al. (2010, p. 244) stochastic model for rolling stock evaluation can be obtained as follows. Based on the analysis of the transportation plan and possible movements of cars during its execution we choose  $j = 1, \dots, J_r$  carriage routes. For each route the relative frequency of a random event is estimated on the basis of statistical information about the turnaround time of the car as well as the value of loading, i.e. cargo transportation along the route  $j = 1, \dots, J_r$ .

So, according to Karamarenko et al. (2010, p. 244) given the introduced specifications, the statistical estimate of the required number of railcars of the railway enterprise is a mathematical expectation of the following kind:

$$N_{req}(\omega) = \sum_{j=1}^{J_r} n_{req}^j \omega \quad (5)$$

Where:

$n_{req}^j$  – rational number of wagon fleet;

$\omega - j = 1, \dots, J_r$  the probability of the presence of the car on the route.

$$\omega_j = \theta_j Q_j / \sum_j \theta_j Q_j \quad (6)$$

Where:

$\theta_j$  – car turnover time for route  $j = 1, \dots, J_r$ ;

$Q_j$  - planned volume of transportation by routes  $j = 1, \dots, J_r$ .

To determine the assessment of the financial risk of the fleet of wagon, we introduce the following conditions. If  $\Delta \geq 0$ , the relative deviation from the transport norm in the period  $T_i$  will lead to the costs  $e_1$ , if  $\Delta < 0$  - to the additional costs  $e_2$ . Let us determine the probability of technological risks of deviation  $\Delta$  from the planned values  $Q_j$  by  $P_{ji}(\Delta)$ . In this case, the corresponding risk estimation looks as follows (Karamarenko et al., 2010, p. 245):

$$\Delta E_{ji} = \left( Q_{ji} - Q_{ji}(N_n) \right) * P_{ji} e_q \quad (7)$$

$$q = \overline{1,2}$$

Where:

$Q_{ji}$  - planned volume of transportation in the period  $T_i$  ;

$Q_{ji}(N_n)$  - the volume of actually performed transportation on the existing car fleet in the period  $T_i$  with the probability  $P_{ji}(\Delta)$ ;

As written in Skalozub et al. (2007, p. 51) with the help of risk assessment in the period  $T_i$  we can calculate the integral assessment of economic risk in transportation  $Q_{ji}$ :

$$E^{(P)} = \sum_j e_j^{(P)} \omega_j^{(P)} \quad (8)$$

$$e_j^{(P)} = \begin{cases} \sum_i \Delta Q_{ji} P_{ji}^{(+)} e_1; & \Delta_i \geq 0; \\ \sum_i |\Delta Q_{ji}| P_{ji}^{(-)} e_2; & \Delta_i < 0. \end{cases} \quad (9)$$

Where:

$P_{ji}^{(+)}, P_{ji}^{(-)}$  - an estimate of the probability of events in the case  $\Delta_i \geq 0$  and  $\Delta_i < 0$ , respectively;

$e_j^{(P)}$  – the obtained value serves to estimate the economic risks caused by the unevenness of the cargo delivery process.

The optimization problem and the target function, based on an estimate of the required number of parking spaces  $N$ , are of the form:

$$E(N) = E_b(N) + E_{req}(N) + E_{eksp}(N) + E_{man}(N) + E^{(P)}(N) \rightarrow \min (E_{const}) \quad (5)$$

Where:

$E_{buy}(N)$  - the cost of buying wagons;

$E_{req}(N)$  - repair costs;

$E_{ekspl}(N)$  - operating costs;

$E_{man}(N)$  – costs of managing the fleet of cars;

$E^{(P)}(N)$  - additional financial risks resulting from disruptions in cargo transportation

### Conclusion 5

Using the same model, the algorithm for calculating the rational number of wagon fleet can be represented as a sequential execution of the following operators:

- (1) Specifying the expected size  $Q_j$ .
- (2) Estimate the value of the indicators in (2).
- (3) Calculate the value of the cost estimate in (5) as a component of (4).
- (4) Find  $\min(\text{const}) E(N)$  by sequentially changing the expected quantity of transport volume by choosing  $Q_j$ .

Calculation of the wagon fleet required for the work in question should be performed in the following sequence is:

- drawing up a schedule of loading in cars (or a report on loading for the period under consideration);
- calculation of the average daily loading of cars;
- calculation of the average loading for the period under consideration without taking into account the day when loading into cars was significantly increased;
- determination of the wagon fleet - determination of the wagon fleet required to cover changes in wagon loading.

Analysis of the world experience and the author's research showed that the problem of the rolling stock maintenance and improvement of its technical condition can be solved, first of all, by improving the quality of capital and depot repairs of cars, purchasing new cars and their overhaul with the extension of their service life.

In this connection it is necessary to have a scientifically substantiated forecast of the number of rolling stock required to develop an effective strategy for the development of the rolling stock of any

railroad, as well as to develop its own base for the repair and production of elements of the rolling stock.

As another solution to this problem we can suggest increasing the weight of the car axle rather than increasing the number of cars. By increasing the axle weight to 27 t/axle the volume of the wagon body will increase by 100 m<sup>3</sup>, and the payload - by 84 t; reduce the tar content by 10-15%; and there is an opportunity to save on the costs of buying a new car.

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# STRATEGY FOR MODELING THE EFFECTIVENESS OF THE EFFECTIVE USE OF ECONOMIC POTENTIAL IN THE SPHERE OF TOURISM

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## ABSTRACT

The strategy for modelling and forecasting the effectiveness of the effective use of economic potential in this field of tourism is revealed based on analysis. In the sphere of tourism, a modelling system and forecasts have been developed as a result of correlation-regression analysis of indicators using statistical data of factors affecting the totality of tourism in the gross domestic product.

**Key words:** strategy, economic potential, quality, economic efficiency, forecasting, system.

## INTRODUCTION

Within the process of implementing economic reforms in the Republic of Uzbekistan, attention is paid to ensuring the country's economic growth due to the effective use of the existing potential in the field of tourism. The third goal of the Development Strategy of New Uzbekistan for 2022-2026, approved by the decree of the President of the Republic of Uzbekistan dated January 28, 2022 No. 60 "Strategy for the Development of New Uzbekistan for 2022-2026" to increase the number of domestic tourists by 12 million people as well as to increase the number of foreign tourists visiting the republic by 9 million people "within the framework of the program" travel around Uzbekistan "in priority" to ensure the rapid development and high growth rate of the national economy" was set [2]. In this regard, the effective use of economic potential and the formation of a system of today's tourism sector is urgent.

It is important to maintain and strengthen the leading positions in the main areas of activity, providing stable positive dynamics of the main economic indicators and technological indicators. On the one hand, the sphere of tourist-recreational activity is allowed to set strategic goals aimed at optimizing economic potential, and on the other hand, liquidity is faced with the need to eliminate threats. The systematic solution of this strategic task necessitates an innovative development that allows you to improve the economic system, which contributes to the solution of problems of the current nature, based on the accumulated economic potential of previous years.

## Literature review

Companies representing the tourism sector do not take full advantage of their potential to increase economic results. The measures taken by the government and financial injections do not give the expected return, which is primarily due to the low efficiency of enterprises. One of the main reasons for this situation is the need to increase the effectiveness of the formation and use of its economic potential in the field of tourism.

Scientific ideas and conceptual bases of the tourism industry are reviewed by K.X.Abdurakhmanov [7], N.T.Tukhliev [14], M.Q.Pardaev [11], I.S.Tukhliev [13], A.A.Eshtaev [16], M.T.Aliev [8], A.N.Norchaev [10], B.Sh.Safarov [12].

According to the law of the Republic of Uzbekistan "On tourism" adopted on July 18, 2019 [1], the development of the tourism industry as one of the main directions of tourism industry as a strategic branch of the country's economy is defined.

At the moment, even though the Cabinet of Ministers of the Republic of Uzbekistan provides for the implementation of a unified state policy in the field of tourism in the planning and regulation of the development of the tourism sector in our country, the effectiveness of tourism using economic



potential is developing differently in different regions. Also, in the context of the scale of tourist and recreational activity, its systematic nature and the increasing complexity of the organization of tourist and recreational needs, increasing the effectiveness of the use of the economic potential of this industry, which in the current conditions has the character of a fundamentally new and large socio-economic complex problem, is becoming important.

### Research Methodology

This article used methods of comparative analysis and evaluation of induction and deduction. Using a comparative method, based on data on economic potential in the field of tourism, scientific conclusions were made based on forecast indicators as a result of correlation-regression statistical analysis.

### Analysis and results

In the field of tourism, it is necessary to assess the possibility of changing indicators to allow further modelling of the system of assessment and optimization of economic potential. To this end, we conducted a correlation-regression analysis of indicators using data from the State Statistics Committee.

Today, the increase in the amount of tourism is due to the main factors affecting the development of the country's economy. Therefore, a quantitative assessment of the change in tourism volume is desirable.

As participating factors in the multi-factor econometric model-the cost of tourism as a result factor(billion. total per capita income (thousand uzs), as well as the population that affects it - X1, passenger turnover in transport (billion.passenger-km.)- X2, number of tourist firms and organizations (unit) – X3, the total number of visitors (person) – X4, the total number of people served (person) – X5, communication services (billion. sum) - X6, incoming tourism: the number of foreign citizens visiting the Republic of Uzbekistan (person) – X7, domestic tourism (person) – X8, the number of places of public accommodation (Unit) – X9 and the coefficient of use of the fund of places in the hotel and similar placement means (In percent) – X10 a total of 10 factors were selected. Thus, the results and influencing factors selected for correlation-regression statistical analysis were reflected in the table below.

**Table 1**

**Correlation-resultant and influencing factors selected for regression statistical analysis [18]**

Years	Y(t)	X <sub>1</sub>	X <sub>2</sub>	X <sub>3</sub>	X <sub>4</sub>	X <sub>5</sub>	X <sub>6</sub>	X <sub>7</sub>	X <sub>8</sub>	X <sub>9</sub>	X <sub>10</sub>
2010	947,2	2192,8	77,2	313	5 128 498	363 300	2229,7	1 398 702	1 125 705	712	25,8
2011	1 238,8	2928,9	82,4	332	5 328 501	411 736	2579,7	1 489 987	1 182 855	823	26,5
2012	2 169,0	3501,8	89,2	351	5 429 689	511 596	3046	1 576 718	1 285 712	872	27,2
2013	2 606,3	4175,1	94,7	348	5 697 345	505 395	3503,9	1 682 667	1 428 568	914	28,1
2014	3 362,9	4759,6	100,1	343	6 219 271	514 107	4195,1	1 861 961	1 571 464	1 000	29,2
2015	4 427,0	5410,6	106,0	398	7 176 204	560 406	4772,8	1 917 714	1 757 154	1 053	26,1
2016	5 363,9	6215,9	126,0	433	7 746 579	465 403	5579,4	2 027 035	1 871 709	1 184	28,2
2017	7 936,9	7314,1	130,0	449	10 018 440	669 982	7168,1	2 690 074	2 145 879	1 307	28,8
2018	10 618,2	9128,6	135,3	502	16 196 559	713 167	8648,6	5 346 219	2 255 512	1 503	31,5
2019	14 028,9	10891,3	140,1	517	17 667 177	941 990	9102,4	6 748 512	2 480 835	1 785	28,4
2020	12 646,1	12125,6	118,3	337	4 574 812	212 349	10303,1	1 504 126	1 069 165	1 839	9,6
2021	18 364,7	14769,0	137,0	288	6 238 852	577 766	11881,7	1 881 345	2 162 660	1 653	16,3

Before building a multi-factor regression model, the factors included in the model (dependent and independent variables) are evaluated by calculating the coefficients of the correlation between the private (formula 1) and the pair (formula 2) (Table 1).

$$r_{x_i y} = \frac{\overline{x_i \cdot y} - \overline{x_i} \cdot \overline{y}}{\delta_{x_i} \cdot \delta_y} \quad (1)$$



$$A = \frac{\sum |\varepsilon: JSM|}{n} \cdot 100\% = 13,5\%$$

t- Statistics coefficients for Model indicators:

$$t_1 = 0.503; t_2 = 4.206; t_3 = 1.570; t_4 = 1.310; t_5 = -0.921$$

$$t_i < t_{\text{tab}} = 2,969$$

$$p_1 = 0.063; p_2 = 0.004; p_3 = 0.160; p_4 = 0.023; p_5 = 0.3874$$

Determination coefficient:

$$R^2 = \frac{\sum_{i=1}^n (JSM_i - \overline{JSM})^2}{\sum_{i=1}^n (JSM_i - \overline{JSM})^2} = 0,9924$$

Fisher criterion indicator:

$$F = \frac{R^2}{1-R^2} \cdot \frac{n-m-1}{m} = 229,508$$

Darbin-Watson criterion indicator:

$$DW = \frac{\sum (e_i - e_{i-1})^2}{\sum e_i^2} = 1.31$$

$$1,5 \leq DW \leq 2,5$$

When the indicators are estimated according to the T-statistics criterion, the X10 factor ( $p=0.28>0.05$ ) showed that it is statistically insignificant, and we can see that the approximation error is more than 10 percent. Therefore, as interpretive factors, X1, X7 and X8s were left on the model.

$$Y = -4098.79 + 1.332 \cdot X_1 + 0.000217 \cdot X_7 + 0.000746 \cdot X_8 \quad (6)$$

Indicators of the model by evaluation criteria:

Application error:  $MAPE = 6,37\%$

Mean quadratic standard deviation:  $S = 5715,984$

t- statistics:  $t_1 = -5,415; t_2 = 23,70; t_3 = 1,283; t_4 = 1.142$

$$p_i < 0.05$$

Determination of coefficients:  $R^2 = 0,9915$

Fisher criterion:  $F = 311,5992$

Darbin-Watson criterion:  $DW = 1,46$

Regulatory Regression is calculated by a statistically significant gradation value. The analysis patterns are based on existing autocorrelations.

The Breush-Godfri test ( $p_{kz} = 0.522 < 0.05$ ) allows you to accept the zero hypotheses that autocorrelation does not exist in the model.

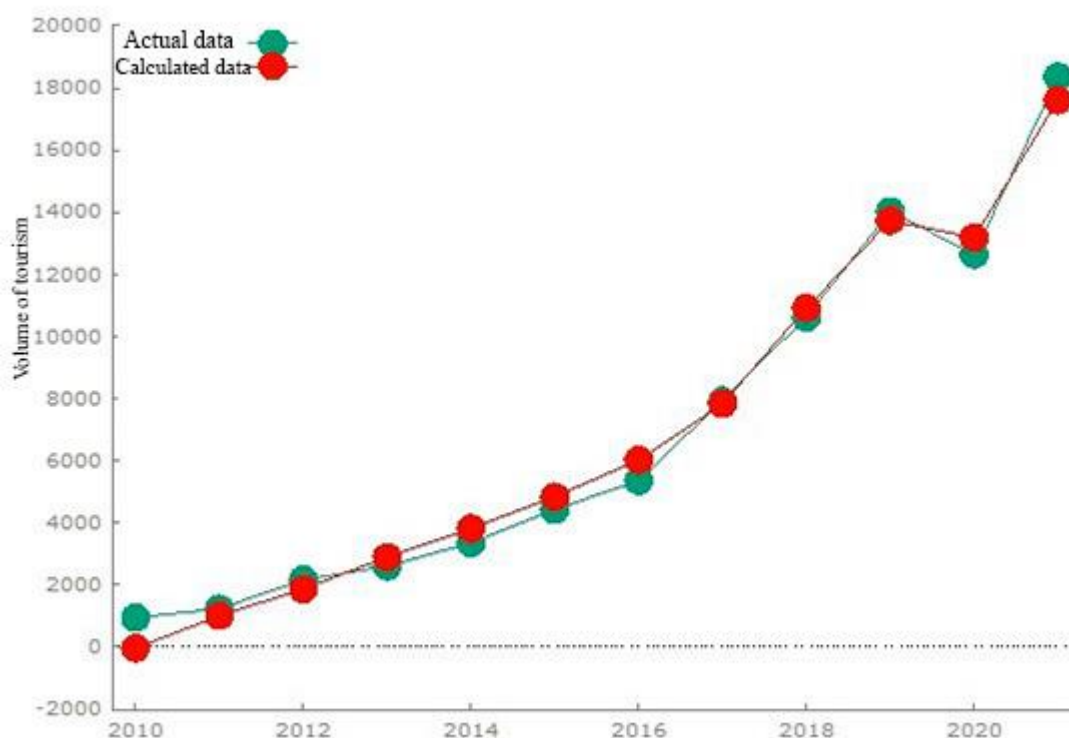
White's criteria ( $P(P(Xi-square(9)) > 11,0685) = 0.271044$ ) indicates that heteroscedasticity exists. Analysis by the infiltration factor criterion shows that there is no multicollinearity between the  $X_1(1.447 < 10)$ ,  $X_7(2.430 < 10)$  and  $X_8(2.934 < 10)$  factors in the model.

According to the results of the analysis, the factor that most affects the cost of tourism is the total per capita income. That is, when the total per capita income increases by 1%, the cost of tourism can increase by 1.3%, respectively, on average.

Tourism in general is directly related to the effective use of the opportunities for the development of sectors of the economy, for sharing, the forecast of indicators related to tourism plays an important role.

In other words, forecasting is another stage in the process of regulating the economy or part of the development of the country's economic and Social Development Program [9].

Forecasting assumes that the indicator of the result calculated by time will be monotonous to the time factor. Otherwise, it will not be able to indicate the future Real state of the result indicator obtained [15].



**Figure 1. Dynamics of values tourism in reality and calculated based on models**

It should be noted separately that one of the most difficult tasks of pre-forecast analysis is the correct choice of analytical dependence. Choosing the type of function that describes the trend, the parameters that are determined using the method of the smallest squares are often compared empirically, that is, several functions among themselves by the magnitude of the average quadratic error [6].

This means that tourism indicators are selected based on forecasting trend models and associated indicators on multi-factor regression models in terms of individual time duration, as well as comparing model errors as the most optimistic of the forecast indicators carried out based on various models. There are following trend models.

$$\text{Linear} \rightarrow y_t = \beta_0 + \beta_1 T + \varepsilon \quad (7)$$

$$\text{Parabola} \rightarrow y_t = \beta_0 + \beta_1 T + \beta_2 T^2 + \varepsilon \quad (8)$$

$$\text{Exponential} \rightarrow y_t = \beta_0 e^{\beta_1 T} + \varepsilon \quad (9)$$

$$\text{Level} \rightarrow y_t = \beta_0 T^{\beta_1} + \varepsilon \quad (10)$$

$$\text{Logarithmic} \rightarrow y_t = \beta_0 + \beta_1 \ln(T) + \varepsilon \quad (11)$$

where: expected forecast quantity at  $y_t$  -  $t$  time,

$t$  – time factor,  $e$  (2,718) – natural logarithm basis.

When forecasting economic-social processes, such trend functions as linear, parabola, exponential, level and logarithmic are used:

Based on the available statistics, it is possible to develop medium-term forecast values for

tourism indicators. But we can see that instability has arisen due to the COVID-2019 pandemic in the trend of changes in the dynamics of visitors who have arrived in the Republic of Uzbekistan by factor X7. Therefore, it is advisable to grind this factor using the wiper average (Moving average (MA)) method before producing trend models that represent a change in these indicators by the time factor. The average sliding method is the average level calculated by pushing the row levels one after the other in a certain order. The mean is determined by the simple arithmetic mean calculation from them, taking in the sliding method always an equal number from the series indicators. They can be calculated based on the series indicators that are obtained in odd or even numbers.

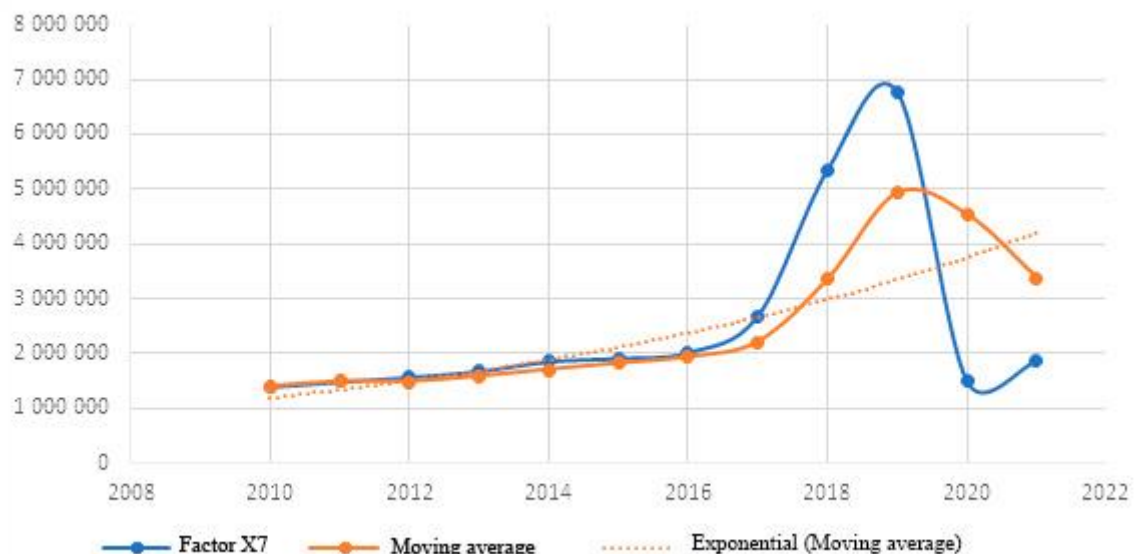
The average sliding method is based on the state of growth of random deviations at the time of determining the average value. The dynamics of the rows of average factual values are alternated with the average values that indicate the average point period of sliding at the time of levelling. Usually, two modifications of the average sliding method are used, namely simple and weighted. Simple equalization is based on the construction of a new series, compiled from a simple arithmetic mean calculation for a time of medium  $p$  length:

$$y_k = \frac{\sum_{t=k}^{p+k} y_t}{p} \quad (k = 1, 2, \dots, N - p + 1) \quad (12)$$

here,  $p$  – the length of the equalization period will depend on the nature of the time series;

$k$  – order name of the average value.

Weighted equalization consists of averaging weighted average values for the dynamics of rows at different points.



**Figure 2. Aligned X7 exponential trend line by pointer [18]**

Trend models, representing a change in the indicators of Tourism influence by the time factor, were evaluated according to the evaluation criteria, and the most suitable ones were selected. Including the trend model, which represents the change in the amount of total per capita income by the time factor:

$$Y(t) = -2150000 + 1070,18 \cdot t$$

$$R^2=0.93; F(1, 10)=153,66 A=6.3\%$$

Trend Model representing the change in the number of visitors (foreign citizens) arriving in the Republic of Uzbekistan by the time factor:

$$Y(t) = e^{-215,717+0,114285 \cdot t}$$

$$R^2=0.8249; F(1, 10)=47,120 A=1,0668\%$$

A trend model that represents the change in the number of internal tourism (people) by the time factor:

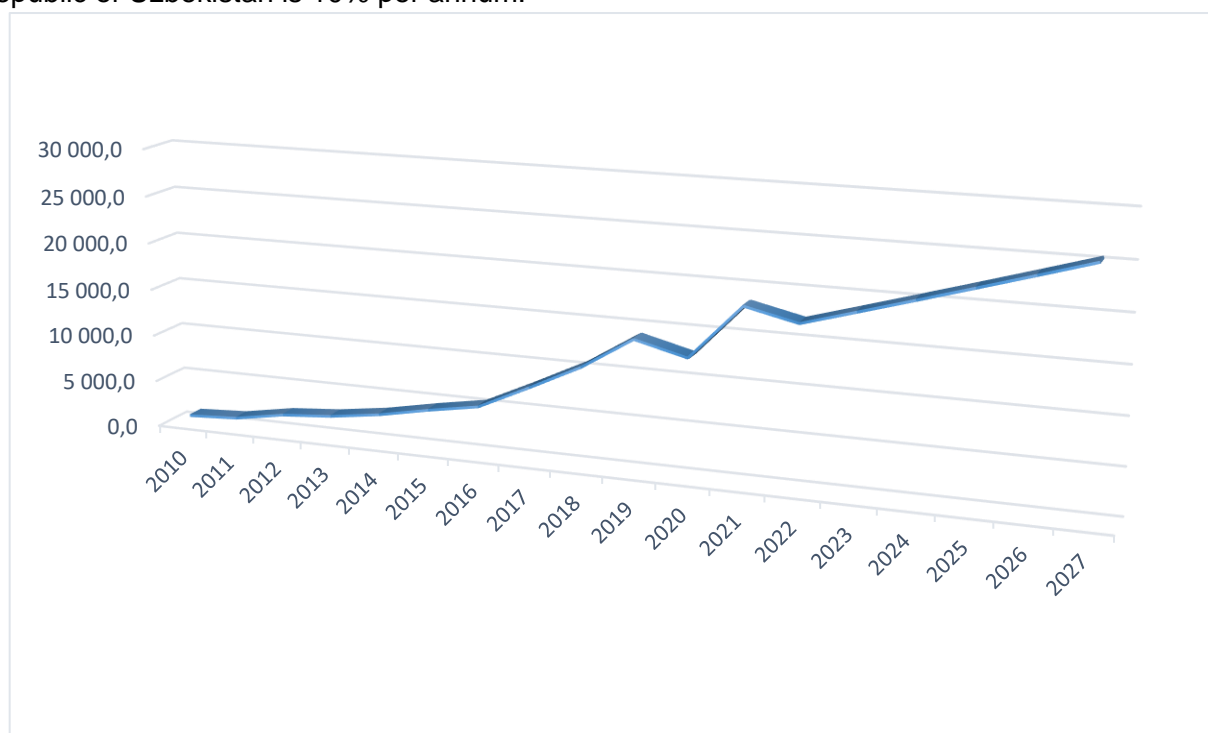
$$Y(t) = -172\,524\,000 + 86439,4 \cdot t$$

During the study, the volume of tourism was developed based on a multi-factor regression model, linear trend models for the amount of total per capita income and the number of domestic tourism (people), and a medium-term forecast value based on the exponential trend model for the number of visitors (foreign citizens) arriving in the Republic of Uzbekistan (Table 3).

**Table 3****Tourism volume and forecast values of indicators [18]**

No	Indicators	2023 y	2024 y	2025 y	2026 y	2027 y
1	Tourism volume (billion uzs)	18742,7	20371,7	22017,5	23682,2	25368
2	The amount of total per capita income (thousand uzs)	14974	16044	17114	18185	19255
3	Number of visitors to the Republic of Uzbekistan (person)	5291197	5931810	6649984	7455108	8357710
4	Domestic tourism (person)	2342906	2429345	2515785	2602224	2688663

According to the forecast, the volume of tourism is projected to grow at an average annual percentage of 6.3% during 2023-2027, while the average increase in the number of visitors to the Republic of Uzbekistan is 10% per annum.



**Figure 3. Dynamics of the Tourism Ministry of the Republic of Uzbekistan for 2011-2022 and forecast values for 2023-2027 [18]**

During the meeting, the parties discussed issues related to the development of the economy, as well as issues related to the development and development of the economy.

Trend Model, which represents the change in the indicator of the effectiveness of tourist firms and organizations by the time factor:

$$Y(t) = 0,65724 \cdot t^2 - 2645,10 \cdot t + 2661330$$

$$R^2 = 0,927; F(2,9) = 57.57$$

A trend model that represents the change in the indicator of the effectiveness of places of public accommodation by the time factor:

$$Y(t) = 0,779865 \cdot t - 1566.88$$



$$R^2 = 0,919; F(1,10) = 114.93$$

**Table 4**

**Some factors in the tourism network are performance indicators of forecast values and dynamics [18]**

No	Indicators	2023 y.	2024 y.	2025 y.	2026 y.	2023 y.
1	The effectiveness of tourism firms and organizations is Billion. uzs/pieces	53,02	66,45	81,21	97,27	114,65
2	The efficiency of places of public accommodation, billion. sum/pieces	10	10,78	11,56	12,34	13,12

According to the results of the forecast, by 2027, the effectiveness of tourist firms and organizations may increase by 2.1 times, and the effectiveness of the places of public accommodation may increase by 1.3 times.

### Conclusions

Analysis of the state and development trends of the economic potential of tourist enterprises became the basis for the development of a system of tactical and strategic tasks aimed at developing their economic potential, as well as the formation of a system of indicators reflecting the main problems.

Taking into account the importance of the forecast of tourist indicators in increasing the effectiveness of the use of economic potential in the tourism industry, the article developed forecast parameters for 2023-2027 for indicators of efficiency of tourism firms and organizations representing the volume of the tourism industry in the gross domestic product in the Republic of Uzbekistan using econometric models, as well as.

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# THE QUALITY OF TRADING SERVICES: EXPECTATIONS AND REQUIREMENTS

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## ABSTRACT

We are facing a change in consumer requirements for the quality of services in the context of the transformation of the economy and the digitalization of the economy leads to the expansion of the boundaries of services. Based on the relevance of these issues, the article discusses the possibilities of improving the quality of services and offers recommendations based on foreign experience.

**Key words:** : service quality, consumer, commercial interaction, customer loyalty, service quality monitoring.

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## INTRODUCTION

The provision of high-quality services in comparison with competing entities is the main direction of the formation of strategic competitive advantages. In this case, the provision of services that meet and, if necessary, exceed the expectations of target customers is fundamental. Customer expectations are formed based on their experience, as well as the information received through direct (personal) or mass (non-personal) channels of marketing communications. Based on this, comparing their idea of the service provided with their expectations, consumers choose the services and their manufacturer. If the perception of the service provided does not meet expectations, then service consumers lose all interest in the service organization, but they can turn to such a service provider again if the service organization begins to meet or exceed their expectations again.

The main activities for the provision of trade services should be aimed at improving their quality, and environmental friendliness and complying with the priorities of the state policy of each country. This system should be connected with the actual activities of organizations. They should carry out operational quality control of services on a commercial as well as a non-commercial basis.

The end user should be able to quickly access the most complete databases, which should be available and carried out on a non-commercial basis. As part of such access, the posting of feedback on the quality and properties of the services received should be encouraged, and the exchange of views and information between interested parties can also be supported.

## Literature review

The rapid growth in the importance and expansion of the service sector led to the development of scientific and practical developments in this area. The specific features of services associated with their heterogeneity, intangibility, non-permanence, the coincidence of the processes of production and consumption of services, the involvement of the consumer in the process of providing services, the impossibility of accurately predicting the result of the service made it possible to further development of the research within this subjects.

One of the leading areas of research in the field of economics is currently the study of the principles and methods of quality assurance and management. A significant contribution to the development of this area was made by scientists such as W.E.Deming [6], J.Juran [4], K. Ishikawa [3] and others. The first studies on the quality of services appeared in the 1980s. in the USA and several Western European countries. The most demanded in this research area were the works of authors such as S. Grönroos [2], P. Danaher [1], W. Zeithaml, A. Parasuraman, Berry L. [7], et al.

However, the quality of services as a specific area of research is only in its infancy. An analysis of the available general scientific and specialized literature shows that despite a significant number of publications on issues related to the quality of products and services, many issues related to ensuring the quality of services and, above all, assessing the quality, methods and forms of its implementation have been studied extremely insufficiently.

## Results

The system of commercial interactions in the provision of a range of services is proposed to be implemented within the framework of sustainable economic development programs. This contributes to the emergence of new areas of entrepreneurial activity in the service sector associated with a humanistic paradigm that has a client-oriented character. The modern paradigm of humanism is the basis for ensuring the interaction of business entities both in the external and internal markets. The humanistic approach focuses on the inherently human side of the company, about which there is little research in the framework of interactions of subjects about the ethics of the business of providing trading services [8].

Each sale of a service must be checked for its uniqueness not only in terms of income but also in terms of its quality and social security. The effectiveness of commercial interactions depends on improving the quality of services provided. For a competitive service, quality parameters are of decisive importance.

More and more qualified people come to trade in services and the consciousness of entrepreneurs is transformed into a progressive humanistic paradigm. This is a reaction to the growing competition and the development of the traditions of leaders in the provision of quality services.

Monitoring the quality of services is a set of observations and studies that determine changes in the environment and affect the set of properties of services that meet the needs of the consumer. However, even such a control system is not optimal enough due to the lack of public opinion statistics. In most cases, when determining the quality of service, the main role is played by representatives of business structures that create this opinion.

The quality of services should be given top priority. Interaction in real market conditions requires an innovative infrastructure, the main features of which include:

- development of the market of high-quality information programs; - improving the professionalism of the use of Internet technologies; - free receipt and use of information on the quality of services;
- increase in the number of information channels between commercial entities;
- expanding the range of quality services for commercial use.

The implementation of the program of state and public monitoring of the quality of services makes it possible to bring the quality of services to a new sustainable level of humanistic relations based on state and regional programs for the sustainable economic development of the Russian Federation. Raising the moral and ethical level of a modern entrepreneur, associated with improving the quality of services provided, should be supported by tax policy instruments and other main strategic directions of state policy in this area.

These changes in modern commercial interaction indicate the need to implement strategic reform directions in the commercial mechanism for the use of quality services. In parallel with this, it is necessary to secure the receipt of high-quality information about services not only for government agencies but also for specific buyers to increase the competitiveness of services in the international market.

L. Berry, A. Parasuraman, and V. Zeithaml [9] offered a model of service quality, which reflected the basic requirements for the expected quality of services. "This model depicts 5 gaps that appear to be the basis of customer dissatisfaction with the services offered:

1. The gap between the perception of the company's management and consumer expectations. The desires of consumers or how they evaluate the components of the service, the management of the service organization does not always correctly represent.

2. The gap between management's perception of consumer expectations and the transformation of this perception into service quality specifications. The service organization may not have quality standards for the services provided or the requirements for them may be formulated very vaguely. Even when these requirements are clearly and unambiguously defined, they may not be feasible to meet and management may not take the necessary steps to maintain the appropriate level of quality.

3. The gap between service quality specifications and service quality. This gap can be caused by many factors. For example, unsatisfactory training of staff, their overwork, low morale of employees, etc. Customer service implies not only meeting their expectations, but also the financial and economic efficiency of the services provided, which may give rise to certain contradictions.

4. The gap between the services provided and external information. Consumer expectations are influenced by the promises contained in information distributed to the general public.

5. A gap between consumer expectations and their perception of the services received occurs when one or more of the previous gaps occur. From this, it becomes clear why it is so difficult for service providers to provide the quality of service expected by the client."

The above researchers also compiled a list of service quality indicators, finding that consumers use mostly simple criteria, regardless of the type of service. These criteria are:

1. Availability: the service is easy to get in a convenient place, at a convenient time, without unnecessary waiting for its provision;

2. Communication skills: the description of the service is made in the client's language and is accurate;

3. Competence: maintenance personnel have the required skills and knowledge;

4. Courtesy: the staff is friendly, respectful and caring;

5. Credibility: The company and its employees can be trusted because they strive to satisfy any customer requests;

6. Reliability: services are provided accurately and at a stable level;

7. Responsive: Employees are responsive and creative in problem-solving and customer satisfaction;

8. Security: the services provided do not carry any danger or risk and do not give rise to any doubt;

9. Tangibility: The tangible components of a service accurately reflect its quality.

10. Understanding/Knowledge of the customer: employees try to understand the needs of the customer as best as possible and each of them is given attention.

Most excellently managed companies have a common thread in terms of the quality of services they provide.

The presence of strategic concepts. To achieve the goals in the field of quality of service products, a system of effective management is necessary. The general and specific responsibilities and authorities of all personnel whose activities have an impact on the quality of the service should be clearly defined. This also includes ensuring effective relations between the consumer and the supplier in all cases of their direct interaction within and outside the service organization. Certain responsibilities and authorities should be consistent with the means and methods of achieving the appropriate quality of service. The best service companies have a great understanding of their target market and the customer needs they have to meet. They have a clear strategy to meet these needs, which helps them win strong customer loyalty.

The constant attention of the top management of the company to quality. Based on the provisions of the International Standard, the top management of the service organization assumes responsibility for the quality policy regarding:

- a favourable image of the service organization and its reputation in the field of quality;

- the quality level of service products;
- goals of ensuring the quality of service products;
- the role of the company's personnel responsible for the implementation of the quality policy.
- approach to achieving quality objectives.

Human resources are a critical resource in any organization. This is especially important in a service company, where the behaviour and attitude to work of each employee have a direct impact on the quality of the service. It is necessary to consider the factors influencing the stimulation of personnel, interaction and attitude to work, and professional growth:

- selection of employees based on their ability to meet the requirements precisely defined for this type of work;
- working conditions conducive to good and calm business relations;
- the ability of each member of the organization for consistent and creative methods of work;
- understanding of the upcoming tasks and goals to be achieved, taking into account the nature of their impact on quality;
- awareness by all personnel of involvement and influence on the quality of services provided to consumers;
- quality improvement efforts through proper recognition and reward;
- assessment of the factors motivating staff to provide the required quality of service;
- well-organised staff promotion;
- planned activities to bring the skills of the staff in line with modern requirements.

The main factors for the growth of staff professionalism are:

- training of performers in the field of general quality management, including quality cost specialists, and evaluation of the effectiveness of the quality system;
- training of personnel (it should not be limited to those directly responsible for quality);
- training of personnel on the issues of the service organization's policy in the field of quality, goals and concepts of customer satisfaction;
- quality orientation program, which may include briefing and training courses for new employees, as well as periodic retraining programs for regular employees;
- methods for accurately determining and verifying the appropriate level of training and retraining received by personnel;
- training in process control, collection of data, identification and analysis of problems, corrective action to improve and improve quality, collaboration and communication methods;
- the need for a thorough assessment of the requirements for personnel for office certification, as well as the provision of appropriate assistance and expression of approval where appropriate;
- assessment of personnel performance to determine their professional growth and potential opportunities.

### Conclusions

Well-managed service organizations believe that the relationship with the company's personnel is reflected in their attitude towards customers and the quality of their work. The management of such organizations regularly conducts internal marketing and regular audits to identify staff satisfaction with work in this company, creating an atmosphere of support and rewards for employees of the organization for good performance in their work.

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## STAGES OF FORMATION AND DEVELOPMENT OF EDUCATIONAL TOURISM SERVICES IN THE WORLD

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### ABSTRACT

In this article, the formation and development of educational tourism services and their 5 development stages provided with analyzed data. The factors affecting it were studied, grouped and described according to their periodicity. Information was provided on the development trend of modern educational tourism.

**Key words:** Stages of formation of educational tourism, affecting factors, periodicity, modern period, trends.

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### INTRODUCTION

Over the years, researchers have studied the changing factors of travel motivation in a practical way, analyzed its different approaches and perspectives. The dynamic nature of travel motivation has prompted extensive research in this area. The decisions made by tourists are reflected in their travel behavior and are considered very important for the development of the tourism industry.

Today, educational tourism has reached the international level as a result of globalization, and we can observe the growing trend of student exchange. "Students seeking knowledge and skills are an important segment of the international educational tourism market."<sup>1</sup> According to statistics, the number of international students is expected to exceed 300 million by 2027, while their mobility is increasing.

#### Research methods

In this study, historical and rationality, scientific abstraction, analysis and synthesis, comparative analysis and modeling methods were used, and the stages of development of educational tourism services were grouped from both historical and practical perspectives.

#### Results

We found it necessary to study the evolution of formation and development of educational tourism services in the following stages:

1. The stage of emergence of educational tourism services;
2. The stage of formation of educational tourism services;
3. Development stage of educational tourism services;
4. Stage of stagnation in educational tourism services;
5. The stage of globalization of educational tourism services.

1. *The stage of the emergence of educational tourism* is represented by the first manifestations of mobility in antiquity (III century BC - X century AD). The civilization of the ancient Roman and Greek countries was the formation of the foundations of fields such as exact sciences, philosophy, literature, architecture and fine arts, the formation of thinking about philosophy and exact sciences by Socrates, Plato, Aristotle, Homer's "Iliad" and "Odyssey" as ancient monuments of literature epics, sculptors and artists' works are characterized by the perfect representation of the human figure and its movements. During this period, many famous scientists went to Greece on the purpose of educational ". Also, parents sent their children to the island of Rhodes in order to get acquainted with

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<sup>1</sup> Ritchie, B. J. R., & Crouch, G. I. (2003). *The Competitive Destination: A Sustainable Tourism Perspective*. Wallingford: CABL. 267 pp.

Greek culture and science. It should be noted that the Chinese philosopher and political figure Confucius and his students spread their knowledge to the countries of Central Asia in the 6th-5th centuries BC. According to S. Chen<sup>2</sup>, in 497 BC, he followed the disciples of Confucius and traveled around Central Asia for 14 years. His original goal was to share his thoughts with several rulers on governing society through moral values rather than violence. Later, one of the founders of the Islamic Renaissance, Musa Al-Khwarizmi (783-850 years), who created the science of algebra, traveled all his life, engaged in science in the fields of physics, philosophy, anthropology, and wrote "Geodesy", "India". Another example is Abu Rayhan Beruni (973-1048), who created such immortal scientific works as "Mineralogy", "Relics of Ancient Peoples". Abu Ali Ibn Sina is known to the world as a nickname of Avicenna, the author of such an immortal work as "The Laws of Medicine", and became as the "father" of medical science. (980-1037), considered a great encyclopedist. So, science, art and literature and philosophical teachings of the ancient world served as the main factor in the formation of educational tourism.

In general, the formation period of educational tourism is reflected in the historical processes directly related to the formation and development of science, educational services. For example, in the ancient times, science developed and positive changes were observed in educational tourism, corresponding to the current period, but in the VI-IX centuries, political instability between the states led to a decrease in attention to science, and a state of relative stagnation was observed. The representatives of science were engaged in the study and interpretation of existing science. So, we can note a relatively stagnant situation in educational tourism.

2. *The stage of formation of modern educational tourism services (XI-XVII centuries).* Starting from the XI-XII centuries, the first medieval universities in Europe are characterized by the formation of the University of Bologna in 1088 and the University of Paris in approximately 1150. These and other medieval European universities were educational corporations that awarded degrees (bachelor's, master's, doctorate, etc.). The basic degree is licentiate ("licentia ubique docendi"), which means "the right to teach everywhere"<sup>3</sup>. This degree was recognized in all European countries. This and the existence of a single Latin script led to the formation of a single educational environment of European universities in the Middle Ages. Students and teachers had the right to move from one university to another, which was an educational system that was not observed in other countries of the world at that time. But the lack of development of transport and road infrastructure had a negative impact on "intellectual migration". For this reason, student mobility in the 15th century corresponded to approximately 20-25% of the total number of students.

3. *Development stage of educational tourism services (XVII-XX centuries).* In the 17th century in England, travel was interpreted as an important part of education, and Grand Tours (French - "grand tour") began to appear<sup>4</sup>. People realized that traveling can broaden one's worldview, and it began to be seen as an essential condition for being considered an intelligent person. The first manifestations of mass tourism appeared in the 18th century. More than 40,000 European aristocrats, mostly aged 15-21, traveled to European countries, including France and Italy, which occupy a permanent place on the route. The main goal of their trip was to learn the culture, lifestyle, science, and language of other countries. During this period, the French language was considered as an international language, and the interest of educational tourists for the purpose of language learning increased.

At the beginning of the 19th century, after the first railways appeared in the USA and European countries, the English businessman Thomas Cook organized the first collective tourist trip and founded such concepts as travel agency and tour package. In the middle of the 19th century, the rapid development of capitalism and the construction of railways in Europe attracted the middle class

<sup>2</sup> Chen S.C. Understanding the Evolving Roles of Outbound Education Tourism in China: Past, Present, and Future // Athens Journal of Tourism. -2020. - Vol.7. - P. 101 – 116

<sup>3</sup> Gaines Post and William J. Courtenay. [The Papacy and the Rise of the Universities.](#) / [Education and Society in the Middle Ages and Renaissance](#) series/ chapter 5, 2017.116–121p.

<sup>4</sup> <https://dic.academic.ru/>

of society to educational tourism. During this period, the number of travel agencies increased, the population's interest in travel increased and exceeded the borders of Europe. Among the factors that cause the development of international tourism in Europe, especially in Great Britain, it is possible to list the convenience of railway and water transport infrastructure, the high lifestyle of the population, and the development of the economy<sup>5</sup>. The increase in the quality and reliability of transport, the decrease in the price, the increase in the standard of living of the population, and the relative shortening of working hours have led to an increase in the flow of tourists. Followingly, tourism infrastructure began to form.

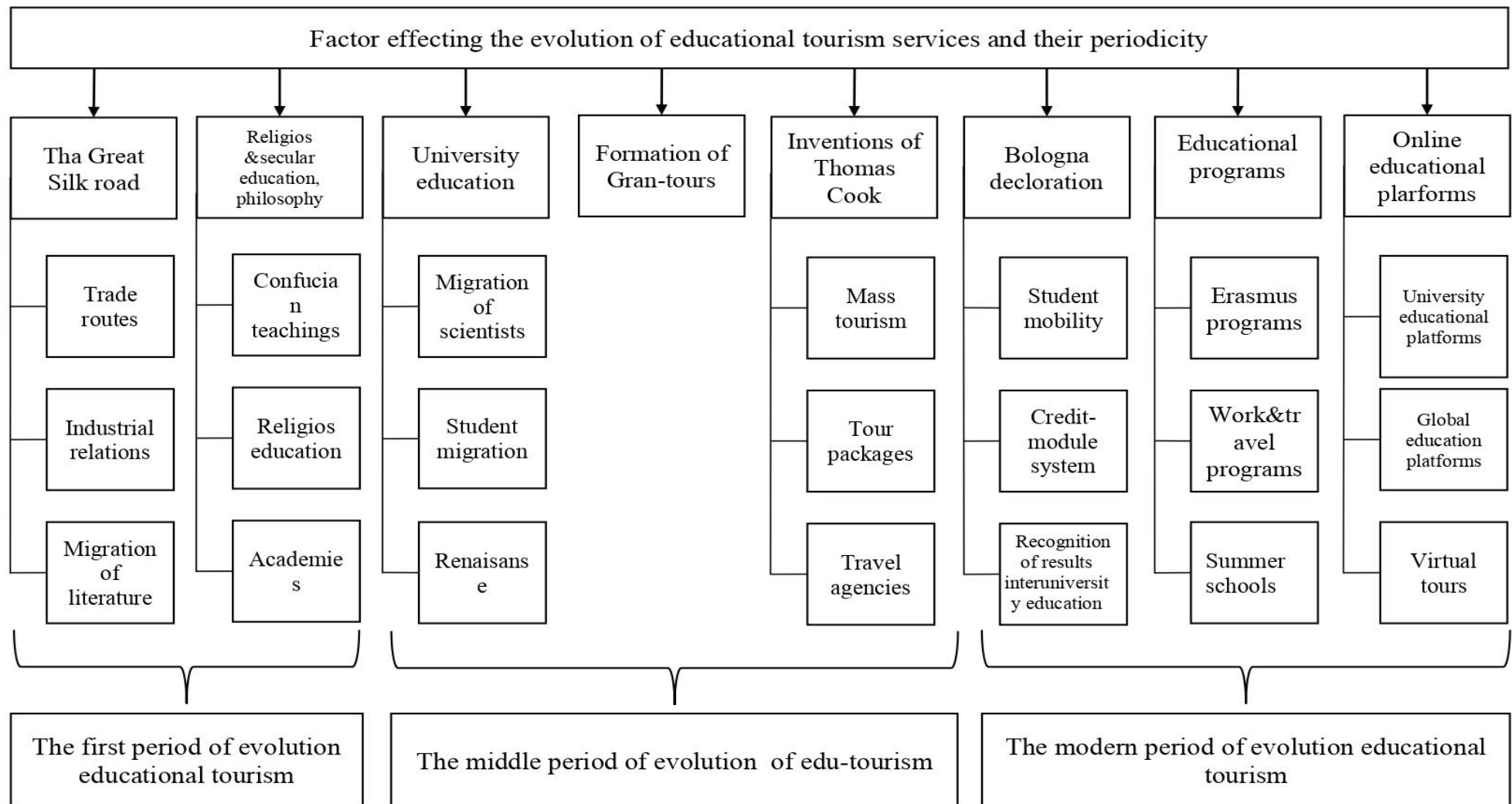
4. *Stagnation stage in educational tourism services* (early 20th century - 1945 years). Due to various political instability and world wars during this period, the scope of international academic exchanges was sharply reduced. In the post-war period, as a result of the "separated" activities of the states, various forms of excursion trips developed mainly within the territory of the countries.

5. *The stage of globalization of educational tourism services* (from the end of the 21st century to the present). In the 80s of the 20th century, the stabilization of international economic and political relations in the USA and European countries paved the way for the reformation and development of mass educational tourism. Various international scientific and educational projects have been developed. Erasmus program (since 1987), "Work and travel" programs had a significant impact on the rapid development of educational tourism. Although the coronavirus pandemic that began in 2019 had a serious negative impact on educational tourism services, and a rapid recovery is currently being observed. In addition, the changes in the education system during the pandemic, distance education, virtual reality, and online educational platforms have opened the way for the emergence of new types of educational tourism services.

So, *the first period* of educational tourism dates back to the history of the ancient world - Confucian education, the emergence of the Great Silk Road. Also, under the influence of socio-economic, political, cultural and historical factors, the development of educational tourism has its own characteristics at different historical stages (Figure1). In the evolution of educational tourism, *the middle period* can be defined as the 11th-12th centuries - the formation of the first universities, the 17th century - the "Grand Tour" educational trips by aristocratic British youth, and Thomas Cook's establishment of the 1<sup>st</sup> mass tourism. *The modern period* of educational tourism is reflected in the last 30 years of globalization

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<sup>5</sup> Московкин Владимир Михайлович, Янь Цзысюань. ОБРАЗОВАТЕЛЬНЫЙ ТУРИЗМ: ПРОИСХОЖДЕНИЕ, ОПРЕДЕЛЕНИЕ И ТРЕНДЫ Научно-практический электронный журнал «Оригинальные исследования» (ОРИС) • № 03 • 2022. 96-99стр



**Figure1. Factors affecting the evolution of educational tourism and its periodicity<sup>5</sup>**

<sup>5</sup> Developed by the author

processes in educational tourism.

This period is reflected in the activities of various international programs and projects as a result of scientific and technical progress in various fields and the globalization of science, education and practice.

In our opinion, the historical factors affecting the development of educational tourism are as follows:

- The emergence of the first universities (University of Bologna; University of Paris);
- Grand tours;
- Inventions of Thomas Cook (tour package, tourism)
- Bologna Declaration (Student mobility, credit module system, recognition of results of inter-university education);
- Various educational programs (Erasmus, Summer school, Work and travel);
- Online educational platforms

The emergence of the first universities implemented an educational system that shaped the migration of scientists and the mobility of students. Consumers of grand tours are mainly the children of aristocrats, and the main destinations for mass visits are Italy and France, and the main language of study is French. And Thomas Cook organized sightseeing trips for the general public.

In our opinion, the signing of the Bologna Declaration in 1999 marked the beginning of modern educational tourism. Based on this, student mobility, credit-module system, mutual recognition of inter-university education results became the main reason for the increase in educational tourism indicators. In particular, various international educational programs and schools (Erasmus program, Work and study program, Summer schools) also have a great importance. In particular, the profile of consumers of online educational platforms has expanded after the global pandemic. In addition, it is possible to list university education platforms, global education platforms and virtual tours. So, *modern educational tourism* refers to the travel of the general public for the purpose of education, experience, and skill improvement through the developed tourism infrastructure.

According to Grand View Research<sup>6</sup>, the global education tourism market is expected to reach \$974.7 billion by 2030 and is expected to grow at a compound annual growth rate (CAGR) of 13.0% from 2023 to 2030<sup>7</sup>. Factors affecting the growth of Educational Tourism Market:

- increased communication between countries with international trade,
- cheap transport infrastructure;
- state marketing initiatives for educational and cultural centers;
- Convenient visa policy for tourists;
- y demand for courses;
- increased government initiatives to develop the country's tourism industry;
- increased interest in the feeling of culture and antiquity of historical places;
- increase in free time of the population;
- growth of discretionary income of people.

USA, India, UK, Turkey, Italy and Greece are some of the best places for educational tours around the world. The visa duration for tourists (at least 2 months) has a direct impact on educational tourism. In particular, the duration of the visa is proportional to the stay of travelers in the same area, and allows direct access to the study of the historical and cultural heritage of this place. For students, this is an invaluable opportunity to acquire relevant skills while mastering theory in practice.

### Conclusion

Entities competing in the market offer various additional services to meet the demands of a wide audience of consumers. Such tours offer a combination of practical and theoretical learning, including visits to historical sites, shopping centers, manufacturing, service enterprises or other

<sup>6</sup> <https://www.grandviewresearch.com/>



attractions. The increase in the disposable income of people worldwide is another factor that activates educational tourism. As living standards rise, so does the demand for authentic travel experiences.

In conclusion, it can be said that various countries set the development of educational tourism as a strategic goal in their activities in the field of education and tourism. But in order to achieve this goal, the condition of the relevant infrastructures must meet the requirements. From the analysis of the above countries, the regions have an advantage in one or another scientific field. Also, the macroeconomic indicators and political stability of the country have a direct impact on the increase in the indicators of educational tourism services.

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# ANALYSIS OF MAIN INDICATORS OF INNOVATION COMPETENCE OF INDUSTRIAL ENTERPRISES

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## ABSTRACT

In this article, the innovative potential of industrial enterprises and their main indicators are identified and analyzed based on the resource approach and different levels of economic systems. Proposals and recommendations on increasing the innovation potential of industrial enterprises are given.

**Key words:** industry, industrial enterprises, innovation, potential, innovation potential, improvement of innovation potential, indicators of innovation potential.

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## INTRODUCTION

Innovative activity is considered one of the most important economic reforms that have a great impact on the formation of market relations and socio-economic development. In addition, innovation is the main factor for increasing the national competitiveness of each country, entering the world market and ensuring its stability in the modern economy. Consistent economic reform is carried out on the basis of increasing the innovative potential of high-tech industrial enterprises and rapid development of production sectors. Based on the content of the term innovation, it can be said that any discoveries, scientific researches, introduction of new approaches and methods in production means the process of using innovations in industrial enterprises.

In recent years, as a result of the strengthening of the environment of free competition among industrial enterprises, the loss of the importance of natural competitive advantages, the transition of enterprises to a new development path and the increase of their innovative potential are becoming one of the urgent issues. It is known from the experience of economically developed countries that, based on the acceleration of technological development, it is possible to quickly improve obsolete production methods, to transition to a new model of intensive economic growth, to increase innovative potential, and to develop innovations within the framework of a new technological order. In the last decade, the use of innovation and new technologies in the activities of industrial enterprises has become one of the main factors of increasing labor productivity, production efficiency and competitiveness. Currently, the share of scientific and technical progress is 70-90% of the gross domestic product of developed countries [1].

**Literature.** The concept of "innovation" and "innovative potential" began to actively enter science in the second half of the 20th century. This category has been studied in the theoretical and methodological studies of a number of economists and various definitions have been given. In particular, Joseph Schumpeter is one of the first economists who defined the concept of "innovation". According to his interpretation, "innovation is the meeting of an idea and an entrepreneur." Using concepts such as "creative state" and "new combinations", this scientist meant the following:

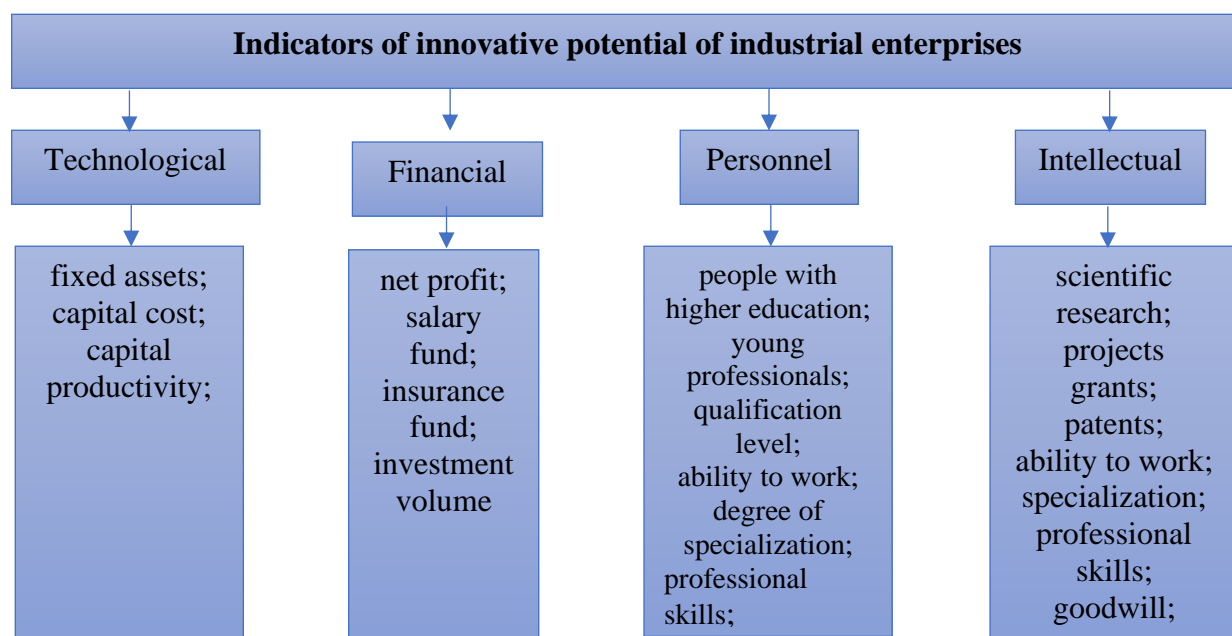
- new product production or product quality improvement;
- creation of a new production method;
- conquest of new markets;
- conquest of new markets of raw materials and semi-finished products;
- implementation of organizational changes [2].

K. Freeman emphasized that "innovative potential" is mobilized for specific purposes under

certain conditions [3].

In the research works of V. P. Baranchyeva and V. N. Gunina, innovative potential is interpreted as a measure of preparation for the implementation of an innovative project or innovative change program to achieve the innovative goals of the enterprise [4]. However, until today, a universally accepted definition of this concept has not been developed. Each economist or researcher approached the innovative potential in different directions, taking into account the specific characteristics of the countries.

**Result.** In economic literature, from the point of view of the resource approach, the economic content of the concept of "innovative potential" is interpreted as a set of resources. The main elements of the innovative potential of industrial enterprises include the following set of resources: technological, financial, personnel and intellectual. All the components mentioned above are closely related to each other. Because effective implementation of innovative potential depends on the condition and interaction of each of its parts. Thus, increasing the innovative potential of industrial enterprises should be understood as the ability to implement innovative activities as the ability to create, improve and use innovations in the conditions of existing resources and economic relations within the system. So, these structural elements externalize the main indicators of the innovative potential of industrial enterprises.



**Figure 1. Classification of indicators of innovative potential of industrial enterprises**

We offer to study indicators of innovative potential at different levels of the economic system, i.e. at the macro, meso, micro and nano levels.

The basis of innovation potential at the macro level is the scientific and technical complex of the country or region. It is, first of all, organizations that carry out scientific, scientific-technical, scientific-production and scientific-educational activities; secondly, it includes a technological complex represented by production enterprises of different forms of ownership. However, scientific and technical activity, including research and development, is a stage of the innovation cycle. When analyzing the impact of innovative potential on economic growth, it is not the presence of this or that innovation, but the process of introducing it into the economic practice of industrial enterprises that is more important.

The resource component of the innovative potential (personnel, material and technical, information, financial) ensures the existence and operation of the innovative system as a whole structural object. The economic component of innovative potential includes the need for innovation in a given society and depends on a number of objective factors implemented through the system of

economic relations and models of rational behavior of economic entities. The institutional component of innovation potential includes the existence of effective state, public and private innovation organizations, high quality of the institutional environment, effective innovation legislation and legal regulation of the innovation field, protection of intellectual property rights and the existence of effective forms.

1. Indicators of innovative potential at the macro (country, region) level include:

- the share of highly educated workers in the total number of employed people in the economy;
- the number of educational institutions;
- the number of scientists and engineers per thousand inhabitants;
- the share of enterprises receiving state subsidies for innovative development in the total number of enterprises in the economy;
- the share of enterprises introducing innovations in the total number of enterprises in the economy;
- the number of employees engaged in scientific research and experimental construction work;
- innovative expenses from the general circulation of the economy, internal expenses for research and development;
- the share of sales of new products to the market from the total turnover of products in the economy;
- advanced production technologies and the number of created structures;
- the share of the patentee of inventions and copyrights in the economy, etc.

2. Innovative potential at the meso level means a set of interrelated elements necessary for innovative development due to the internal capabilities of the economic system (the economic sector, including the creation, introduction and effective use of innovations). Indicators of innovative potential at the meso (industry, sector) level include:

- the number of employees with higher education as a percentage of the total number of employees in the industry, sector;
- the number of enterprises that use training and training of personnel related to innovations, to the total number of enterprises operating in this field, network;
- expenses spent on scientific research and experimental design work as a share of the added value created in the industry, network;
- the share of enterprises receiving state subsidies for innovations in the total number of industrial and branch enterprises;
- the share of enterprises introducing and introducing innovations in the total number of industrial and branch enterprises;
- the number of small and medium-sized enterprises cooperating with other enterprises, compared to the total number of small and medium-sized enterprises in the industry, sector;
- the cost of innovation in the industry and the percentage of total turnover;
- sale of products that have undergone significant technological changes or are newly produced as a share of the total volume of sales in the industrial sector;
- sale of improved products as a percentage of the total volume of sales in the industry, network;
- the number of industrial enterprises that have granted patents for their inventions, as a percentage of the total number of enterprises in the industrial sector.

3. At the micro level, the innovative potential of the enterprise (organization) is an integral system characteristic and is measured by assessing innovation propensity, innovative activity and competitiveness. These indicators include:

- share of employees with higher education in the total number of employees in the enterprise;
- costs of training and education of employees related to innovations, as a percentage of the total turnover of the enterprise;

- research and development costs as a percentage of the company's total turnover;
- the share of subsidies from different sources for innovations in the total value of innovations;
- the number of innovations introduced in the enterprise as a percentage of the total number of innovations introduced in the industry;
- the share of cooperation contracts with medium and small enterprises belonging to this enterprise in the total number of contracts;
- innovation costs of the enterprise as a percentage of the total turnover of the enterprise;
- the share of sales of products that have undergone significant technological changes or are newly introduced in the total turnover of the company's products;
- share of product sales volume;
- the share of the number of patents belonging to this enterprise to the total number of patents in the industry;

4. At the nano (department, employee) level, the employee's innovative potential is the employee's ability to develop and effectively use new ideas and projects of his own and third parties, and reflects the innovative component of human capital. These indicators include:

- level of education of the employee, share of highly educated employees in the unit;
- qualification and level of qualification;
- the ability to create and implement innovations;
- work;
- flexibility;
- learning ability;
- existing experience and professional skills;
- ethical worldview corresponding to the innovative society;
- ownership of intellectual property rights;
- high mobility.

The results of many modern studies show that the innovative development of the economy requires the creation of a state concept and strategy for the formation of competitive innovation-oriented specialists, human capital reproduction technologies and systems as the main resource of society.

**Conclusion.** Improvement of the private-state mechanism aimed at establishing relations in the field of "science-science-production" of attraction of private capital, selection and financing of innovations to increase the innovation potential of industrial enterprises, uniting companies, regional authorities, research centers, banks and water. It is expedient to integrate insurance companies, as well as information-consulting structures and technology parks into the structure of the cluster and implement them through their specialization. In general, the following should be taken into account when developing the innovative potential of the enterprise: optimal use of the internal capabilities of the enterprise; development of the existing intellectual potential of the company's employees based on the use of modern technologies of personnel training, raising their professional qualification level and professional retraining; proportionate introduction of product and organizational innovations provided with appropriate legal protection; making the most of industrial opportunities.

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## IMPROVEMENT OF INNOVATIVE PROCESSES IN THE TRANSPORT INDUSTRY OF UZBEKISTAN TOURISM

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### ABSTRACT

On the component of convenience and competitiveness of supply Uzbekistan took 120th place among 160 countries in the international index of efficiency of logistics. Undoubtedly, the transport industry has a direct impact on the country's tourism sector. The article considers the main problems of the transport industry from the point of view of the tourism industry and offers suggestions on improvement of innovative processes of the transport industry of Uzbekistan.

**Key words:** Transport industry, tourism sector, logistics, development, transportation, land transport, air transport, water transport.

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### INTRODUCTION

One of the most strategically important points in modern tourism is the transport industry. The interconnectedness of these two industries is evident to the naked eye, and tourism would not have developed without global changes in the transport sector.

Significantly, at present, the transport sector in Uzbekistan cannot fully meet the growing consumer demand from tourists. The country is renovating infrastructure and expanding the capabilities of the industry, which is yielding results, but the potential in this direction is not yet fully exploited: civil aviation has not yet developed full competition, ten airports are operating at a reduced capacity. As a result, Uzbekistan ranked 120th out of 160 countries in the Logistics Efficiency Index for convenience and competitiveness of supply. In particular, due to the liberalization of the air transport market, the number of companies operating flights to Uzbekistan has doubled over the past three years. The share of domestic carriers in international road freight transport reached 62 per cent. 300 km of railway lines electrified; 1,500 km of roads built.[4]

"This industry is vital for the economy. If we do not take transport and logistics to a new level, we will not be able to ensure stable economic development", said President Shavkat Mirziyoyev meeting on accelerating reforms in the transport sector.

The President also defined the tasks in three directions - a significant expansion of railway transit capabilities, the transformation of civil aviation into an area with convenient, fast and high-quality service, expansion of modern road networks for international cargo transit. The President touched upon the quality and capacity of roads. The design, construction and control functions in the road sector are concentrated in one organization and quality suffers. In this regard, instructions have been given to introduce advanced standards, strengthen the testing work, increase the responsibility of contractors.

The article identifies many other tasks concerning the expansion of transportation infrastructure and the digitization of the sphere.

The innovation process is a purposeful activity of creation, mastering in production and promotion to the market of product, technological and organizational-managerial innovations. [1]

### Literature Review

According to the international classification of vehicles of the World Tourism Organization, the transport classification is divided into three types based on the use of the natural environment of

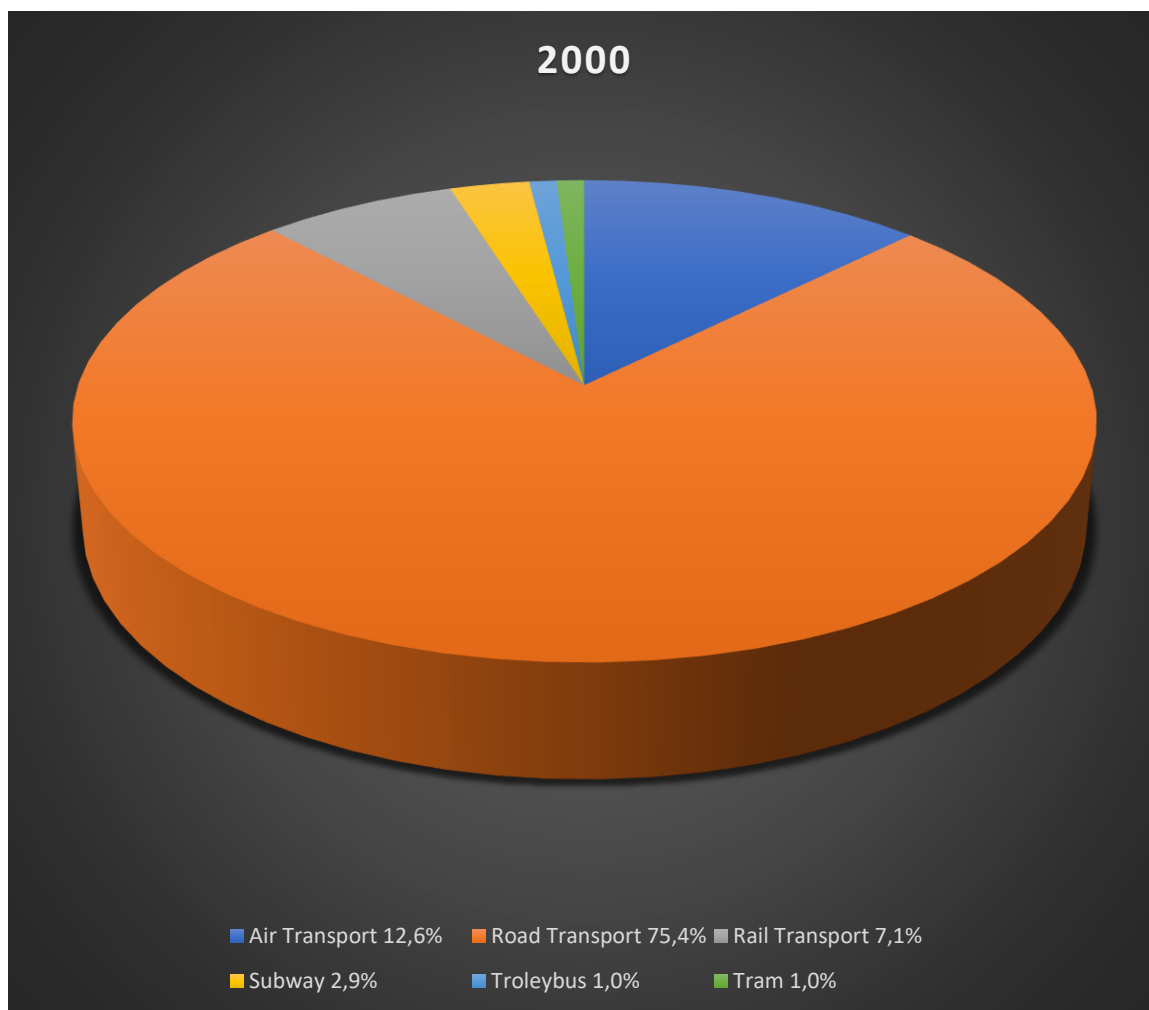


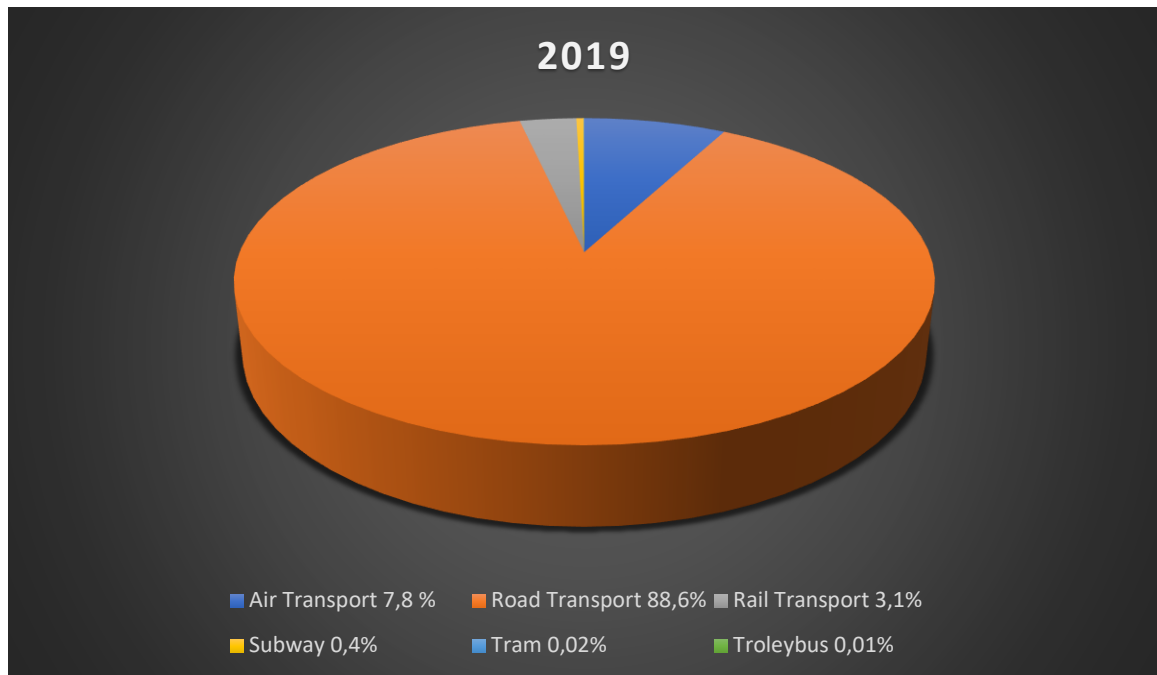
the planet:

1. Air (transport aircraft);
2. Water (Ships, sea and river cruises);
3. Land (Rail, Cars, Buses)

Due to its geographical location, Uzbekistan has no access to the sea or the ocean, the country cannot make full use of the mode of marine transport in the tourism sector. To improve the quality of service and travel tourists should pay careful attention to land and air transport.

One of the features and increasing problems in the transport sector is that the growth of road transport is significant and higher than the growth of rail freight, as shown in Figure 1. The situation is unstable, as the road infrastructure is already in poor condition in much of the country.





**Figure 1. Distribution by mode: number of passengers transported (passenger-km)[5]**

On the other hand, rail transport is profitable and has the potential to increase productivity. Economic development may be slowed down and the integration of lagging areas weakened if intermodal transport is not strengthened and rail infrastructure remains underutilized.

Urban mobility is under particular pressure due to population growth and income, but urban transport is weak. In addition, there are many unlicensed taxi services, because public transport is often not available in sufficient quantity and quality.

In the export sector, the lack of linkages between transport corridors and mixed transshipment terminals poses a major challenge for the integration of small and medium-sized businesses into global supply chains.

## DISCUSSION AND RESULTS

First of all, the main beneficiaries of innovation processes in the transport sector are transport consumers. At the same time, organizations involved in the development and implementation of innovations and transport enterprises are active participants in this process.

Another important role for the effective implementation of innovations in the transport industry plays the level of training and motivation of personnel. Innovative solutions can have a significant impact on minimizing waiting times for transport, reducing vehicle intervals on routes, pedestrian areas and bike lanes.

At the present stage of development of the transport industry on a global scale, global innovation processes are conducted. Famous companies Tesla and Google are working to ensure the safety of the driver or full replacement in the process of driving. And there is also an unmanned system, trains without drivers that run through closed tunnels, etc.

Partial or complete fuel substitution is under way, moving to a more environmentally friendly mode of transport, such as electric cars or hybrids.

## CONCLUSION

In summary, it is safe to say that innovations in the transport industry are directly linked to the global tourism industry. It is with the continuous development of the transport industry that it is possible to achieve significant development of tourism.

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## WAYS TO INCREASE THE LEVEL OF EMPLOYMENT OF THE POPULATION WITH THE HELP OF TELECOMMUNICATION TECHNOLOGIES IN THE DIGITAL ECONOMY

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### ABSTRACT

In this article, using the marketing strategy, it is proposed to form an innovative system for Uzbekistan to take its position as a country that can compete in international markets with telecommunication services and goods. It has been shown that the demand for the quality of telecommunication services and goods and competitive relations are of decisive importance in the current conditions..

**Key words:** Marketing concept, marketing strategy, modernization, telecommunication services, e-money, e-mail marketing, e-banking, e-services, e-commerce.

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### INTRODUCTION

Taking the position of Uzbekistan as a country that can compete in international markets with telecommunication services and goods, the formation of an optimal system of selling telecommunication services and goods, in particular, places special demands on the development of the international marketing concept. This situation is directly related to the solution of existing problems regarding the development of mechanisms for increasing employment of the population in the field of telecommunication services based on the requirements of the modern market. Currently, in a number of regional development programs being developed in our republic, significant work is being done to increase the employment of the local population based on the development of telecommunication services, and on this basis to export telecommunication services and goods to the world markets.

Especially in the current conditions, the demand for the quality of telecommunication services and goods and the decisive importance of competitive relations in this is very important, and this process is being given great attention in the following years in Uzbekistan. Because in the positive changes taking place in the country's economy, it is important to increase the volume of production and increase the employment and competitiveness of the population in the field of telecommunication services in the country.

#### Research methods

According to A.N.Romanov, Y.Y.Koryakov, S.A.Krasilnikov, "Competitiveness is defined as a wide range of competing goods that serve to determine the success of a product in the market, comprehensively describe its consumption and value (price-value), that is, under the circumstances, this product is understood to be superior to other products" [2]. According to A.A. Ambartsumov, F.F.Sterlikov, "Competitiveness of goods and services is a set of consumer characteristics of the goods that determine the difference in the cost of purchasing and using them in terms of level and scope of meeting the customer's needs compared to other similar goods"[3] A.A. Tarasova, F.A. Krutikov noted: "Competitiveness of the product - compared to the type and use of other products,

E. Brinolfcon and L. Hitch, as a result of studying the activities of 527 large American companies, the authors say that additional assets (assets that change due to the impact of information and communication technologies, the experience and skills of employees, communication tools and technologies, the quality of decision-making, changes in business

processes, etc.) ) plays an important role, and over time, the results of the introduction of digital technologies are manifested in the stage of rapid development [5].

Building a "knowledge economy" based on innovative high technologies, research and production capacity, and intellectual property is one of the main tasks of increasing employment of the population today. Innovation becomes the engine of modern economy and the basis of competitiveness of organizations. This means that the countries of the world are choosing their own path of industrial development in the context of the fourth industrial revolution. The leading countries of the European Union are Germany, the Netherlands, France, the United Kingdom, Italy and Belgium, but the first place still remains in Germany [6].

In his research, Dodgson.M developed the principle of increasing employment of the population by managing the principles of technological innovation management based on international and strategic approaches and proposed its implementation [7]. Abramov V.I. in his research, he developed a methodology for evaluating the innovative potential of labor resources in enterprises for the analysis of the main indicators and trends of the development of science and technology and innovative activity [8]. In the scientific works of Lapteva.E.A., researches were conducted on the problems of evaluating the innovation potential of industrial enterprises, he described the structures of the industrial enterprise, indicating the level of innovation potential [9].

Nobel laureate R. Solow also considers new technologies to be the most important factor of economic growth. Analyzing the reasons for the rapid growth of labor productivity in the United States (it doubled from 1909 to 1949), the economist concludes that the main role of technological change and innovation (the contribution of innovation is 7/8, and capital is 1/8) growth is only 1/8 of the total productivity growth is a part [10]. P. Drucker, a well-known expert in the field of management theory, also notes the crucial importance of technological progress and labor productivity improvement for economies, especially developing countries. According to him, protectionist measures became the first defensive reaction against external competitors [11]. His assessment of the problems faced by innovative active organizations is of great importance.

### **Result and discussion**

In this regard, we consider it necessary to reach the level of world rankings and indices of digitalization of the economy in order to ensure the employment of the population.

However, despite this, telecommunications services in our republic face a number of problems in their development, including problems in ensuring the implementation of regulatory documents on the development of telecommunications, the existence of laws that require improvement, conducting research to ensure serious employment in this field, selling goods and services, and competing with large companies. An example of this is the low level of economic and legal literacy necessary to make scientifically based decisions on problems related to the development of effective strategies and tactics, and the barriers set up by the administrative bodies of inspection and control.

For this reason, in order to fundamentally solve the problems in the field of population employment in the field of telecommunication services, it is necessary to introduce digital service management.

Human resources with intellectual knowledge are used for data processing, data transfer, organization of electronic document exchange, introduction of interactive services in the organization of digital service management system in the field of telecommunications.

In the process of digital management of telecommunication services, it is important to provide human resources with intellectual knowledge to monitor the management using new methods and digital technologies, to apply digital technologies for information security, to manage the database and to ensure that top management has digital technologies.

By studying a number of human resources in ensuring the employment of the population, we expressed information and protection in groups.

In our opinion, there is one common shortcoming in the interpretations of this concept, which is that competitiveness is considered as an indicator that represents the total characteristics of the

human factor. They did not take into account what the consumer is most interested in, i.e. quality, consumer price ratio. However, compliance with these requirements is crucial in determining the competitiveness of products or services.

Also, in some economic sources, it is emphasized that the competition is a competition related to labor, and one type of product differs from another in terms of quality. At the same time, it is necessary to dwell on the meaning of the concepts of "competition", "rivalry", "competition", "competition". The content, correlation and difference of these concepts can be explained as follows.

The competition between independent producers of goods in enterprises consists in the struggle to produce goods under favorable conditions and sell them at a good profit-making price, to strengthen their position in the economy as a whole, and they spend the necessary funds to purchase the necessary means of production, raw materials and materials, and to hire labor. Competition between producers is ultimately determined by the attraction of consumers in the market.

"Competition" is used with the word competition. The competition is about who can excel and who can achieve good results, because the underachievement and underachievement are ensured in "numbers".

Mandatory mobilization method in the competition:

- spirit of initiative;
- the possibility of improving quality and reducing production costs;
- under the rule of the "gross product" ideology, competition indicators are performed based on quantitative indicators. Competition is the driving force of the stimulating economy. Therefore, it occupies a strategic place in the mechanism of the digital economy.

In the digital economy era, it is important to take into account the existing real opportunities for the development of competitive relations. Competition is unplanned and controlled by transparent smart technologies.

Here:

- supply and demand;
- price-price;
- level of oligopoly and monopoly;
- the antimonopoly policy of the state is of decisive importance.

There will be no compulsory mobilization in the competition. Here, in exchange for the development of honest and free economic competition, the domination of buyers over producers is established.

Competing through price is the most common. Nowadays, the competition is taking on a unique shape. Price competition requires production to be located in countries where costs are lowest. Price competition arose in the past when there was free market competition, where the same goods were sold at different prices. By lowering the price, the manufacturer was able to differentiate his product, draw attention to it, and ultimately gain the desired market share. In the current market conditions, open competition with price does not apply, because when one of the producers lowers the price, its competitor does the same, which does not change the position of the firm in the market, but leads to a decrease in profits in the industry as a whole. leading to a decrease in investments for the renewal and expansion of fixed assets. As a result, instead of the expected victory and defeat of the opponents, there is an unexpected destruction and fracture. Therefore, industrial monopolies tend to keep prices as long as possible, to increase profits by reducing costs and marketing costs. Thanks to the progress of scientific and technical development, favorable conditions have arisen for the use of non-price methods of competition. In non-price competition, not the price of the product, but its high quality, low consumer price, modern design, service, reputation of the company that produced it becomes the main factor of competition. When studying the strategy of capturing the market by lowering the price, the following questions will be answered: As a result, instead of the expected victory and defeat of the opponents, there is an unexpected destruction and fracture. Therefore, industrial monopolies tend to keep prices as long as possible, to increase profits by reducing costs and marketing costs. Thanks to the progress of scientific and technical development, favorable



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- What are the factors that determine the competitiveness of other goods?
- What are the advertising means and sales promotion methods of competing companies?
- what trademarks are used?
- what is highlighted in the packaging-decoration, design of competitors' goods?
- what kind of service is offered during the product warranty and subsequent periods of use?
- Are the goods sold through national trade networks or has the company opened its own branch?

- movement of goods used by competitors (transportation, volume of reserves, warehouses and their location. As a result, the questions are answered: are competitors acting like this? Is there no other way? According to P.S. Zavyalov, "Competitiveness means a set of consumption and value characteristics that ensure the purchase of goods in the market, that is, in conditions where there is a large offer to exchange similar competing goods, it is necessary to understand the ability to exchange the same goods for money". The buyer's costs consist of two parts, one part of which is the purchase costs (goods price), and the other part is the costs related to its consumption. Competition is wide is a concept that is influenced by many factors. In assessing the level of competitiveness of the firm, the factors that determine the intensity of competition in the network market serve as a basis for analysis.

J. Lamben groups competitive advantages into two broad categories - external and internal competitive advantages, that is, competitive advantages that describe the competitiveness of the firm and the brand. An external competitive advantage represents a good's "market power, which means that it can force the market to accept higher selling prices than that of its favored competitor, and relies on advantages in identifying and satisfying the wants of customers who are dissatisfied with existing goods. Internal competitive advantage is a product-based product that allows a firm to achieve lower production costs than its competitors and creates value for the producer, and is more

tolerant of market or competition lowering selling prices."

The scheme of classification of factors representing product attractiveness and competitiveness can be shown in the form of a chain: price - quality - service - marketing environment.

Competitiveness is related to quality and value factors. They can be fully characterized with the help of quality, economy and marketing indicators.

Using the profitability matrix, we will look at the issue of achieving growth at the cost of increasing profitability. In this case, we will look at the issue of ensuring the optimal ratio, dividing the average purchase amount and the speed of visitors into segments. Effective segmentation based on consumer purchasing behavior and decision-making characteristics helps to effectively manage marketing and sales efforts and focus them on key business growth issues.

It should also be noted that different subjective or objective understanding of small and medium business by one or another researchers and politicians complicates the determination of population employment boundaries. There may not be uniform criteria even at the level of a country

### Conclusion

Qualitative options for determining population employment imply the use of qualitative criteria. In addition, some quantitative indicators can be used in qualitative definitions, but this approach is based mainly on subjective judgments and experiences.

According to the results of the above analysis, the use of the above-mentioned methods to ensure employment of the population, in particular, the profitability matrix and the use of the segments of the average amount of purchases and the speed of visits, will serve to ensure the employment of the population in our country and its regions, and to increase the effectiveness of management organization in them.

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# PRINCIPLES OF IMPROVING THE QUALITY OF EDUCATION BASED ON THE USE OF ICT

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## ABSTRACT

The introduction of innovative educational technologies based on the use of ICT allows to expand the potential of educational services, to get the opportunity to interact with the world's leading trends in the field of education. The observed process of globalization, including in the field of higher education, requires changing the main characteristics of the university based on new requirements for creating conditions for international certification and accreditation, ensuring international mobility of students and teachers, using international educational programs technologies and others.

**Key words:** World educational, educational services, international educational programs, innovative educational technologies, methodological.

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## INTRODUCTION

It follows that the introduction and development of remote technologies in order to be in the general direction of the world educational space is one of the important problems facing the educational system of our country. At the same time, it should be noted that in the scientific literature, insufficient attention is paid to the issues of developing the theoretical justification of the socio-economic aspects of the use of distance education technologies. This undoubtedly led to the selection of a dissertation research topic of relevance and high practical importance.

Development of methodological bases for the formation of innovative educational systems, improvement of economic and mathematical methods and models that ensure the increase of the socio-economic impact of the educational process in the distance education environment.

To achieve this goal, the following tasks were defined and solved in the work:

- to determine the place and role of innovative educational technologies in the higher education system as one of the factors of increasing the quality of acquired knowledge;
- to determine the features of the introduction of information and communication technologies into the educational system in the conditions of the introduction of distance education technologies;
- development of an imitative economic-mathematical model of ensuring the socio-economic efficiency of innovative educational technologies in higher education;
- development of models and algorithms for improving the organization of the educational process in the conditions of distance education technology;
- development of software based on algorithms aimed at improving the organization of the educational process in the conditions of distance technology;
- offers the main directions for improving the educational process in the higher educational institutions of the republic in the environment of distance education technologies.
- A study of the current state of the world economy shows that the transnational movement of information, technology and capital flows is increasing. This trend leads to increased competition in the field of improving the quality of education among the countries of the world. This, in turn, serves the emergence of new directions in the development of higher education. Factors such as the increasing importance of higher education, the increase in the number of students, and the need to



provide educational services should be taken into account in the new directions. The change of the educational paradigm is predetermined by the transition of civilization to the post-industrial, technological, information age. In this case, not scientific knowledge, but the technology of its transformation plays a special role. It can be said that material production ceases to play a leading role.

- One of the main directions determining the development of modern civilization is the state and trends of the world educational space. Defining the concept is important here
- "Educational System". From [1] we can give the following definition:
- "Educational system is interrelated educational and innovative processes (both inside and outside the facility) and management of these processes aimed at meeting the educational needs of students and the population " [3].

In modern conditions, the development of the national education system cannot be carried out without taking into account the experience of the current world trends. One of the main factors is the international labor market. Studies show that the current trend in the labor market of different countries indicates a mismatch between the structure of higher education personnel training and the requirements of the national economy. This is confirmed, on the one hand, by the fact that there is a sufficient number of specialists who cannot find work that meets their needs, and on the other hand, by the fact that enterprises do not find specialists who meet their needs. The current situation causes a change in the direction of the country's education system in the direction of adapting the level of professional training of personnel to the requirements of the labor market. that is, the education system should actively respond to changes in the world economy [3]. In other words, it is necessary to improve the efficiency of educational services.

This trend in the introduction of ICT into the educational process is confirmed by the conclusions presented in the study "World Communication and Information Report 1999-2000" prepared by UNESCO and published by the Business Press agency at the end of the 20th century. In the introduction to the report of the Director General of UNESCO, Federico Mayor, it is emphasized that "new technologies must contribute to the creation of a better world in which everyone can enjoy the achievements of education, science, culture and communication". ICT affects all these areas, but they have the strongest positive impact on education, because they "open completely new ways of learning and teaching" [4].

This formulation of the problem of renewing ICT implementation was continued in the second chapter of this study by C. Blairton, Associate Professor of the University of Hong Kong, and presented by Professor O. Garbo in the lecture "New Directions of Education". Chapter VII of the Royal College of Librarianship in Copenhagen "Information services, libraries, archives. Also, in this study, the current global processes of the penetration of mass media, electronic industrial products, telecommunications and their impact on the activities of the information society and the global impact of ICT on the educational process analysis of trends and summarized.

The analysis of the formation and introduction of ICT in the path of the information society showed that the full use of ICT in the formation of new communications and a highly automated information environment in all aspects of society was the beginning of the transformation of society. was the first step towards the formation of the existing education system and modern information society. The change of the existing education system created the need to identify and determine the appropriate response to the main problems that arose at the beginning of the 21st century:

The importance of society adopting a new development strategy based on knowledge and effective information and telecommunication technologies;

The need to form such a level of abilities and personal characteristics that determine the main direction of the development of our civilization;

Effective use of ICT, which helps to create opportunities for the successful development of a society based on real education;

The need to achieve interdependence and the level of socio-economic development of the people, the achievement of the national security of the country, the interrelationship between the



state of education and the introduction of ICT.

Studies conducted by a number of scientists [5] show that the fundamental factors determining the transition to the formation of a prospective education system are of fundamental importance for the countries in the transition economy, including the Republic of Uzbekistan. In the era of economic changes, in our opinion, the following [6]:

- To improve the quality of education on the basis of fundamentalization by achieving the awareness of the student using the modern achievements of science and ICT;
- Using new modern technologies of the information society in the educational process of teaching based on the introduction of ICT;
- Achieving the openness of the educational process to a wide segment of the country's population; Involving a creative approach to the educational process for the development of an individual knowledgeable person.

Information and educational technologies that allow the use of modern computer technologies in the educational process to develop and implement a complex process to influence education and to activate and improve the quality of education based on the creation of new approaches to the effective interaction of teachers and students with ICT. The practical use of new information and educational technologies, according to a number of researchers [7, 8, 9] makes it possible to increase the effectiveness of training by 20-30%. The use of computer technologies in the educational process has led to a radical transformation of previously used traditional teaching methods and technologies, and the entire field of education, at the same time, a new field occupies a special place. communications, communication technologies such as television, communications based on space technologies, which were previously used management process and additional training systems. An important example of the effective application of ICT to all aspects of human activity was the emergence of the Internet. The global computer network has made it possible for almost everyone to use its unlimited possibilities for collecting, storing and transmitting information.

For the first time, the credit technology of education was introduced in the US educational system. In 1869, the president of Harvard University, Charles Ely, a well-known Picture of American education, introduced the concept of "credit system" [10]., according to which it was planned to use credits as a unit of measurement of mastery of science. . Based on the proposed approach, this form of educational process was allowed

transfer of the educational process to a single educational format, which made it possible to bring different educational technologies into a single compatibility. It should be noted that the concept of "credit system" introduced into the educational process in the USA was further developed and reformed based on the requirements of the educational process. Considering the global trends in the educational process, we can conclude that students prefer to receive educational services online. For example, the following main trends of higher education in the United States of America have been identified [11,12]:

Enhance online learning;

The share of the commercial sector in distance education is increasing;

Solving the problem of ensuring the quality of education using distance education technology.

Studying the development trends of the education system in many European countries (Bologna Convention), we can conclude that the strategic goals of education development are as follows [13]:

- educational system, which is appropriate
  - goals of the current stage of post-industrial society development;
  - increase the rate of development of the educational system in connection with other social spheres and economic sectors of the region;
  - existence and application of the principle of "quality and affordable education for all" and "lifelong education";
- formation of public opinion in favor of the education sector as a priority direction for the

implementation of socio-economic development in all spheres of society's development; creating conditions for integration into the world educational space.

It is true for the CIS countries. there is a tendency to commercialize education. Here it is important to define an educational strategy to ensure a level playing field for education [14].

It should be said that the process of reforming the education system in different countries is uneven. In this direction, the use of information-computer systems and Internet technologies used in the higher education system is important [15].

Network or peer-to-peer learning technology (abbreviated p2p-learning) is based on the implementation of the idea of mass cooperation. The main principle of openness is that educational resources are a network of student interaction[16].

In the context of the reform of the educational system, the tasks of the university are to search for such educational technologies that allow to optimize the teaching of academic subjects. In addition, such educational technologies should help to take into account the individual characteristics of students. Based on this, it is possible

The conclusion is that such trends of higher education are a priority, and they are based on the following principles [17,18, 19]:

to achieve such a level of professional and general cultural preparation of university graduates in order to eliminate the isolation and isolation of national education systems in order to provide opportunities for the integration of trained specialists into the world educational space;

Building educational technologies based on the transition to the block-module structure of current curricula, using a wide selection of elective subjects, using an independent rating system for knowledge assessment, providing ample opportunities for independent professional training. selected specialties;

Providing opportunities to use open educational systems that contribute to the organization of the educational process of teaching based on the selection of individual programs that allow determining the educational trajectory that matches the educational and professional abilities of students.

The analysis of statistical data shows significant inequality in the level of education. According to statistics, the level of educational opportunity in the world's leading countries is 350-400 students per 10,000 people. As can be seen from the table above, among the countries on this list, the lowest number of students is in Uzbekistan, Azerbaijan and Uzbekistan (102, 199 and 280, respectively). For Russia, this indicator was 660 students. Even for developing countries, the minimum Picture is 25% of the working population with higher education [20].

- The main strategy for achieving equal access to education is to:
- Development and implementation of educational technologies that reduce educational costs, in particular, the use of network technology to provide education;
- Bringing the place of education closer to the place of residence of students, which reduces the cost of education;
- Equipping with technical tools of the necessary size and appropriate quality;
- Transition to lifelong learning through the use of multi-level technologies for higher education;
- Providing various forms of higher education and related services;
- Providing material assistance to the poor and other socially vulnerable groups of the population.
- Consequently, in addition to the traditional activities of the university, new types of activities aimed at commercializing the activities of educational institutions have appeared, including:
- Carrying out promotional activities to attract students to the university to provide educational services in various forms and periods;
- Conducting marketing research in educational and scientific service provision system;
- Monitoring the demand and needs of the labor market for specialists in relevant specialties;
- ensuring the growth of the income part of the university budget by reducing the cost of profit and educational services;
- A differentiated approach to the use of various factors of resource provision. As mentioned above,

there is currently a tendency to increase the share of students studying on a fee basis [21,22].

The study of the world trend in the educational process shows that the amount of knowledge obtained in higher educational institutions is increasing significantly. This is a sign that the duration of training courses is increasing in order to prepare a qualified specialist who meets modern requirements. In addition, the growth rate of the emergence of new knowledge shows that the given education can become obsolete in 2-3 years. This leads to an increase in the age at which specialists begin to serve society. This implies the special importance of reforming the concept of modern education in terms of the fundamentalization of education.

The main scientific results of the research obtained by the author are as follows:

It was determined that the use of distance education technologies is an important way to ensure wide access of the population to higher education. It turned out that the transition to distance education technology, taking into account the use of ICT, is becoming the most promising direction of higher education based on modern information technologies.

Specific features of the use of ICT in the distance education environment were revealed, which create conditions for the realization of the individual educational trajectory of students, the possibility of differentiating the educational material in order to achieve the required high-quality educational standards. personality of the student based on the introduction of innovative electronic technologies and software.

In order to assess the socio-economic efficiency of introducing innovative educational technologies into the higher education system, a simulation economic-mathematical model was developed, aimed at determining the strategy of introducing educational technologies, taking into account the achievement of maximum socio-economic efficiency. . According to this model, the optimal values of investment resources used for educational activities are calculated. Based on the number of students, calculations were made showing the effectiveness of the transition to distance education technology.

Graphically, the presented set of objectives for the provision of educational services is presented in the form of triangle sides representing the educational objectives formulated above, presented in the work of Daniel SJ, and shows the potential contribution of ICT [23].

According to Daniel SJ, the main purpose of using ICT is to increase the possibility of extending the sides of the triangle in terms of the convenience and quality of education, while reducing the cost of education. This approach has the following limitations in traditional classroom teaching with teacher and student participation (Picture 1):

First, the increase in accessibility through the quantitative increase in the number of students leads to a decrease in the quality of the educational services provided.

Secondly, improving the quality of the educational process by using more educational and methodological materials and attracting experienced pedagogical personnel leads to an increase in the cost of providing educational services.

Third, reducing the cost of educational services affects both the convenience and quality of the educational process. Research shows that mainstream education the process is the rapid development of hardware and software to ensure the provision of educational services. One of the factors that confirm this direction is the desktop reality.

Studies show that the effectiveness of providing educational services in modern conditions depends on the level of ICT use. The main trend was the provision of educational services over the Internet. At the same time, it should be noted that the purchase of appropriate office equipment and used software requires large financial resources, as well as the use of employees with the necessary qualifications.

Determining the efficiency of activity and the adequacy of management influence in the field of education is one of the problems that requires the development of theoretical and practical tools of organizational management. It is, accordingly, of some importance in terms of both research and management directions for solving the problem [24,25].

For the problem of determining effectiveness in the field of education, determining the ratio of

the results obtained and the funds spent is the main criterion [26]. Determination of effectiveness in the field of education is complicated by the fact that the management of socio-economic systems is multifactorial and has a complex structure, which is characterized by the presence of a sufficiently large number of management objects. At the same time, it is necessary to take into account the wide range of indicators used and the complexity of formalizing the established criteria of the system. As a rule, the study of educational systems shows that they work in the presence of large information arrays. This creates certain difficulties in learning dynamics.

At present, a sufficient amount of methodological and practical experience has been accumulated in the field of determining the level of efficiency based on general theoretical and methodological approaches to the evaluation and operation of the educational system. However, in the context of changing the national education system and the emergence of new modern educational technologies, in the context of the increasing use of ICT in the educational process, it is necessary to develop new approaches to the evaluation of the effectiveness of the educational system, taking into account the specified properties [30].

- Research methods in the evaluation of educational quality can be divided into two directions in terms of methodological approaches used:
- Use of informal heuristic approaches in the analysis of events or processes;
- The use of mathematical methods that require strict formalization in the form of models and their precise justification [31].

Depending on the intended use of the assessment of the quality of education received, both analysis methods and forecasting methods can be considered. The goal of conducting predictive calculations is to formulate and use reasonably possible options for the development of the educational system in order to determine the prospective directions of the development of the studied object [32].

Conducting research requires compliance with a number of basic rules that must be followed in order to develop an adequate model and achieve practical important results [33]:

The following principle of optimality refers to the search for the best solution from a set of available ones and the argumentation of this choice.

The principle of adequacy lies in the evaluation of the performance of the educational system and the selection of the result indicators.

The principle of formalization is that the results of the analysis should include important complex features and conclusions presented in a form convenient for interpretation and practical use.

The structure, objective function and limitations of the model should reflect the content of the educational system, in other words, its internal organization. In addition, in the model, it is necessary to identify and take into account various information flows of events that may affect the operation of the studied system. In general, the activity model of the university should cover as much as possible the array describing the existing mechanisms and the cost estimate of the activity.

One of the most important areas of use of models is the business project model, which determines the financial results of the educational process on new educational technologies, in particular, distance education technologies. Such business-project models should reflect the interconnectedness and interdependence of the university and the environment. Conducting a structural analysis using economic and mathematical modeling tools is as follows. As an educational enterprise, the university must process incoming data in a way that fulfills its purpose, i.e. provision of educational services consisting of a complex of interrelated and interconnected activities within the framework of business projects. The successful operation of the university in such conditions largely determines its competitiveness in the market of educational services. The decisive factors here are the ability to identify and provide a range of educational services of the required quality and at the lowest cost compared to competitors.

From this point of view, it is important to determine the stages of transition from one form of education to another, which determines the change of the life cycle of the university in accordance

with the changing economic conditions [34].

➤ When conducting a structural analysis of the educational system, it is necessary to take into account the traditional and remote forms that affect the educational process:

- The structure of formation of educational business projects;
- Performance of educational business processes;
- A set of rules and requirements used in the educational system;
- The structure and directions of information flows (educational, financial, regulatory, property, etc.).

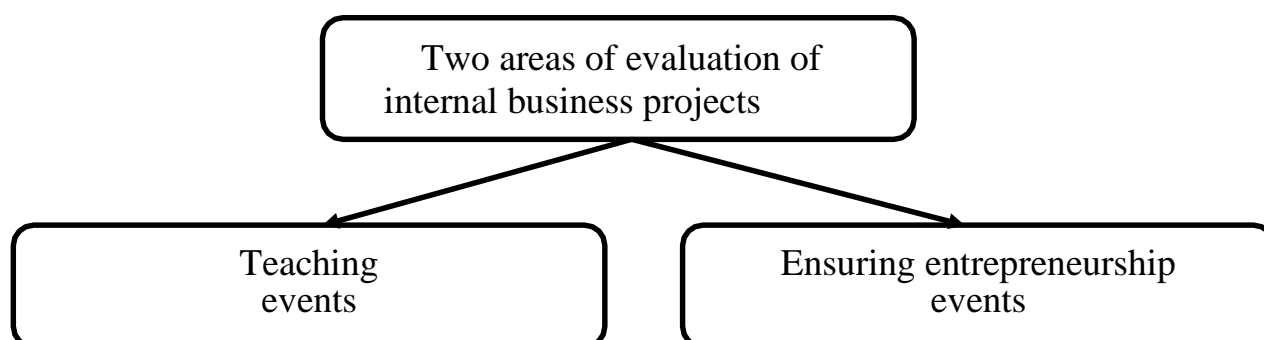
➤ The results of the structural analysis of the educational system should be the determination of the following parameters that determine the functioning of the educational process:

➤ Finding the important and main factors that shape the educational costs; Developing and forming an adequate model of the operation of business projects and relevant directions of information flows [48];

➤ Development and implementation of a corporate information system project to implement the educational process.

➤ In this case, it is important to consider that the evaluation of the use of information and communication technologies is related to the concept of transactional information systems, which includes systems that allow minimizing costs through optimization.

➤ operation of the studied object. In other words, implementation of activities aimed at increasing efficiency by reducing transaction costs of business projects (Picture 1).



**Picture 1. The scheme for evaluating the use of information and communication technologies (developed by the author)**

- Various filters, matching criteria, etc. are used to implement the structure of the initial data and determine the relationship between the parameters.
- The use of data with different informative properties leads to different principles of processing these indicators. It should be noted that the presence or absence of a summarizing indicator is the basis for the classification of system efficiency assessment methods, which can be expressed as follows:
- Carrying out a comparative evaluation of the studied educational technology based on the compilation of their ratings with the next rating;
- Evaluation of efficiency based on the application of the developed system of generalized criteria;
- Conducting a comprehensive analysis on the basis of the received coefficients that evaluate the parameters and condition of the studied educational technology.

It can be concluded that the approach to the integration of new ICT-based educational technologies is based on intelligent systems and therefore consists in the use of complex indicators. At the same time, factors such as costs, teaching time, and subjective assessments of teachers and students are used as a specific assessment of technical efficiency [35].

The conducted studies show that the process of reforming the educational system requires,



first of all, solving the problem of introducing information and communication technologies into education. In order to calculate the effectiveness of ICT use, it is necessary to simultaneously define and develop a system of relevant indicators and determine the goals of their use in the educational process. It is worth noting that in order to formalize the main goals of educational technologies, it is necessary to solve a number of problems related to the research of many authors in the field of the educational process, both in our country and abroad. [36]. In particular, one of the examples is the introduction of a point system that allows the use of other indicators to evaluate the effectiveness of using ICT in the educational process [37].

Based on this, it can be concluded that, taking into account the introduction of ICT, educational technologies are becoming priority systems aimed at solving the main goal of the educational process - the training of specialists that meet international requirements. The concept of "educational technologies" includes the development and implementation of educational plans, programs, educational materials, as well as the transfer of a complete complex of the knowledge system to the student.

Modern world trends in the development of educational technologies indicate the need to take advantage of electronic (digital) educational resources and ICT and achieve their openness to all student contingents.

For countries with economies in transition, including CIS countries, it is important to create appropriate mechanisms to ensure a gradual transition to a new stage of education based on the use of ICT, which will allow the acquisition of knowledge in both areas. national education system and world education space system.

The use of ICT should be based on the creation of e-learning resources that support the acquisition of professional or professional skills. This opens up opportunities to use informal technologies to acquire knowledge and skills.

The introduction and development of ICT provides equal opportunities for all participants in the educational process to receive quality education. At the same time, special attention should be paid to students with disabilities.

ICT creates conditions for the implementation of the personal educational trajectory of students, opportunities arise to differentiate the educational material depending on the personality of the student. This makes the learning process more efficient.

The introduction of new educational technologies allows to ensure the achievement of the required high-quality educational standards, which is achieved through the online access to modern educational technologies, scientific-methodical materials and knowledge resources. In addition, it helps to organize effective feedback between the participants of the educational process.

It should be noted that in the Republic of Uzbekistan, certain works are being carried out on the introduction of ICT into the educational process. At the same time, it should be noted that most of the studied countries are based on international cooperation with more technologically advanced countries in the introduction of ICT. in order to improve the built educational system, modern technical tools and methods are needed to collect, transmit, store and process information in a certain educational system. The importance of this process of transferring the practical experience gained during the educational process is that it allows to increase the effectiveness of the educational technology used.

It should be noted that the use of ICT in the educational system allows not only to improve the quality of educational technologies, but also to promote new, more effective mechanisms in the educational process. The use of ICT is primarily related to the use of technical tools such as computers, telecommunications and special equipment, and the development of software and technical tools for information processing systems. For the first time, complex models and algorithms aimed at making management decisions on optimizing the educational service of the university are offered. The criterion for the developed models was the minimization of the time of training students with appropriate educational and methodological complexes, which allows to determine the optimal strategy for the development of education in the distance education system.



1. A set of practical programs for managing database structures was implemented and tested using the php 7, mysql 5.7 web programming environment according to the following proposed algorithms:

2. Forming a training module;
3. Choosing an individual educational strategy;
4. Organization of the educational process in the conditions of distance education technology.

5. Based on the wide introduction of distance education, the main directions of increasing the socio-economic efficiency of higher education were defined and proposed. Based on the trajectory of individual education, the strategy of increasing the socio-economic efficiency of the provision of educational services in the conditions of the application of distance education technology was determined.

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# PRICE POLICY IN THE TELECOMMUNICATION SERVICES MARKET

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## ABSTRACT

As a result of an unexpected event in the competition in the market of telecommunication services, new ways of development in the business sector have been shown. At the current stage of digitalization of relations between consumers and telecommunication service providers based on market principles, it is proposed to improve the service strategy of service providers and also to optimize the price policy in the development of marketing strategy.

**Keywords:** Price policy, Digital economy, telecommunication, marketing strategy, modernization, telecommunication services, e-money, e-mail marketing, e-banking, e-services, e-commerce.

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## INTRODUCTION

The current policy of our country, based on globalization and digitalization of the socially oriented market economy, creates the need to effectively organize the price policy of the telecommunication services market and digitize the economy.

As a result of an unexpected event in the competition in the market of telecommunication services, new ways of development in the field of business are increasing. At the current stage of digitalization of relations between consumers and telecommunications service providers based on market principles, it is appropriate to improve the service strategy of service providers, as well as to optimize the price policy in the development of marketing strategy.

The development of methodological approaches to pricing policy, taking into account the economic potential of telecommunications enterprises, to form a marketing strategy and develop mechanisms for its practical application, is of great scientific and practical importance at the current stage of economic reforms.

The modern requirements of the market economy determine the cooperation of the enterprise with a large number of suppliers of raw materials and materials, for example, for the production of products under its own brand, regardless of the territorial location. Every year, the use of outsourcing and other services provided by third parties is expanding[1]. All this allows you to increase the competitiveness of your goods and services (for example, if the retail chain has its own brand), reduce their price and increase their quality. After all, one of the decisive factors for success is the ability to choose from a wide range of suppliers [2].

### Research methods

Many buyers, especially in the context of the ongoing economic crisis, are looking for the cheapest goods, which requires sellers to use a flexible pricing system. In highly competitive conditions, price risks may arise for the seller that require constant monitoring and evaluation using, for example, the method of imitation (simulation). A.V. Laktionov states that it is possible to prevent, insure, reduce and neutralize price risks, for which hedging should be carried out [3].

V.N. Tkanko modernized the formula for calculating the risk of fuzzy sets and adapted it to the conditions of implementation of the marketing development model [4].

L.M. Filipishina looked at price risk from the perspective of enterprise-wide pricing policy and

proposed effective pricing methods to minimize price risk. Improved price classification in order to improve the efficiency of managing the pricing process at the retail enterprise level. A new classification feature was introduced - "according to the level of risk", in the context of which the following was noted[5]:

- risk-free price;
- price with minimum risk level;
- price with the level of perceived risk;
- price with an unacceptable level of risk.

Based on research L.M. Filipishina suggested the following ways to minimize the risks associated with the company's pricing policy:

- establishment of a permanent system of training of personnel participating in the development of the price policy;
- development of technologies and procedures for making effective price decisions;
- formation of the methodology and procedures for the formation of the information system for the development of an economically based price policy;
- development of a system for adjusting the level of trade margin and sales prices.

N.W. As shown by Apatova [6], new pricing principles have been introduced on the Internet, which allows a virtual entrepreneur to implement a flexible pricing policy even in times of crisis.

In the implementation of enterprise activities in it, the computer network allows to use the auction model for price determination based on the comparison of the conditions offered by a certain market [7]. In this regard, we can distinguish the principles based on the property of the computer network in terms of offering new technologies:

- profit;
- differentiated pricing based on costs, volume, distribution method and logistics.

In order to carry out the fact of exchange (Goods - Money) in the conditions of the physical presence of the seller and the buyer in the market, the seller must organize the work of the point of sale. The point of sale must find the product, find it valuable to him and match his requests according to price, quality or other criteria, including satisfaction with the service at the point of sale, select and buy.

The last type of risk is also related to the company's pricing policy, so it is appropriate to consider it independent. N.G. Georgiadi [8], S.Ya. Saliga [9], G.V. Teplinsky [10], I.A. Kiseleva and S.O. [11], O.L. Tsvetkova [12] states that the main source of risk is the human factor. Risks occur during the operation of the system, primarily:

- technical failures;
- violation of the work schedule;
- local interventions to individual elements of the system.

The marketing strategy of trading companies in virtual markets should be based on the principle of providing a competitive advantage. G. Porter defines three strategies for achieving competitive advantage:

price leadership, differentiation, concentration [13].

In a virtual enterprise, a network of resources is created based on the analysis of potential participants. Its description is the most important part of the database of virtual enterprises. The database of job descriptions includes order information: content, deadlines, levels of complexity, price restrictions. On the basis of the received algorithms, as well as taking into account "tips", decisions on the distribution of the order are made in the interactive mode. It is also possible to use a knowledge base describing private decision-making rules in a declarative form when distributing an order with the help of an optimizer. With this approach, the principles of the theory of expert systems are implemented, and it also provides many advantages in the implementation of software systems - independence of databases, flexibility,

### **Result and discussion**

Trading enterprises are recommended to follow the following selection criteria in the process of



choosing a strategy for achieving a trading advantage (Table 1).

**Table 1**

**Strategies for gaining competitive advantages**

Options assumptions	Price leadership	Differentiation	Attention
1. Selection criteria	Presence of high entry barriers; low efficiency of activity; low business activity; opportunity to save sales volume	High consumer rating of the enterprise; high advertising costs; profitability of enterprises	The company operates in a specialized market segment
2. Commercial risk of strategy implementation	Failure to respond in time to changes in the external environment; decrease in the quality of goods and services; the threat of narrowing the sales market; competitors may use cost-cutting techniques	Due to the change in consumer values, the originality effect disappears; the price difference may be so significant that the financial investment for buyers becomes more important  brand loyalty	The threat of narrowing the market segment on which the company focuses; the difference in prices can be significant, which reduces the effect of concentration; competitors can find sub-segments within a segment and increase specialization
3. Strategy implementation directions	Reduce costs through scale, buy in bulk and get big discounts	Differentiation of service quality, differentiation of product assortment, active use of Internet marketing elements for advertising.  retail chains	Concentrating efforts to work with one or more segments of the market; selection of advertising methods depending on the target groups of consumers

Note that the marketing strategy is based on differentiating the value of the offer for different categories of consumers, in which satisfaction with their goods and processes is formed. Price policy is also influenced by external factors. For example, the level of market prices of technical means of information processing and transmission, conditions of legal provision of information, level of taxation, innovations in the market of information products. Problems of monitoring economic systems at different levels V.K. Galitsyn [15], the main causes of risk are the properties of systems such as uncertainty and conflict, while the external causes of information risks are the lack of clarity of primary sources and the high cost of obtaining information.

Increasing the stable competitive advantage of the enterprise also depends on the price policy. Because it is affected by many factors and their characteristics. It is presented in (Table 2).



Table 2.

**Factors of sustainable competitive advantage of the enterprise and their characteristics.**

Factors	Characteristics of the factors
A unique feature product	Ability to attract customers and customers need goods / services / works, have unique qualities and characteristics.
Scale effect	The ability to set a lower price by providing a higher volume of production/sale of the product offered by the enterprise in the market, because scaling allows you to lower cost per unit of output.
Experience	Ensuring the effective application of knowledge and technological innovations and improvements, as well as the use of experience curve effects, allows to reduce costs.
Brand power	It provides recognition of the company / product among other offers in the market, which allows you to offer the product at a higher price and justify it. buyer's value.
Diversification	More bidding opportunities for buyers wide / diverse range
high efficiency	Enables production / sales the company's product is at a lower price.
Reduce costs	Providing conditions where enterprise costs are low compared to the costs of competitors allows: to increase production / sales volume; reducing the retail price by reducing the cost of goods/products; increase profits and profitability.
Quality of service	The ability to remain loyal and loyal customers, as well as new ones - thanks to great convenience and other services

In recent decades, the rapid growth of e-commerce in the global retail industry has attracted more and more attention. In practice, it has shown the attractiveness and effectiveness of its application, because it requires a lower price, provides easy access to the market and a wide variety of goods, has the ability to differentiate services and provide fast service to any consumer, regardless of location. The technologies used in electronic commerce are diverse and are mainly based on the following information technologies [16]: e-mail, Internet, intranet (exchange of information within the company); EDI (Electronic Data Interchange - electronic data exchange); extranet (exchange of information with the outside world).

In this regard, the study of consumer preferences is not only desirable, but also a necessary tool

in successful competition, because a deep knowledge of the needs of a potential consumer not only helps to set competitive prices for goods, but also helps to improve product quality[17]. aligning all components of the marketing mix to achieve the company's strategic goals.

The method of studying consumer preferences is a survey of buyers, which allows to obtain information about the factors that shape certain consumer behavior, to assess its level. Satisfaction with product range, prices, service quality, etc.

The high risk zone in determining the price policy includes 8 risk factors:

- wrong choice of the target audience;
- imperfection of the technologies used for product promotion;
- Inadequate assessment of Internet marketing tools;
- low consumer confidence in online purchases;
- changes in the price level of commodity suppliers;
- decrease in market share;
- Risks related to the lack of financial resources for the introduction of innovations in the Internet sector.

So, if the goal is sales or, in other words, the volume of activity, then the main indicator - the evaluation criterion will be the turnover in terms of volume and dynamics, and if the goal is the profitability of the trading company, then it will consist of the profitability of sales and the total amount of profit received.

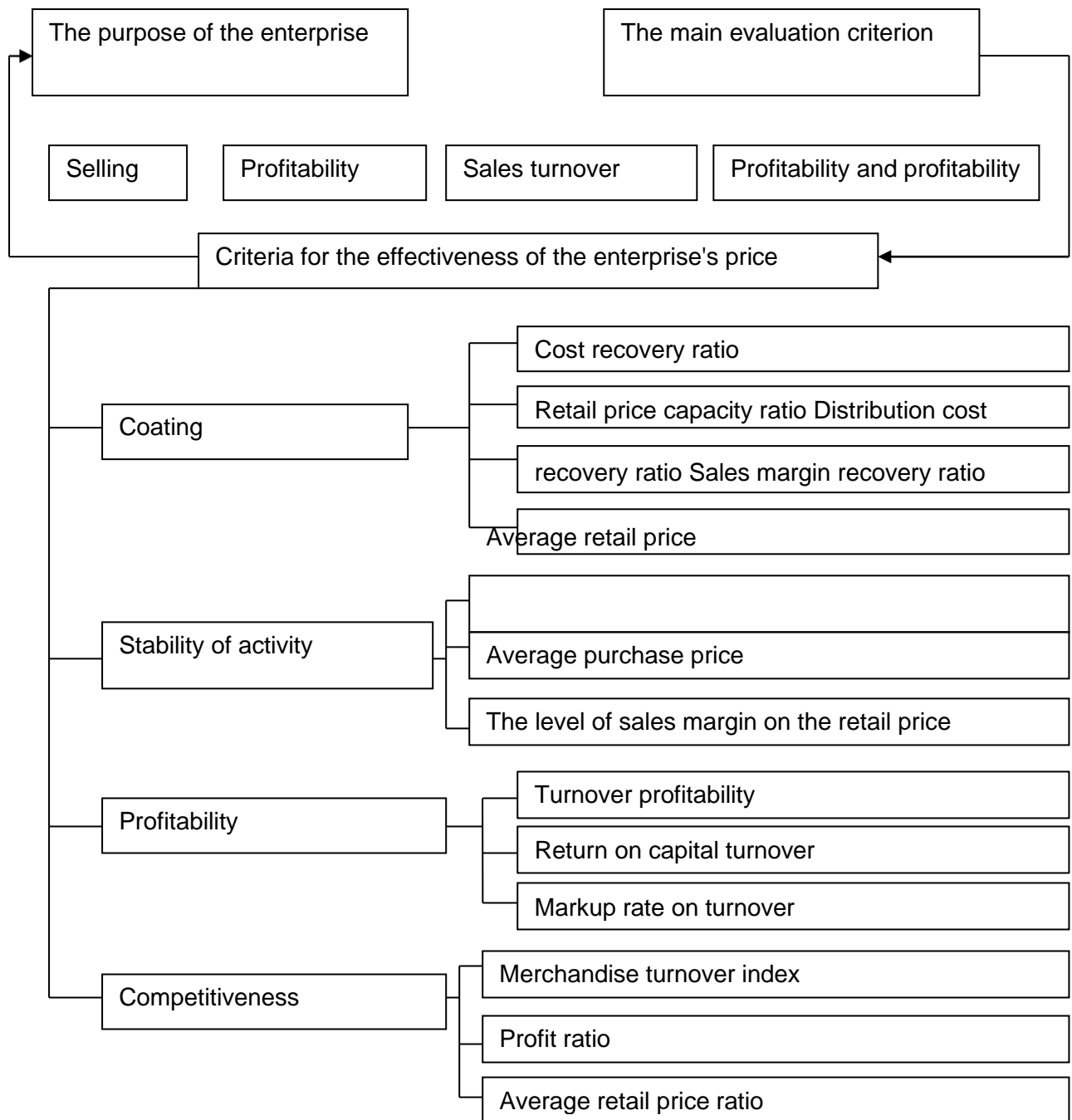
Table 3 shows the main principles affecting prices in the computer network.

**Table 3**

**Basic principles affecting prices in computer networking**

Principle	The essence
"Advertising pays for the product"	Advertising income added to the price of the sale of the offered goods, allow them to sell below cost.
"Buyer want to pay"	The Internet works like an auction and flexibly responds to changes in supply and demand in the price range.
"Price assigned according to the number transactions"	The Internet has a dualistic nature, creating virtualthe market also has supplier "free" products, because the product or service is provided for free, but the buyer pays a certain amount for each financial transaction

Picture.2 shows the criteria of the effective price policy of the enterprise, which are selected based on the price policy used in the marketing activity chosen by the enterprise.



Picture 1. Criteria of effectiveness of price policy

Risks in the high-risk zone require significant management attention, in particular:

- reduction of loyal audience, ineffective price policy, ineffective development and implementation of advertising campaigns, changes in the tax system, changes in the price level of suppliers of goods; decrease in sales profitability, loss of financial stability, insufficient financial resources, risk of bankruptcy, risks related to the introduction of innovations in the marketing policy of the enterprise, risks related to interruptions in the activities of information services and providers; risk of disclosure of confidential customer information, poor content content.

Thus, the Internet computer network affects pricing, makes it more convenient for buyers and sellers, and allows buyers to search and find goods with the best ratio.

"price, quality" and the seller should implement one of the possible marketing and pricing policies to minimize the risk of lack of profit.

The significant growth of Internet technologies has contributed to the rapid growth of marketing activity in the Internet space, in which merchants working in virtual markets have great opportunities

as well as a number of specific risks:

- cyber attacks;
- risks associated with interruptions in the activities of information services and providers;
- virtual fraud;
- breach of data integrity;
- the risk of disclosure of confidential customer information; low-quality content content;
- The imperfection of SEO.

The current development trends of the market force the telecommunications companies to shift to the needs of more subscribers – real customers who generate income and to listen to their demands more and more. This strategy can significantly reduce customer churn and continue to grow your subscriber base[18].

In this article, the development of the scientific basis of marketing strategies for the development of telecommunications enterprises and the creation of methods of application are:

- determining the place and role of marketing;
- development of marketing strategy and its ideological basis;
- justification of the role of marketing strategy in telecommunications enterprises in the conditions of digitization of the economy;
- analysis of marketing activities of telecommunications enterprises;
- principles and criteria for development of marketing strategy in telecommunications enterprises;
- development of marketing strategy in telecommunications enterprises and ways of its implementation.

The most basic process in marketing is two-way and complementary. On the one hand, this is a comprehensive and in-depth study of the market of telecommunication services, demand, tastes and needs, orientation of service delivery to requirements, addressability of service delivery, and on the other hand, it is manifested in active influence on the market and its existing requirements, consumer preferences and the formation of needs.

The marketing strategy consists in coordinating the company's (firm's) capabilities with the market situation, defining complex means of achieving the set goals. A mature American economist I. Ansoff [19], the strategy in its essence and aspect refers to the set of rules that are available for application in the decision-making process of the organization in its activities.

J. J. Lamben defines marketing as follows: "Marketing is a social process aimed at satisfying the needs and desires of people and organizations through free competitive exchange of goods and services of value for purchase" [20].

The application of Lamben's marketing philosophy provides for two directions of enterprise activity.

1. The first direction consists of regular and continuous analysis of the needs and requirements of decisive groups of consumers, as well as the development of an effective concept of goods and services that allows the company to provide better services to selected groups of buyers than competitors, and thus provides the manufacturer with a stable competitive advantage. . This process is one of the main tasks of strategic marketing.

2. The second direction consists in organizing trade and communication policy in order to inform potential buyers and demonstrate the specific qualities of the goods while reducing the costs of searching for buyers, which constitutes the task of operational marketing.

Operational marketing is an active process of short-term planning aimed at existing markets. This is a classic commercial process of achieving the desired volume of sales in the market of telecommunication services by using tactical communication tools.

The activity of operational marketing is a decisive factor in the activity of telecommunication services enterprises, especially in the increasingly competitive telecommunication services market. Even if the quality of any product or service is the highest, it should have an acceptable price for the market, the sales network should be adapted to the habits of the target consumers, and it should have communication support that ensures the good performance of the product in the market and

emphasizes its unique features.

**Strategic marketing-** this is primarily an analysis of the needs of individuals and organizations. From the point of view of marketing, the customer does not need the goods or services themselves, but the problem that can be solved with the help of these goods or services. The solution is achieved with the help of information technology, and information technology itself is constantly changing. The role of strategic marketing is to monitor the evolution of the given telecommunication services market and to identify various existing or expected markets or their segments based on an analysis of the needs that need to be satisfied.

Strategy appears as a somewhat difficult and abstracted philosophy of practical activity. It is clarified and becomes targets under specific conditions and under the influence of changes [21]. During the relevant period, in the short term, in the decisions made based on the relevant conditions, in the risk policy (according to the level of risk), he implements this strategy in the form of a set of methods – tactics. In general, the marketing strategy is characterized by five main aspects based on each other: choosing the market, choosing the goal, choosing funds and deadlines, controlling the effectiveness, and choosing an alternative strategy.

In order for any enterprise to act effectively in the economy, it is necessary to choose its own marketing strategy[22]. In this case, the company's capabilities are adjusted to market requirements, and the marketing strategy is developed based on market research and prospecting, product and consumer research. The practical solution to this problem is widely considered in the author's research [23].

Marketing is a set of market analysis tools (such as sales forecasting methods, market simulation models, and research) that correspond to the capabilities of enterprises, which are used to develop a prospective and scientific approach to the analysis of needs and demand. Critics believe that the reliability and practical value of such expensive methods is not so obvious.

With the digitization of the economy in our country, all subjects of the economy are making effective use of marketing principles in their activities.

In recent years, the use of the rules of the marketing concept in the successful implementation of the most important priorities of the transformation of the economy has also shown its effectiveness, which is reflected in the socio-economic growth indicators, which are considered the basis for raising the standard of living of the population.

In the conditions of digitization of the economy, in order to provide flexibility to rapid changes, telecommunication service enterprises will have to operate based on marketing principles. When developing a marketing strategy, a system of telecommunication services control measures is formed. The marketing program (business plan) is considered the main document of telecommunication activity, and represents the specific activity in the market of telecommunication services. In a broader sense, marketing program refers to a set of analysis, planning and control processes aimed at adapting service capabilities to market requirements.

Marketing, especially strategic marketing, should play an important economic role in the market system of the economy. The reason for this is not only the effective integration of supply and demand of strategic marketing, but also the activation of the cycle of economic development consisting of the following stages:

- strategic marketing finds unsatisfied needs and develops goods adapted to them;
- operational marketing implements a work plan that will lead to increased demand for new goods;
- growing demand leads to a decrease in costs and, as a result, to a decrease in prices, due to which new groups of buyers are attracted to the market;
- such expansion of the market attracts new investments, which allow economies of scale and improvement to develop two new goods.

Thus, the role of strategic marketing is to direct the enterprise to profitable economic opportunities, that is, to direct it to opportunities that correspond to its "know-how" and resources, and provide its growth and profitability potential [24]. The strategic marketing process has medium and long-term perspectives. Its task is to determine the enterprise's mission, set goals, develop a

growth strategy and ensure a balanced structure of the product portfolio[25].

In the conditions of the market economy, the function of marketing is to organize a free and competitive exchange in order to ensure the effective balance of supply and demand for goods and services. This balance does not occur by itself and requires:

- organization of material exchange or, in other words, physical movement of goods between production and consumer;
- organization of communications, that is, organization of the information flow that occurs before the exchange, simultaneously with the exchange, and following it in order to ensure the effective balance of demand and supply.

### Conclusion

Thus, the role of strategic marketing is to direct the enterprise to profitable economic opportunities, that is, to direct it to opportunities that correspond to its "know-how" and resources, and provide its growth and profitability potential. The strategic marketing process has medium and long-term perspectives. Its task is to determine the mission of the enterprise, set goals, develop a growth strategy and ensure a balanced structure of the product portfolio.

The role of marketing in society is to organize exchange and communication between sellers and buyers. In this definition, regardless of the purpose of the exchange process, special attention is paid to the tasks and functions of marketing. Such an expressed definition can apply to both commercial and non-commercial activities.

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# TRANSFORMING THE CONVERGENCE OF THE UZBEKISTAN INSURANCE MARKET

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## ABSTRACT

In the article, the theoretical foundations of the formation of the processes of transformation of the convergence of the insurance market of Uzbekistan are discussed. Convergence processes and new formation of associations in the world economy have a significant impact on the development of various sectors of the national economy. In the conditions of the digital economy, issues of scientific support for the convergence of regional districts, including wide use of the results of scientific research in the fields of science, have been developed.

**Keywords:** Transformation, convergence, convergence processes, divergence, optimal order, company merger, Financial convergence, system efficiency, integrated information system, integration and globalization processes, convergence theory, modern trends, control systems, world economy, regional macroeconomic policy, coordination mechanisms.

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## INTRODUCTION

Insurance is an important part of the financial market and the entire economy as an institution of financial and social support of society and state economy and the most important source of investment resources. The importance of insurance is increasing in today's volatile economic environment, especially given the emerging risks. The development of national insurance markets is always influenced by certain factors and trends. Such important, generally positive trends in the development of society and economy are the processes of convergence and digitalization, which are currently reflected in the development of the insurance market of Uzbekistan. Convergence in the economy is a process of convergence of activities of different companies and enterprises. is one of the important mechanisms for increasing the competitiveness of any economic entity. The modern opportunities provided by digitalization are giving a new impetus to the activation and strengthening of convergence processes at various levels of the economy. Such processes are most clearly manifested in the financial markets, which is connected with the high level of use of modern digital technologies in this sector of the economy, and the specific features of the provided services - priority financial services, most importantly, the constant need. both by residents and organizations. The insurance market of Uzbekistan shows the active participation of insurance organizations in such processes and providing services to the population.

The need to study the impact of the economic convergence processes that are already taking place in the insurance market of Uzbekistan, the expected changes in the insurance market, the cooperation of insurance organizations with various segments and sectors of the economy, economic entities leads to participation in business.

In the framework of economic convergence, the creation of new business models by the initiative of insurers using modern digitization products is the most urgent issue. This will contribute to increasing the competitiveness of the insurance organizations of Uzbekistan and the effective development of the entire insurance market of Uzbekistan.

The initial hypothesis of the study is as follows. Under the influence of digitization, joint business is carried out to some extent. It can be effective by facilitating economic convergence, but

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subject to a number of conditions. The development of economic convergences can be considered in terms of the modern direction of increasing the efficiency of the entire social production, but solving this problem is especially important for the financial market as the most important segment of the financial sector.

## II. Methods

Revealing the concept proposed in the article defines the following goal of the research:

- to determine the impact of digitization and economic convergence on the changes in the insurance market of Uzbekistan, as well as to develop a methodical approach to determining insurance coverage based on the analysis of this impact;
- formation of economic convergences and development of models of their formation so that their real development and activity support the effective development of the national market;
- Analysis of the state of the insurance market of Uzbekistan and identification of modern factors for its effective development;
- economic convergence - to reveal the nature and parameters of the mechanism of increasing the competitiveness of insurance organizations as a business entity;
- building a classification of levels of economic convergence based on the different content of its main parameters proposed in the work;
- Determining the features of digitization in the insurance market of Uzbekistan;
- taking into account the participation of insurers in the processes of economic convergence, assessing the possibilities of changing the insurance market of Uzbekistan under the influence of digitalization; revealing the role of digitalization in the processes of convergence of the economy and specifying the parameters of their interaction;
- development of the theory of effective activity of the organization based on the financial model developed to increase the efficiency of the insurance organization based on the use of algorithms for the formation of plans for increasing the efficiency of the activity of the insurance organization. consideration of the proposed performance criterion;
- development of a theoretical concept of the economic ecosystem in terms of an effective business model of economic convergence, taking into account the impact of digitization, including the definition, classification and models of ecosystem formation;
- assessment of the possibilities of developing insurance ecosystems in the insurance market of Uzbekistan under the influence of digitization within the framework of economic convergence of various levels;
- To reveal the advantages and difficulties of creating potentially effective insurance ecosystems in the insurance market of Uzbekistan - cross-sectoral ecosystems of economic convergence when using more complex digitization products in them.

This study proposes, substantiates and reveals the following concept for the effective development of the financial market of Uzbekistan, which provides the illumination and development of the convergence of the financial market.

The most important factors of modern economic development that can affect the efficiency of the financial market of Uzbekistan are digitization and economic convergence. The influence of these factors is manifested at the level of financial companies, therefore, the condition for the effective development of all financial companies of Uzbekistan is the effective development of these trends due to the positive impact on their activity.

Improving the efficiency of any financial company can be ensured by introducing certain areas of efficiency improvement characterized by two financial indicators - real economic effect and economic efficiency of its acquisition.

Convergence initiator or one of its active participants (unilateral convergence), for example, in the financial or industrial sector, or several of its active participants (multilateral convergence).

As mentioned above, digitization is a modern trend of all social development based on the

digital transformation of any information. Information - any information, messages and data is one of the main modern resources used in economic activity, their importance is constantly increasing, therefore, digitization affects almost all aspects of life, including the processes taking place in the economy. affects. The need for digitalization and the development and use of modern digital technologies in the Russian economy, including the financial market, is confirmed by current regulatory documents.

The issues of interaction of various economic entities under the influence of various trends have been studied for a long time. Now on the agenda are the problems of their transformation and change under the influence of digitization processes.

There are currently two different use cases IT platforms and networks connecting them.

IT platforms and networks can be used to improve the business process of entrepreneurial activity carried out only at the level of inter-sectoral economic convergence to increase joint business efficiency (option 1 of using unifying IT platforms and networks). In fact, this means the use of already known institutional forms of joint business, but on the basis of a new electronic base, including IT, IT platforms and networks, and therefore allows to increase the effectiveness of joint business through this new electronic.

In this case, the main direction of application of the new electronic database is the development of data-based business system models based on it.

### III. Results and Discussion

There are also several stages of digitization development:

Stage 1 is the development of individual information technologies and their application to solve specific problems, which allows improving individual aspects.

Any activity. The variety of tasks that information technologies are used to solve determines many classifications of IT, which are made according to the values of various classification characteristics that meet the specific characteristics of the tasks being solved;

Stage 2 - development and implementation of IT platforms, which are hardware and software systems that provide the basic set of services necessary for users to perform certain tasks<sup>179</sup>. At the same time, platforms can be universal or they can be customized to perform specific management tasks. The use of IT platforms allows you to connect different enterprises, provides common services to business participants, such as ID identification system, KB customer base, unified database, API interaction rules of various computer programs. helps speed up business processes implemented on individual platforms;

Stage 3 - development and implementation of networks at different levels (local, regional, national and international), combining different IT platforms and individual IT. Networks help to integrate the necessary IT platforms, which helps to increase their joint activity, as well as to create new business models and new forms of business. They are aimed at creating a unified information space for joint business, including providing resources for solving common problems for all participants of the business.

Thus, each stage of digitization corresponds to its main product: the first stage - information technology (IT), the second - IT and IT platforms, the third - IT, IT platforms, their connecting networks. The identification of the main products allowed the following classification of product groups (classes):

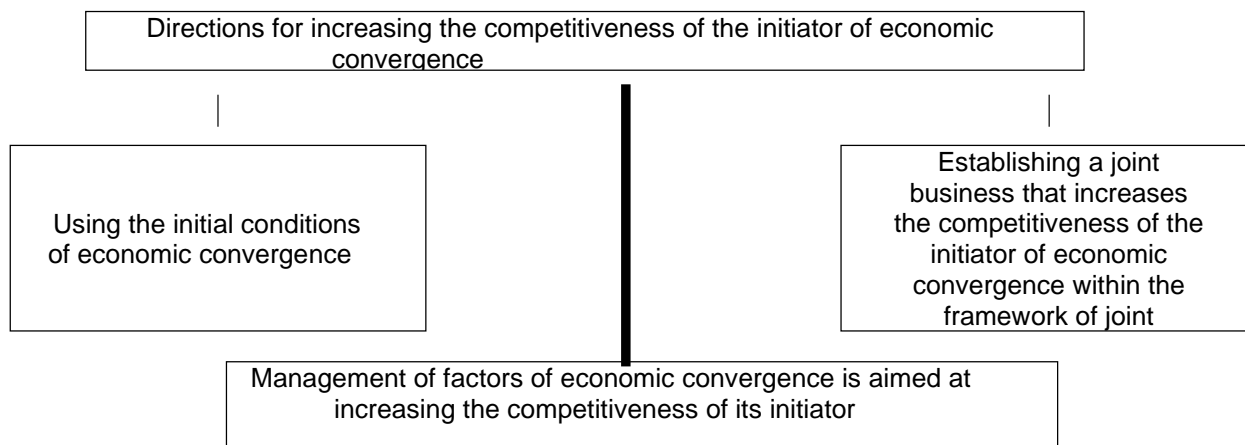
- since the main product of the first stage of digitization is information technology, the first class of digitization products is the group of information technologies ("IT" class);

- since the product of the second stagedigitization development of information technologies and information technology platforms, the second class of products is formed by the group of digitalization information technologies and information technology platforms ("IT and IT platforms" class);

- Since the product of the third stage of digitalization development is information

technology, information technology platforms and their connecting networks, the third category of digitization forms a group of information technologies, information technology platforms and networks connecting them ("IT, IT" class). platforms and their connecting networks" ).

A jointly established business can also have its own opportunities to increase efficiency due to the convergence of activities of the initiator and other participants of the convergence. Therefore, the establishment of a joint venture itself is a business model of joint activity, the modernization of which helps to increase the competitiveness of the initiator, and can also be considered as an independent direction of increasing the effectiveness of the activity of the initiator (Pic. 1).



Picture 1 - Scheme of directions for increasing the competitiveness of the initiator of economic convergence within the framework of joint business.

Practice shows that the influence of a new trend in social development, such as digitization, on economic convergence processes has been very strong. The following points should be noted about the relationship between digitization and economic convergence.

All insurance organizations active in the financial market of Uzbekistan can currently be divided into two groups - those active in the market independently and joint business participants - economic convergence processes.

The effective operation or development of an independently operating insurance organization may be related to the implementation of certain areas of efficiency improvement, including the impact of digitalization. Maximizing the efficiency of the insurer, if it is measured in terms of the sum of real economic benefits and costs, which provides the maximum increase in total efficiency from all possible directions of efficiency improvement, including digitalization, is provided. savings to get it, is done in practice.

The effective operation and/or development of an insurance company participating in joint business, that is, operating within the framework of economic convergence, may also be related to the implementation of certain areas of efficiency improvement. At the same time, not only specific features of the insurer's activity, but also related to the direct impact of digitalization, in determining all possible directions to ensure the maximum increase in joint business efficiency. It is also necessary to define directions. joint business should be considered; those determined by the possibilities of economic convergence processes and the impact of digitalization on these economic convergence processes

This study proposes, substantiates and reveals the following concept for the effective development of the insurance market of Uzbekistan, which ensures the creation and development of insurance ecosystems.

The most important factors of modern economic development that can affect the efficiency of the insurance market of Uzbekistan are digitization and economic convergence. The influence of these factors is manifested at the level of insurance organizations, therefore, the condition for the effective development of the entire insurance market of Uzbekistan is the effective development of



insurers due to the positive impact of these trends on their activity.

Increasing the efficiency of any insurance organization can be ensured by introducing certain directions of efficiency improvement characterized by two financial indicators - real economic effect and economic efficiency of its acquisition.

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#### **IV. Conclusions**

Considering the economic convergence (joint activity) business model, which realizes the most effective of all possible directions of increasing efficiency under the influence of digitalization, as an economic ecosystem that best meets the task of effective development of the insurance market of the entire Uzbekistan possible

In general, under certain conditions digitization is a factor of effective development of any insurance company, for insurance companies participating in the process of economic convergence, digitalization and economic convergence become factors of their effective development, which affects the results of their activity both independently and jointly. . An effective direction for the development of the insurance market of Uzbekistan is the development of insurance ecosystems, because the main functions of the insurance company and the implementation of business processes in the formation of the efficiency improvement plan are determined by the impact of digitization. they are the features and benefits of economic convergence processes, as well as the impact of digitization on these convergence processes.

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# ORGANIZATIONAL AND ECONOMIC ASPECTS OF EFFECTIVE IMPLEMENTATION OF INFORMATION COMMUNICATION TECHNOLOGIES IN MARKETING PRODUCTS OF INDUSTRIAL ENTERPRISES

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## ABSTRACT

In the article, the organizational and economic aspects of the introduction of digital technologies using information communication systems in the management of industrial enterprises and the regulation of relations in the field of their use are thoroughly studied. During the research, modern instruments, functional and structural support of the complex information system of the enterprise were developed by combining the production planning mechanisms and hardware and software tools based on the planning system for the realization of the products of industrial enterprises through e-commerce and the management system of e-commerce processes using ICT.

**Keywords:** Electronic commerce, information system, enterprise management, automation, system efficiency, management decisions, management modules, software tools, integrated information system, information communication technologies.

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## INTRODUCTION

In the context of the digital economy, world experience shows that countries such as the USA, Japan, South Korea and India use modern information and communication technologies (ICT) to automate the commercialization system of industrial enterprises, ensure the competitiveness of their products, and improve their economic status. until today, they are achieving high results.

At a time when the economy of our country is rapidly developing innovatively, the task of ensuring the competitiveness of the products produced by industrial enterprises, and effectively organizing management activities by introducing modern information and communication systems into their activities is being set. In this regard, the Strategy of Actions on the five priority directions of the development of the Republic of Uzbekistan in 2017-2021, signed by the President of the Republic of Uzbekistan Shakat Mirziyoyev, also includes "...introduction of ICT in the economy, social sphere, management system" [1] priority tasks are defined.

The problems of using ICT in various sectors and areas of the economy, the design and development of economic information systems, and the issues of effective implementation in the management system have been researched in the research works of leading scientists in the field of ICT. The scientific and practical issues of the introduction of ICT in various sectors of the national economy have been extensively studied in the scientific works of foreign economists. Among them P. Drukker [2], M. Banderman [3], AVShiyer [4], UMFayyad<sup>1</sup>[5] and the works of other scientists can be cited.

AP Verevchenko [6], in his studies, emphasized the need to use information and communication technologies to make optimal decisions in the organization and planning of production by industrial enterprises. The development of modern instruments, functional and

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<sup>1</sup>Fayyad UM, Piatetsky-Shapiro G, Smyth P. From Data Mining to Knowledge Discovery: An Overview. Advances in Knowledge Discovery and Data Mining.

structural support of the complex information system provides informational support for the design and technological preparation of production of products, details, necessary equipment and special instruments [7]. GA

The main directions of the development of electronic commerce using ICT in the industrial production of our country are based on cyber-physical production systems. The evolution of industrial development consists of several stages. Currently, it focuses on digital technologies, combining physical and digital production. It includes the development of e-commerce through digitization and integration of value chains of products and services.

In the scientific works of AN Aripov, one of the scientists from Uzbekistan, the practice of structural organization and formalization of production processes while solving complex tasks in the enterprise and expanding the field of application of automated control systems allowed the executive team to operate in a single manager and information society based on the concept of a single integrated information system (KAT) of the enterprise. The applicant indicated the need to merge into a single coordinating body. [9]

SS G'ulomov and BA Begalov[10] consider the modernization of the enterprise's management system as the most effective factor preventing the enterprise from achieving the specified competitiveness. In addition to the fact that the enterprise has a high technical and technological speed, it is impossible to ensure the competitiveness of the enterprise if the management system in it is not established effectively. Therefore, besides technical and technological renewal, it was emphasized that one more direction of ensuring competitiveness is the modernization of the management system of the enterprise.

In our opinion, it is appropriate to design and develop information systems and technologies for industrial enterprises, management and econometric analysis of information systems, as well as to use ICT and systems to solve various problems of the branches and sectors of the national economy, and to form management strategies based on information systems.

The widespread use of information systems in enterprise management and the mechanisms of their effective operation have not been sufficiently researched. The lack of integrity in the development of the principles of this issue does not allow the formation of an effective mechanism for the use of information systems in enterprise management.

Therefore, the development of comprehensive approaches to the widespread use of ICT means their effective use in the management system of enterprises of various ownership types, which allows defining the goals of the tasks to be solved in this study.

Electronic commerce is a business activity of the process of selling and buying goods, which is carried out with the help of electronic means, using the global Internet network and other information and communication technologies.

The structural elements of electronic commerce are as follows:

- electronic payments;
- digital products;
- production;
- delivery infrastructure;
- service infrastructure;
- bank cards digital money;
- open database;
- network users;
- email;
- electronic catalogs;
- electronic communication and security.

Electronic commerce seamlessly integrates with marketing systems based on the use of electronic tools, electronic payment systems and logistics systems.

Development of electronic commerce using ICT in industrial productionit's through artificial intelligenceis to increase the innovative potential of e-business. The innovative potential of electronic

commerce consists in the preparation of intellectual goods.

Nowadays, mobile phones, satellite communication and cable television are leading to the emergence of intellectual network goods.

Currently, artificial intelligence (SI) is one of the most important areas of research, the engine of rapid growth of the industry. This has recently been called "Industry 4.0".

Just as the discovery of electricity in the 19th century brought about the industrial revolution, artificial intelligence and information technology are now being perceived as a source of deep change in society and economy [11]. However, unlike the previous industrial revolutions, this one is based on tectonic changes felt is about information that is related to the overall development of the Earth means changes. The society itself, the lifestyle of the population changes. Information changes consumer behavior. They become more complex and demanding with different quality data. Using ICT, the management receives high-quality professional tools for monitoring, management and control. The policy of the state and investors will change: They will no longer want to invest in activities that have inherited an order that uses low-skilled manual labor. Robots and cognitive information systems will replace old technologies.

## Methods

International Data Corporation IDC (International Data Corporation) according to the data, in 2016 the market of cognitive systems and artificial intelligence technologies amounted to approximately 7.9 billion dollars in monetary terms. In 2017, it is expected to grow by 59.3% and reach 12.5 billion dollars. According to analysts, this decade by the end, the average annual growth rate will be 54%. As a result, the value of industry products will exceed 46 billion dollars in 2020. The largest share of this market is made up of cognitive applications that automatically study data and make various assumptions, recommendations or forecasts. Investments in AI software platforms that provide tools, technologies and services based on structured and unstructured data amount to \$2.5 billion annually [12]. in the region

Needless to say, work in the field of AI has not always been successful. After an explosion of interest in the 1950s and wild hopes that the computer would replace the human brain, the 1960s and 1970s were deeply disappointed. The capabilities of computers at that time did not allow for complex calculations. Research on the development of AI's mathematical hardware has also stalled. This pessimism is the color of many applied computer science textbooks still being published. In popular culture, the image of a robot or cybernetic algorithm is formed as a pathetic, incompetent agent that can only perform its tasks.

2005-2008 saw a quantum leap in AI work. The world of mathematical science discovered new theories and models for the study of multilayer neural networks, which became the basis for another theory - deep machine learning. And the IT industry began to produce high-performance and, most importantly, cheap and affordable computing systems. As a result of joint efforts of mathematicians and engineers, great achievements have been achieved in the past 10 years, including various practical results. The first examples of impressive results from the application of AI have been achieved in activities that require the consideration of a large number of frequently changing factors and flexible human response, such as entertainment and games.

In the past few years, artificial intelligence-based solutions have been introduced not only in the entertainment industry, but also in many areas of activity, achieving increased process efficiency. Tech giants Facebook, Google, Amazon, Apple, Microsoft, Baidu and several other companies are investing heavily in artificial intelligence research and uses various developments in its practical work. In May 2017, Microsoft issued a statement. plans to use AI mechanisms in every software product and make them available to any programmer [14].

Currently, artificial intelligence actually includes various software systems and the methods and algorithms used in them, the main feature of which is the ability to solve intellectual problems like a person thinking about solving them. The most popular applications of artificial intelligence



include predicting various situations, evaluating any numerical data with an attempt to draw conclusions from it, as well as analyzing various data with the search for hidden patterns (data mining). We note that the computer is not yet capable of simulating the complex processes of human higher nervous activity, such as its manifestation

Digital twins is used for virtual visualization, simulation and study of complex operating products, and then the resulting information is used to significantly improve the time to market, cost, quality, etc. of the product. Creating digital twins is essential for validating designs, modeling changes, analyzing the impact of changes, and optimizing performance. Digital twins enable optimization of manufacturing process management, anomaly detection and predictive maintenance.

Digital twins are created both for the products produced by the industrial enterprise and for the enterprise itself and its workshops. The digital simulation model of the enterprise allows planning the optimal placement of technological, auxiliary and auxiliary equipment, creating diagrams of engineering networks at the level of workshops and the enterprise as a whole.

Digital twins are an advanced technology used in various fields of industry and energy, for example, 3D modeling systems are used to create digital twin equipment at the Gazprom oil refinery. However, the use of digital twins creates new types of threats to information security, in particular, the processing of data collected from cyber-physical devices is carried out on the basis of foreign software.

Therefore, the data is transferred to the cloud storages where it is located. abroad, it does not ensure technological independence. Industrial enterprises can digitally remanufacture new products before the production process begins, reducing costs, waste and quality issues.

Robot-technological complexes lead to an increase in the quality of manufactured products and practically no defects, to increase the coefficient of equipment exchange without increasing the number of workers, to ensure the rhythm of production, to reduce injuries to employees, etc.

Internet of Things (IoT) technology is based on a network of physical objects embedded with sensors, software, and other technologies to connect and share data with other devices and systems over the Internet. Physical devices that connect to a network can range from simple household appliances to complex industrial equipment. According to expert estimates, there are currently about 10 billion IoT devices connected in the world, and by 2025 their number will increase to 22 billion. Cloud technologies, big data, mobile technologies, physical objects can be used to exchange data and collect information with minimal human intervention.

Industrial Internet of Things (IIoT) is about the application of IoT technology in an industrial environment, specifically about connecting devices, sensors and devices controlled by cloud technologies. The Internet of Things for enterprises offers actionable analytics in an industrial environment, enabling the collection and analysis of data from connected resources, people and places. The benefits of using the Industrial Internet of Things are clear: analytics based on IoT data enable better business management, increase productivity and efficiency in business operations, enable more. elimination of errors caused by the human factor in the implementation of technological processes, high level control of business processes.

The growth of industrial Internet use in Uzbekistan is directly related to the development of 5G networks, which will increase the efficiency of cloud storage and on-demand computing.

Broadband Internet, cloud services, RFID (Radio Frequency IDentification) radio frequency identification technologies, use of ERP systems are digital technologies of the highest intensity level in the use of digital technologies in industrial production enterprises.

RFID is used in intelligent accounting of the movement of objects, making management decisions and automating work.

In industrial production, RFID technology is used to mark finished products, determine the purchase and delivery of materials, coordinate the work of employees, control access and ensure the safety of workers, and automate inter-store planning.

In warehouse accounting and logistics business processes, RFID technology is necessary to identify and define the processes of storage, delivery and transportation of objects, to coordinate the



movement of vehicles online as part of the organization of optimal logistics, to ensure access and security of storage. automation of objects, goods sorting process and their configuration.

## Results and Discussion

Artificial intelligence technologies provide machine vision, which is widely used for the automation of production processes, in particular, for monitoring compliance with the rules of technological operations, monitoring the condition of equipment and product quality, etc. As part of the development of this technology, machine learning is used, which refers to the machine's ability to learn using large amounts of data instead of hard-coded instructions.

Development of e-commerce in industrial production, highly qualified specialists for internet data processing and use of necessary equipment are currently one of the most serious problems[19]. For the training and retraining of industrial workers, it is necessary to create special training programs and competence centers, which are necessary to provide the industry with highly qualified personnel[23]. Employees of industrial enterprises should be familiar with modern information communications to organize marketing services electronically and to ensure effective interaction with product consumers.

The main directions of development of production and e-commerce in the industrial enterprises of the Republic of Uzbekistan include the successful digitalization of these industrial enterprises and the increase of innovative potential at the technological level[20].

BDI (Business Digitalization Index) Business Digitalization Index is used to assess the speed of adaptation of electronic commerce to digital transformation in industrial enterprises.

It is based on private indexes, i.e. business usage information:

- information transmission and storage channels (cloud technologies, corporate mail, messengers, automation systems, etc.);
- digital technologies of artificial intelligence, Internet tools, 3D printing, electronic document circulation, etc.;
- Internet tools for enterprise promotion and development;
  - use of digital information protection programs and special anti-virus programs;
  - human capital, in particular, the level of participation of management in the self-development and development of personnel in the field of digital competences is evaluated.

Cost reduction can be achieved by implementing integrated production and planning, which synchronizes in-house data from sensors to ERP systems with information from partners in the horizontal value chain[21,22,23], such as inventory levels or changes in customer demand. Cost optimization is also possible by optimizing repair and maintenance schedules for key assets, which increases their uptime.

In order to improve the mechanism of development of electronic commerce using ICT in industrial production and its digitization [24,25], it is necessary to carry out the following works:

- development of relevant legislation on digitization and regulatory and technical support of digital technologies;
- development of state support measures for digital transformation;
- creation of its infrastructure, including the creation of necessary methodological support and programs;
- formation of digital competencies of employees of industrial production enterprises to work in a digital environment;
- retraining and upgrading the skills of industrial production employees in order to work in a digital environment;
- creation of state information system platforms in industrial production;

- investment in industrial production;
- creation and development of e-commerce enterprises in the industry;
- development of state support measures for e-commerce enterprises in the industry;
- export of industrial products to domestic and foreign markets;
- creation of platforms for analysis and forecasting of production development;

it is necessary to ensure the activity of the competence center, to develop measures for the state support of the basic technologies for the production of digital platforms, software products, priority electronic components and radio-electronic equipment. In addition, improving products by digitizing manufacturing business processes will also help bring it to market faster and generate higher returns. The implementation of "Internet of Things" in the manufacturing industry helps to identify production errors at an early stage, which in turn reduces the number of complaints.[26,27,28,29]

One of the main advantages of integrating digital transformation such as robotics and the Internet of Things is that robots can work around the clock without any malfunctions or errors. As a result, it has a positive effect on productivity growth and the industrial market.

The fourth industrial revolution covers a wide range of digital technologies along the value chain and is at the core of information and automation. However, the rapid adoption of automation requires digital transformation in the industry.[29,30]

### Conclusions

An improved mechanism for the development of e-commerce using ICT in industrial production processes consists of:

- when assembling complex products, operators use projection displays that show step-by-step instructions, leaving the operator's hands free to perform assembly operations;
- for remote maintenance and repair, in this case, a real-time video broadcast of the operation of the equipment and the problems that have arisen is shown to the specialists, who then receive consulting support in the same mode;
- for quality assurance, helps engineers and operators quickly compare manufactured products to design specifications and verify that the correct parts are used and correctly assembled;
- being successfully used in on-the-job training. The use of interactive electronic technical manuals for assembly processes allows to increase the quality of assembly and increase the safety of employees, reduces the time of training new employees in the assembly process.

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# CHANGING EMPLOYMENT FORMS IMPACT OF THE MARKET OF INFORMATION AND COMMUNICATION TECHNOLOGIES AND TELECOMMUNICATION SERVICES

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## ABSTRACT

It has been shown that the innovations introduced in the field of telecommunications affect the development of employment, contribute to the growth of unemployment, increase the quality of life, and the level of education. Information-communication and telecommunication technologies from a technical point of view it is analyzed that the increase in demand for communication operators necessary to ensure the provision of telecommunication services will lead to changes in employment patterns.

**Keywords:** Digital economy, forms of employment, transformation, information communication, telecommunication, telecommunication services, digital technology, empirical model, econometric model, forecast results, information system, endogenous variables, exogenous variables.

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## INTRODUCTION

The introduced innovations in telecommunications affect the development of employment, contribute to the growth of employment, the quality of life, the improvement of the level of education, form a positive information-communication and telecommunication climate, and thereby serve to increase the employment of the population in your country.

Information-communication and telecommunication technologies from a technical point of view the demand for communication operators necessary for the provision of telecommunication services and provision of telecommunication services will increase. This leads to changes in employment patterns. In changing employment patterns, managers and operators make decisions using information and telecommunications. By using ICT, it helps to analyze, solve complex problems and make optimal decisions in a new form, along with coordination and management.

### Research methods

A.A. According to Efremov, A.A. "Telecommunications services play an important role in the formation of a civilized society" - national economy, industry, scientific, cultural, construction, transport activities, etc. [4]. At the same time, they lead to the transformation of the form of employment by forming the information infrastructure of any economy.

A number of scientists have conducted research on modern forms of employment, remote employment. Karl Schwab, the founder and president of the Davos Economic Forum, justified the fact that the main factor of production in the digital economy is still not capital, but human resources [5].

Odegov Yu.G. and Pavlova V.V. "Based on the accumulated knowledge, today we are facing the disappearance of the difference and separation between industries, the integration of industries and the emergence of new professions, and this process is accelerating" [2].

Academician K.Kh.Abdurakhmanov believes that "distance relations" between employers and employees are a component of the process of decentralization of labor activity in time and space.

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This also serves to form a flexible virtual labor market[3]. "Working at a distance is a labor activity performed at a distance from the employer with the help of information and communication technologies. The main feature of this form of employment is the establishment of virtual "economic relations at a distance" between the employer and the employee.

Based on the above and other studies, this article analyzes the possibility of using modern forms of employment in our country and the issue of remote employment regulation, which is considered relevant in today's conditions.

Nevertheless, the totality of the economic, organizational and marketing characteristics of the telecommunication services market, which have a significant impact on the service delivery system in this market, has not been fully studied.

### Result and discussion

Currently, the change in the form of employment is developing under the influence of the leading trend called "globalization" in the international trade world economy. This trend will determine the development and change of the employment pattern at the beginning of the 21st century.

The intellectualization of the form of employment is expressed in the ever-widening and deepening of international relations in the fields of investments, production, circulation, supply and marketing, finance, scientific and technical development, and education.

Creating special "spaces" on the Internet is a transformational level of employment growth. In accordance with the development trends and laws of global markets, the market of communication and information services is developing rapidly in Uzbekistan in the following years. In particular, new approaches to employment based on knowledge, which are inextricably linked with informatization in relation to the understanding of the modern economy, are being formed in our republic. In this, new information and communication technologies, of which the Internet and mobile communication are the main components, are of decisive importance, and the rapid exchange of information serves to transform employment.

The criteria for classification of telecommunication services have been developed in connection with employment change, including:

- importance for the user;
- according to technological indicators;
- according to the type of traffic;
- according to the instructions;
- on the nature of information exchange.

According to the features of provision, telecommunication services are divided into basic and additional services. The provision of basic services is determined by technological processes, and the set of additional services is determined by the technical capabilities of network operators and service providers engaged in the field of telecommunications.

As a result of the selection of information related to the reporting years 2007-2022, information communication and telecommunication sectors and the factors affecting them were determined based on certain characteristics (Table 1).

Table 1

### Volume of information communication and telecommunication services (billion sums)

Years	Volume of information communication and telecommunication services (billion sums)	As-total population of the region (x1)	Ad-total income of the population of the region (x3)	Ui-total consumption of the population of the region (x4)
2008	8.7	2378.2	541.7	430.3
2009	10.1	2419.8	653.5	539.1
2010	17.9	2462.2	850.3	701.75
2011	27.9	2506.2	1068	877.8





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

In order to have multifactorial empirical models of their processes, several options were calculated in the Eviews 9 program and corresponding results were obtained (Table 2).

**Table 2**

**Elasticity of coefficients of the model built for the network of communication and information services to the population**

Variable	Model coefficients	Standardized coefficient	Coefficient of elasticity
X1	0.225065	0.437066	4.014907
X3	1.220895	18.55420	24.45173
X4	-1.471871	-17.99397	-23.92220
C	-548.3712	NO	-3.544434

Provision of communication and information services to the population (Y1) analysis of the results of the multifactor empirical model built for the field allowed to determine the following: if the total number of the population (X1) increases by 1 percent, the provision of communication and information services to them (Y1) amount increases by 4.01%, if the total income of the region's residents (X3) increases by 1%, providing them with communication and information services (Y1) will increase by 24.45%, if the total consumption (X4) of the population of the region increases by 1%, providing them with communication and information services (Y1) amount decreases by 23.92 percent.

In this regard, it was analyzed using the econometric modeling method to obtain the planning values of service areas [7].

of our President «Actions on five priority areas of development of the Republic of Uzbekistan in 2017-2021 about the strategy of the priority tasks defined in the decree [1]. the analysis of the results of forecasts obtained taking into account the empirical models built for the purpose of consistent implementation, the development of public service networks in the future, and the reforms carried out in this area show the following (Table 3).

**Table 3**

**Analytical indicators of public service networks (billion soums/thousand soums)**

Indicators	2022 (actual)	Forecast years					
		2023	2024	2025	2026	2027	2028
Aaaaah—providing communication and information services to the residents of the region (Y1/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

Information-communication and telecommunication services in the development of the service industry, the use of econometric models in the form of a system of interconnected equations is of particular importance. Alternatively, a information and communication services The organizational-economic mechanism of the development of the activity of display networks represents a hierarchical system of interconnected elements and groups at various levels, besides, it forms their mutual relations, innovative infrastructure, and relations with market subjects [10].

### Conclusion

To conclude according to the analysis carried out, providing communication and information services to the population (Aaaaah) In 2020, it will increase by 1.13 times compared to 2019, and by 2025 by 1.87 times. The development of information and communication technologies is necessary to have a positive impact on the processes taking place in civil society and the market economy. A contact and information service Further development of high-tech services, expansion of the list of new types of services, as well as improvement of the quality of the provided services in the field of mobile communication, international, long-distance, local communication, mail, telegraph

communication, television program, Internet network have influenced the growth of the service sector.

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# IMPROVING THE ECONOMIC MECHANISM OF DEVELOPING THE COMPETITIVENESS OF THE TOURISM INDUSTRY OF BUKHARA REGION

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## ABSTRACT

This article presents the state of tourism in the Bukhara region, its development prospects, today's competitiveness and ways to increase efficiency. Together with this, the number of hotels in Bukhara region, the difference in the growth of tourism in this region between years, the impact of the pandemic on tourism, the ways to eliminate its consequences, the ways to develop domestic and foreign tourism, and the obligation to increase competitiveness were analyzed.

Attracting the attention and flow of international tourists to our country in the conditions of strong competition requires the search for unconventional, innovative ways. That is, in order to increase the competitive advantages of the tourism industry, it is important to develop an innovative form of competitiveness in the way of innovative development of the industry.

**Keywords.** Tourism, competitiveness, efficiency, hotels, motels, pandemic, domestic tourism, foreign tourism, innovative ways, tourism industry.

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## INTRODUCTION

According to the World Tourism Organization, today, about 50% of tourist visits in the world fall mainly on 10 prestigious international tourist areas such as the USA, Spain, France, China, Italy, Germany, Great Britain, Switzerland, and other regions with rich tourist potential in the world (including , Uzbekistan as the only tourist area) they have to fight among themselves for the remaining 50% of international tourists. Attracting the attention and flow of international tourists to our country in the conditions of strong competition requires the search for unconventional, innovative ways. That is, in order to increase the competitive advantages of the tourism industry, it is important to develop an innovative form of competitiveness in the way of innovative development of the industry.

### **Analysis of the relevant literature.**

Travel times and places are determined by travel, relevant destinations and length of stay. Talking about tourism without changing one's place of residence is pointless. Tourist resources are associated with specific territories, and their popularity and level of use are determined by the transport capacity of such territories.

Undoubtedly, the development of transport ensured the development of tourism. Now you can go to previously unknown regions of the world, as well as the ability to move faster and farther than before.

Stephen J.P., Hall S.M., Sorupia E., Meredith J., May A., Roberts M., Lynam D., Satch are among the foreign scientists who comprehensively studied the organization of transport services in tourism, their content and influence on the development of the country's economy. <sup>1</sup>

T., Broughton, J., Lawson, S. et al. A significant contribution to the development of this topic was made by Russian scientists Kuskov Alexey Sergeevich, Ovcharov Anton Olegovich, Biryakov

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<sup>1</sup> Stephen J. Page. Transport and tourism. Global perspectives. 3rd edition, London: Pearson education Ltd. 2009. - 447 c.



Mikhail Borisovich, Kotelnikova Valeria Evgenievna.

According to Stephen Page, the main task of the transport infrastructure is to create the necessary conditions for the free movement of tourist flows.<sup>2</sup>

According to the Organization for Economic Co-operation and Development (OECD), "Transport is a key driver of tourism, facilitating and linking the internal movement of tourists in the region and tourist destinations in the tourism market, ensuring their movement and access to various attraction functions."<sup>3</sup>

According to the Russian scientist Aleksey Sergeevich Kuskov, "transport infrastructure forms the basis of the transport complex and is a real transport network used to transport goods and passengers, as well as an organizational structure that ensures the efficient use of vehicles and stationary devices."<sup>4</sup>

According to Ovcharov Anton Olegovich, transport infrastructure in some cases can be an independent subject of tourism activities, providing tourist and excursion services. Transportation is part of the basic services that make up the tourism product, and transport enterprises are considered specific tourism enterprises that make up the tourism industry.<sup>5</sup>

Biryakov Mikhail Borisovich in his book "Tourist Industry" said that transport is the essence or an important component of the tourism business, vehicles serve not only tourists and travelers, but also their luggage, but also entertainment, sports, museum collections, modeling.<sup>6</sup>

According to the Uzbek scientist M.K. Pardaeva, "Transport service is the activity of transport workers aimed at meeting the needs of the individual, labor collective, region, state and society in passenger and freight transportation through quality services".<sup>7</sup>

Khamidov Obidjon Khafizovich also noted that "... the provision of transport services to tourists can be described as a set of services designed to deliver tourists and their cargo from one place to another as quickly and conveniently as possible."<sup>8</sup>

### **Research Methodology:**

In the course of this study, we analyzed the modern methods of transport services in developed countries in order to effectively organize the activities of transport services in the field of tourism and the integrated transport system in our country, to solve problems in this process. We have developed proposals for the development of their activities by methods of statistical and comparative analysis.

### **Analysis and results:**

"Innovative competitiveness" means "the ability to gain a competitive advantage through innovative activities." That is, innovative competitiveness represents the use of the existing innovative potential of the tourism sector and the extent to which the innovative system is developed in this sector. In the field of tourism, creating new types of products and providing innovative services is the essence of innovative competitiveness.

Based on the fact that innovative competitiveness first of all depends on the successful passing of innovative processes, we will make an effort to create an innovative model of tourism competitiveness. The methodological basis of such a model is two: theory of competition and theory

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<sup>2</sup> Stephen J. Page. Transport and tourism. Global perspectives. 3rd edition, London: Pearson education Ltd. 2009. - 447 с.

<sup>3</sup> OECD Centre for Entrepreneurship, SMEs and Local Development, as part of the Tourism Committee's Programmer of Work for 2015-2016.-6.

<sup>4</sup> Кусков А.С., Джаладян Ю.А. Транспортное обеспечение в туризме: учебник/: - М. КноРус, 2008. - 368с.

<sup>5</sup> Овчаров А.О. Туристический комплекс России: тенденции, риски, перспективы. М.: ИНФРА-М, 2009. - 280с.

<sup>6</sup> Биржаков М.Б., Никифоров В.И. Индустрия туризма: перевозки/ Биржаков М.Б., Никифоров В.И. - СПб.: Издательский дом Герда, 2007. - 528с.

<sup>7</sup> Пардаев М.Қ., Исроилов Ё.Ж. "Автомобиль транспорти хизматини кўрсатувчи корхоналар тахлилининг айрим жиҳатлари", Тошкент "NOSHIRLIK YOG'DUSI" нашриёти, 2011 йил.].

<sup>8</sup> Хамидов О.Х. "Транспорт сервисини ташкил этиш" фани бўйича таълим технологияси. Тошкент – "ТДИУ" – 2006.



of innovation.

As a result of the integration of the theory of competition and the theory of innovation, the qualities of "innovation" appear as innovative activities of business entities as a means of increasing their competitive advantage. In particular, an innovative model of competitiveness is formed as the innovative competence of business entities or their ability to implement and commercialize innovations in practice increases. Then, the introduction of investments in their innovative activities will increase the level of innovativeness of the firms, as a result of which, on the one hand, the economic and financial status of entrepreneurship enterprises will improve and move to the state of competitiveness, and on the other hand, innovative development will be achieved on the scale of the industry, region and country.

The innovative concept of competitiveness, in our opinion, can consist of the following five components:

- 1) related to innovations and having the form of innovative entrepreneurship as an economic resource component in the form of a resource;
- 2) its component in the form of goods in the form of innovative ideas, technologies and projects as innovative goods;
- 3) a functional component that has the form of an innovative firm as a factor that increases competitiveness based on innovations;
- 4) the commercial component related to the implementation and popularization of innovations;
- 5) an investment component that has an innovative quality as a source of income for business entities.

Thus, with the emergence of innovative entrepreneurship in the field of tourism and at the intersection of the theory of competition and the theory of innovation, a new "Innovative Model of Tourism Competitiveness" is formed.

The starting point of the innovative model of tourism competitiveness is the theory of competition in the interpretation of "the integral element of the market mechanism, which is inextricably linked with the function of entrepreneurship and the innovation process and is aimed at creating completely new market assumptions and even markets free from competition through the introduction of innovations."

Because competition forces manufacturers to introduce the most effective innovative ideas, technologies and projects. The second point of this model is the theory of innovation in tourism, interpreted as "the creation of new tourist products, services, technological processes, marketing methods and new methods of conducting tourism business as a result of the implementation of new ideas, technologies and projects." Innovations play a fundamental role in the process of forming the innovative concept of competitiveness, and tourism requires the development of innovative qualities from business entities. In return for such efforts, the weight of active business enterprises in the economy compared to conservative tourism firms is increasing day by day.

Also, the two opposite sides of the innovation model of competitiveness are recommended as three interconnected and interacting organizational-economic tools such as "Innovative activity in tourism" (tourism innovation), "Active tourism entrepreneurship" and "Competitive advantage in tourism". Because, as a result of the implementation of innovative activities in the field of tourism, the innovative qualities of the tourism business increase, and it, in turn, gains a competitive advantage due to the application of new ideas. The concept of "tourist innovation" in the model represents the ability to make fundamental changes in business tactics and strategy in tourism entrepreneurship. Because, at the intersection of innovation and competition theories, a new innovative competence of entrepreneurship is formed, which is the ability to effectively manage the period from the creation of new ideas and their implementation to the creation of new innovative tourist products and the provision of services.

In the innovative model of competitiveness, "Active tourism entrepreneurship" is

recommended as the second connecting organizational-economic tool. Development of entrepreneurial skills of personnel in the field of tourism ensures the development of active entrepreneurship in tourism. In the innovative model of competitiveness, "Competitive advantage in tourism" is recommended as the third connecting organizational-economic tool, which ensures the improvement of the competitiveness of economic entities through innovation.

As an integrated component of the model, the "Innovative competitiveness in tourism" multiplier, which is formed under the influence of its five elements described above, is recommended. It is reflected in the competitiveness achieved as a result of innovative activities in the field of tourism. This multiplier describes innovative ideas, technologies and projects capable of increasing the competitive advantage of tourism activities.

The implementation of the innovative model of competitiveness in the economy will help ensure the competitive advantage of economic entities in the field of tourism. Therefore, the component "Increasing the innovative competitiveness of tourism as an economic entity" is recommended as the final element in this model. "Increasing the innovative competitiveness of tourism as an economic entity" means increasing the competitiveness of economic tourism business entities located at different hierarchical levels through innovations.

Thus, innovative activity and competitive advantage are the main factors for increasing the competitiveness of tourism. Due to the many innovative efforts implemented in the field of tourism in Uzbekistan in 2021-2023, this field has the opportunity to move from the level of non-competitiveness to the level of competitiveness and from it to the level of innovative competitiveness. Innovative competitiveness of the tourism sector, if on the one hand, the level of innovative development and attractiveness of the tourism sector is increased, on the other hand, it serves as a measure of the comparative effectiveness of the sector.

With the development of the economy of our country, necessary conditions are being created for increasing the income of the population by raising the level of tourist services.

This fact is also confirmed by the fact that the main growth indicators of the demand for tourism in the world are formed in the rapidly growing economies of developing countries, first of all, Asian countries.

Under the influence of the crises that are still present in the global economy, Uzbekistan continues to develop its economy at a steady pace. In other words, the level of economic development and its indicators are reflected in the tourism industry. The development of this sector is related to the level of tourist services.

Tourist services are accommodation, catering, transportation, information and advertising services of the subjects of tourist activities, as well as various services aimed at satisfying the needs of tourists.

### **Discussion of research results**

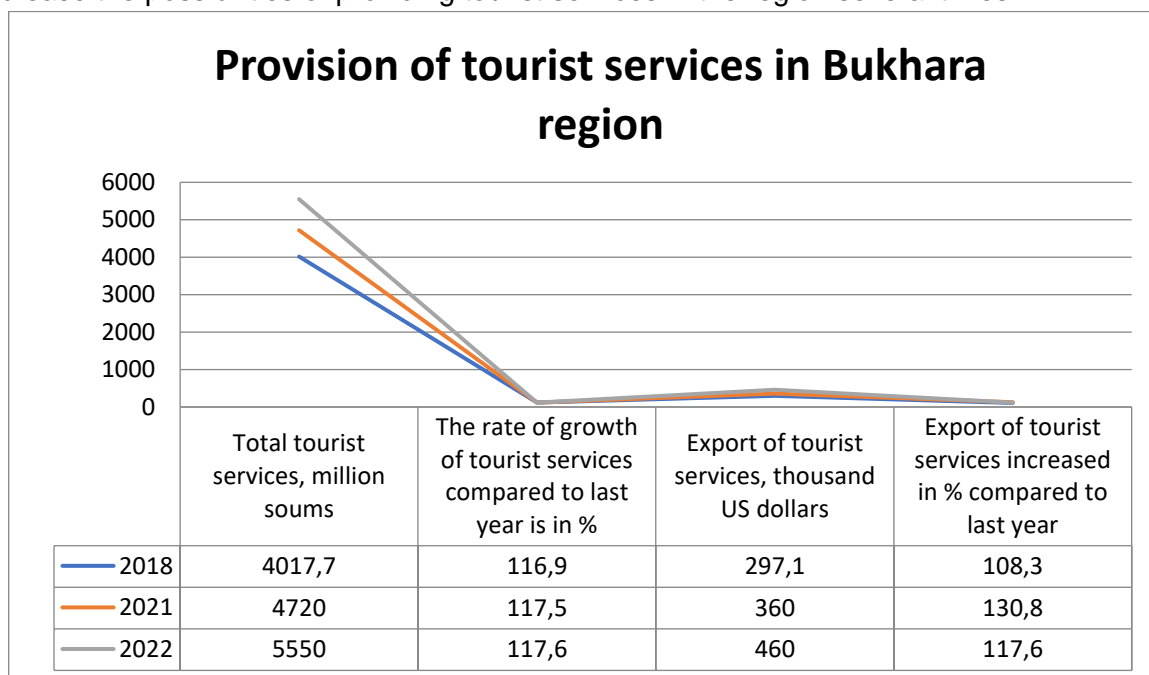
The main part of the tourist services implemented in the Bukhara region corresponds to the contribution of the city (96%) and has increased by more than 30 times compared to the previous period. There are a number of facilities for the development of tourism in the region:

- 1) Availability of tourist infrastructures. International airport, about 20 hotels, several museums and theaters, parks and swimming pools;
- 2) the formation of a convenient transport system as a center in the Bukhara region;
- 3) existence of the main recreational and balneological tourist centers of the Bukhara region - Sitorai Moxi-Khosa and other private sanatoriums, "Etti pir" religious places of pilgrimage;
- 4) The cities of Bukhara region stand out among the big cities of Uzbekistan due to their antiquity and unique historical and archaeological monuments.

Based on these facilities, there are opportunities to increase the level and quality of tourist services in the region. Mainly, the region's religious-pilgrimage, treatment-healthcare, khanate and emir period can be multiplied by the number of monuments. "Currently, there are more than 250 monuments of cultural heritage in the region.

There are many ancient sites and historical monuments in the province - sites of people of

the Stone Age, images carved on rocks, cemeteries, villages of the Bronze Age, remains of medieval castles and cities, amazing architectural structures. This shows how rich the region is in historical and cultural recreation resources, and during the acceleration of their effective use, it will be possible to increase the possibilities of providing tourist services in the region several times.



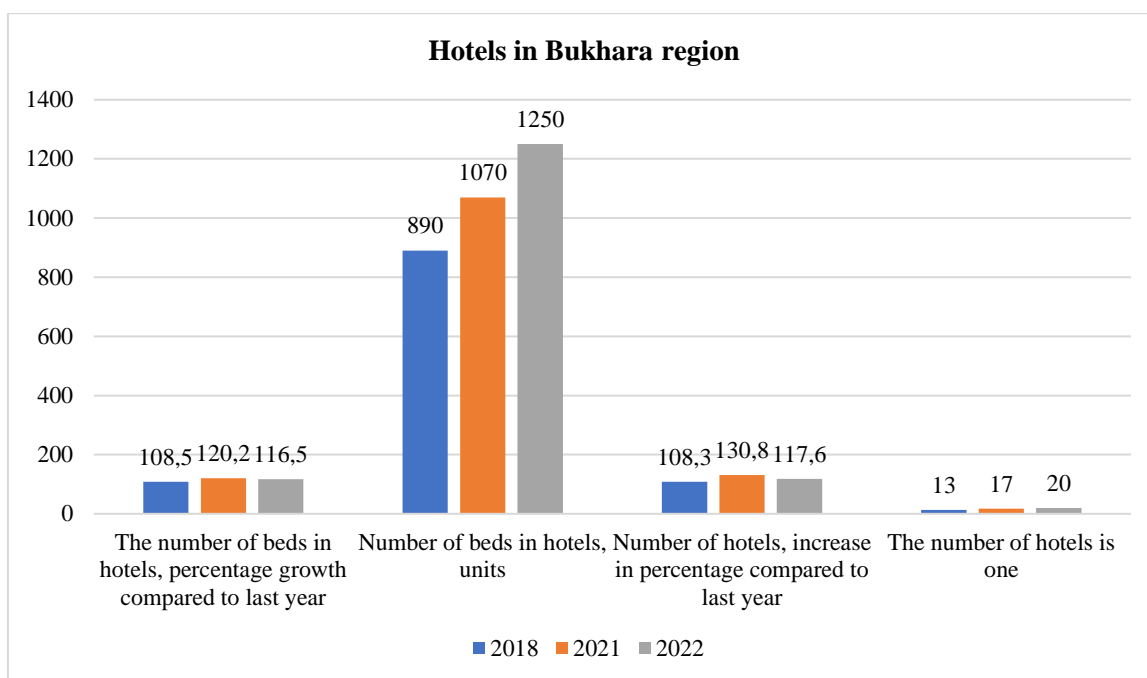
Picture 1. Provision of tourist services in Bukhara region<sup>9</sup>

From the data of chart 1, it can be seen that the total tourist services in the region amounted to 4 million 17.7 thousand soums in 2018, in 2021 it reached 4 million 720 thousand soums, and in 2022 it reached 5 million 550 thousand soums. Compared to previous years, the growth rate was 116.9 percent in 2018, 117.5 percent in 2021, and 117.6 percent in 2022. The export of services provided in the region amounted to 297.1 thousand US dollars in 2018, 360 thousand US dollars in 2021, and 460 thousand US dollars in 2022. It can be seen from the above information that the provision of tourist services in the region is expected to increase year by year. It can be said that a number of works were carried out on the basis of the decision of the governor of Bukhara region dated February 16, 2021 "On the development program of the tourism sector in Bukhara region in 2021-2023" No. 78.

Figure 2 shows information about hotels operating in Bukhara region. The number of hotels was expected to increase to 13 in 2018, 17 in 2021, and 20 in 2022. Compared to previous years, the growth rate was 108.3% in 2018, 130.8% in 2021, and 117.6% in 2022.

In 2018, the number of places in hotels operating in the region was 890 people. In 2021, the number of places is expected to reach 1070 people and 1250 people in 2022.

<sup>9</sup> Made by author

Picture 2. Hotels in Bukhara region.<sup>10</sup>

Accordingly, the number of visitors to the region is expected to increase dramatically in the coming years. Accordingly, it is required to raise the level of development of the service sector.

The measures taken for the development of tourist services at the level of Bukhara region have a clear goal, and there are all conditions for the full use of available opportunities to achieve it.

The decision No. 78 of the governor of Bukhara region dated February 16, 2021 "On the development program of the tourism sector in Namangan region in 2021-2023" reflected the tasks that need to be done in this sector.

It consists in developing tourist services, improving the quality of tourist services, organizing activities based on international standards. All these works will lead to the prosperity of the tourism industry in the region in the future.

#### Conclusions and suggestions:

The President of the Republic of Uzbekistan, Sh. Mirziyoyev, on the development of tourism: "We have now approved the issues related to the structure dealing with the development of tourism. These measures should be strengthened with specific measures to increase the contribution of tourism to the development of the economy of Uzbekistan, to promote our historical and cultural values, as well as to replenish foreign exchange reserves.

In the 28th and 35th goals of the development strategy of New Uzbekistan in 2022-2026, goals for the development of tourism are mentioned. In the 28th goal, "Increase the export of tourism, transport, information and communication, including software and other services by 1.7 times or reach 4.3 billion US dollars." And the 35th goal is to increase the number of domestic tourists from 12 million and the number of foreign tourists visiting the republic to 9 million within the framework of the "Travel Uzbekistan" program. Broad introduction of barrier-free tourism infrastructure in the main tourist cities of the country. By 2026, the number of people employed in tourism should be doubled to 520,000. Implementation of a special program for rapid development of tourism in Bukhara region. tasks are defined.

Competition is one of the important features of the tourism industry. Today, ensuring the competitiveness of the tourism economy has become the main issue. The great economist M. Porter says that the development of a high-level competitive strategy involves finding a clear picture of how enterprises will compete, as well as its goals and the means and actions needed to achieve these

<sup>10</sup> Made by author.

goals. highly appreciated the importance of competition and competitiveness in the activities of enterprises.

The competitiveness of the tourism economy is a comparative description that includes a comprehensive assessment of the state of important indicators of the economy in relation to external parameters, therefore, the competitiveness of the tourism economy is manifested in international competition.

By ensuring the competitiveness of the tourism sector, the competitiveness of the country's national economy will increase, and the country's position and prestige will increase in the international arena.

Ensuring the competitiveness of the services provided in the tourism sector and the competitiveness of the employees (personnel) providing these services directly serves as the basis for the competitiveness of tourism.

Increasing modernization of tourism services, improvement in quality, serves to increase their competitiveness. The personnel of the tourism industry, who have all-round high skills and qualifications, approach their work responsibly, and have excellent knowledge of foreign languages, helps them to be competitive.

The competitiveness of tourist enterprises directly depends on the services provided and the tourism industry employee. Because by ensuring the competitiveness of tourism services and service providers, the competitiveness of the tourist enterprise is ensured.

In conclusion, it can be said that positive results are achieved by ensuring competitiveness in every field, ensuring the competitiveness of tourism is the main factor in the development of the tourism sector, the influence of the socio-economic life of the country, and the competitiveness of the national economy.

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## PROSPECTS FOR THE DEVELOPMENT OF BANKING SERVICES IN UZBEKISTAN

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### ABSTRACT

*The article deals with the introduction of innovative products by commercial banks and the creation of a competitive environment in the banking and financial sector of the country, as well as the development of remote banking services, the use of banking services through a mobile application.*

**Keywords:** *innovative product, banking services, microcredit, online application, commercial bank, payment system.*

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### INTRODUCTION

With independence, the Republic of Uzbekistan chose a new path of development - a market economy. The country faced a number of serious problems, the solution of which required fundamental changes in all spheres of the economy. The changes did not bypass the banking sector of the republic. Uzbekistan is still improving the regulatory and legal framework in the field of the banking and financial sector. The reform of the economy, which began almost immediately after Uzbekistan gained political sovereignty, is now approaching a decisive stage. Prerequisites and conditions have been created for the establishment of market principles in the real sector of the economy, and measures are being taken to most effectively implement the task of creating a class of private owners in the republic. A number of government decrees and resolutions have been adopted aimed at implementing and regulating the processes of denationalization and privatization in all sectors of the economy.

In this regard, it is impossible to overestimate the role of commercial banks and the entire banking system in the liberalization of the republic's economy. Therefore, the task of liberalizing the activities of commercial banks is so important and relevant today, which is regarded as a necessary and significant step towards reforming the banking and financial sector. Decree of the President of the Republic of Uzbekistan "On the strategy of action in five priority areas of development of the Republic of Uzbekistan in 2017-2021" No. UP-4947 dated 02/07/2017 defined a new set of tasks, without which the development of the state would be impossible. In accordance with this decree, the country's banking system is further improved. In particular, in the Decree of the President of the Republic of Uzbekistan No. PP-3620 dated March 23, 2018 "On additional measures to increase the availability of banking services", the Central Bank of the Republic of Uzbekistan was instructed to eliminate a number of problems and shortcomings related to the quality of banking services [1]. In turn, the Committee for the Development of Retail Banking Services under the Association of Banks of Uzbekistan has been established and is actively functioning in the country. The main objectives of this committee are to determine the goals, objectives, procedure for the formation and organization of work aimed at expanding and improving the efficiency of retail banking services (retail) by commercial banks, studying the problems of retail activities, as well as cooperation in developing a concept for the development and maintenance of retail services in the banking system of Uzbekistan.

**Analysis of references on the topic.** Most authors tend to consider banking services as a combination or variety of banking operations. For example, I.S.Didenko argues that "a banking service is an interconnected set of banking operations that are implemented by the bank to the client



on a contractual basis and are aimed at meeting the client's needs for banking services." According to D.E.Shved, "banking services should be understood as banking operations regarding customer service, which are of an additional nature (service, service)." Some scholars interpret banking services as a kind of banking product. In particular, the authors of the textbook "Banking Management" edited by O.I.Lavrushin argue that "banking services are a kind of specific intangible banking product, expressed in the actions of banks aimed at meeting the specific needs of a client of a monetary nature." After analyzing different points of view regarding the essence of the concept of "banking service", we believe that a banking service is a broader concept than a banking product and a banking operation, since it includes not only the banking product itself (for example, a loan), but also the way it is provided to the client [2].

**Analysis and results.** Today, each of us has the opportunity to do most of the work at home, with only one phone in hand. You can also open a mobile application or go to the official website of any organization and get the necessary information, place an order, make a payment, and even send a complaint. There are programs and devices that allow you to carry out transactions in a matter of seconds, but in fact it used to take months, often you had to stand in line for days on end. All this is the result of the development of information and communication technologies (ICT), the digitization of information, the consolidation of disparate data from paper media into electronic databases. The rapid penetration of ICT into our lives has dramatically increased the globalization of world economic relations, competition in the market of suppliers of goods and services, including financial ones. The banking system also continues the widespread introduction of information and communication technologies in accordance with the requirements of modernity, and thus the automation of many banking services is carried out. Now you can get almost all banking services instantly using a mobile phone or special devices, unlike, say, what it was a few years ago. The "Strategy for Reforming the Banking System of the Republic of Uzbekistan for 2020-2025", signed by the President on May 12, 2020, identified such priority tasks as creating the necessary conditions for the widespread introduction of modern information and communication technologies, automating the business processes of commercial banks and expanding remote banking services. In the process of corporate transformation of commercial banks in the field of introduction of modern information and communication technologies, it is planned to implement the following measures:

- expanding the number and coverage of remote banking services, including contactless payments;
- widespread use of the scoring system, remote identification and credit pipeline;
- enhancing the information security of banking information and systems;
- wide introduction of new concepts and technologies in the banking sector (fintech, digital banking).

These steps are aimed at developing the digital economy in the country, digitalizing banking services to ensure the rapid growth of the economy of Uzbekistan, accelerating the country's integration into the world economy and the free market along with economically developed countries. Digitalization of banking services is the establishment of relationships between the bank and the client based on digital information and communication technologies. As the bank's customers use financial services, they begin to understand how important it is to ensure the convenience, quality and speed of service, save time and reduce transaction costs, and electronic document management. Accounting and management systems are being integrated, a CRM (Customer Relationship Management) customer relationship management system is being created.

The volume of banking operations performed is constantly growing, which is also reflected in the growth in the number of payments. Thus, according to the Central Bank of the Republic of Uzbekistan, the number of payments through the Clearing Settlement System in September 2018 increased by 47.84% and amounted to 5,581,957 transactions for a total of 1,167,890,346,199 soums (more than 1 trillion soums) relative to the same period for 2017, where the number of transactions in all banks of the republic was 3,775,742 for a total of 514,393,260,231 soums (more than 500 billion soums) [3]. The increase in the number of the above settlements was influenced by

the increase in demand among the population in a non-cash way, which significantly reduces their operating costs associated with payment, significantly saves time.

Commercial banks have created all the necessary conditions for using remote banking services without visiting banks. Today, almost all commercial banks have mobile applications. Also, several mobile applications of payment organizations are actively functioning. This, in turn, gives the population the opportunity to use payment services without visiting banks, which is undoubtedly more convenient, faster and more reliable.

Mobile applications of banks and payment organizations have the following advantages:

- the possibility of making payments without leaving home;
- making payments without the use of cash, which are potential carriers of infections and viruses;
- the ability to track your own income and expenses;
- reduction of transport and time costs, as well as increased safety.

In order to use mobile applications, you must first of all purchase a bank card issued to the user of the mobile application (if there is no bank card). Currently, commercial banks issue bank cards of two types (HUMO and UZCARD).

To purchase a bank card and make payments through mobile applications, individuals must complete the following steps:

- apply to any bank with a passport to obtain a bank card (it is possible to order a bank card online through the official websites of commercial banks);
- replenish a bank card with cash (by visiting a banking services center, or through an ATM with a cash-in function);
- activate the service of SMS notifications or telegram messages by connecting the bank card account number to the mobile phone number by visiting the bank, or connecting it through an ATM or information kiosk;
- download via the Internet platform "Google Play market" (for mobile phones with the Android operating system), or "Appstore" (for mobile phones with the iOS operating system) a mobile application of commercial banks and payment organizations (the list is attached);
- register in mobile applications, i.e. after entering the number of the purchased bank card and the expiration date, confirm the registration with the secret code received on the mobile phone;
- for security purposes, set a secret code to enter the mobile application.

When carrying out the above actions, no fees are charged for banking services.

Through mobile applications, you can pay not only for utility bills and mobile communication services, but also payments for public services, payments for notary services, fines for traffic violations, taxes, Internet services, educational services and charity, it is also possible to pay for delivery food products and food.

It used to be difficult to contact a bank and use services, especially in remote areas. Modern digital financial services have made it possible to effectively reach the population and business entities in remote and sparsely populated areas where opening bank branches is unprofitable. Through digital changes, business models of banks are being optimized, the banking and payment segment is developing - from remote banking to changes in the field of financial transactions. Strengthening competition between banks The transition to the provision of banking services in electronic format and the creation of convenience for the population, of course, influenced the strengthening of competition. In turn, as competition grows, so does the need to take advantage of new opportunities in the field of information and communication technologies. Thus, the digitalization of the economy has increased competition in the financial services market between banks and non-banking structures. Customers now have the opportunity to choose where and when to use financial services. The result of studying the needs of the client is the round-the-clock offices opened by banks (24/7). In accordance with these needs, electronic banking technologies offered on the financial market are rapidly developing. Examples are electronic payment systems, electronic money, remote banking services, including online banking products, banking terminals and automated banking

centers. The use of digital financial technologies optimizes the possibility of active cooperation between the state, payment service providers and customers.

Constant analysis of the needs and requirements of customers leads to the introduction by banks of new ways of providing services, the creation of new attractive products. It should be noted that the pandemic has also affected the rapid development of digital financial services. Before the start of quarantine, the population was less interested in remote banking, preferring to come to the bank and solve the problem "on the spot". Only a small number of bank customers used mobile applications and software for remote banking services. Residents who could not leave their homes due to quarantine were in dire need of remote banking services. We began to search, study, and, if necessary, use the necessary service through electronic channels. This encourages banks to pay more attention to electronic applications, improve remote services, mobile applications. In other words, the digitalization of the economy not only creates new opportunities for banks, but also encourages them to look for new ways to attract customers by increasing competition, creating favorable conditions for customers, and providing cheap and high-quality financial and payment services.

Results of digitalization of the payment system Over the past three years, effective work has been carried out to radically improve the activities of commercial banks, establish full-fledged interaction with the public and businesses, and massively introduce remote banking services.

As a result, the use of modern technologies is expanding - remote banking technologies, such as Internet and mobile banking, which are convenient for bank customers. Today, the development of digital financial services has become an important direction in the development of the country's banking and financial system. The regulatory framework of the industry is being improved, the development of the payment infrastructure is being encouraged, and the functioning of payment organizations (fintech companies) specializing in the provision of remote banking services is expanding. With the adoption of the Law of the Republic of Uzbekistan "On payments and payment systems", the service infrastructure of payment system operators operating in the country has increased dramatically. In addition, 28 payment organizations specializing in the provision of digital financial services are registered. In order to develop contactless payments, the HUMO retail payment system was created, which fully complies with international standards, which, in turn, has created a competitive environment in the field of bank cards. Currently, all mobile applications of banks are implemented

Commercial banks of our country are introducing more and more new services, improving the material and technical base in pursuit of competition, because in a market economy, the client has the right to choose a bank that is ready to provide him with the widest range of banking services using innovative products.

The data indicated indicate that the role of non-cash payments in the economy is increasing. It should be noted that in 2018 Tashkent hosted the National Exhibition of Financial and Banking Services BankExpo 2018. All commercial banks of the country, as well as insurance and leasing companies, payment systems and processing centers took part in it. The banks participating in the exhibition presented innovative products in the field of banking services [5]. The National Bank of Uzbekistan has introduced a round-the-clock service system for exporters. For customs clearance of some goods for export, it is required to enter data on the receipt of foreign exchange funds in the UEISVO system (Unified Electronic Information System for Foreign Trade Operations). Joint-Stock Commercial People's Bank of the Republic of Uzbekistan and Joint-Stock Commercial Bank "Turonbank" announced the use of a fingerprint identification system for depositors, which creates an additional level of protection for customer accounts. For this, special readers have been installed in bank branches. The depositor leaves a fingerprint sample when opening a current account. Subsequently, all operations are carried out only with his participation. Bank employees cannot access the account without the depositor's fingerprint scanner. Private Joint Stock Commercial Bank "Orient Finance" together with the company "Fido-Biznes" LLC is working on the introduction of online issuance of microcredits and microloans in the OFB24 mobile application. Retail customers

of the bank will be able to apply for a loan product in the application. The system will automatically calculate the creditworthiness of a potential borrower. Established in 2017, the Joint Stock Commercial Bank Uzagroexport is developing an overdraft system. The bank will cooperate with large companies in Uzbekistan, whose employees will be provided with loans at low rates. At the same time, the company bears all the risks, for which it receives a commission from the bank. This is beneficial for the image of large corporations that care about their employees. Companies in this case play the role of a credit institution and enter into a general agreement with the bank on the provision of overdraft services. Overdraft can be obtained through the application of this commercial bank. The creditworthiness of a person will be determined not by the bank, but by the company itself for which he works. Private Joint Stock Commercial Bank "Hi-TechBank" is negotiating with foreign partners to develop a single platform for e-commerce. It will bring together suppliers of goods and services. The platform is integrated with the accounting programs of organizations. Private Joint Stock Commercial Bank "Orient Finans" also intends to introduce contactless payment technology NFC (NearFieldCommunication) in the coming months. For the full functioning of NFC technology, a certain infrastructure for retail outlets is required. Therefore, when implementing and developing this technology, the bank will cooperate with other banks, payment systems, and retail and service companies. In addition, Hi-TechBank Private Joint Stock Commercial Bank is launching a separate application for legal entities. It will be possible to make currency payments via the SWIFT system. UzCard presented cash-recycling ATMs at the exhibition. They circulate cash. So, the money deposited into an ATM by one client is issued to another without collection. In addition, ATMs read both cards with chips and contactless ones. The joint-stock commercial People's Bank of the Republic of Uzbekistan installed Desko passport readers in two branches in a test mode. Scanners save time for bank customers. The device reads information from the passport and displays it on the screen. Bank employees do not need to manually enter customer data, which, in turn, eliminates the possibility of errors. All banks in the country are actively working on opening special branches that will serve their customers 24 hours a day.

This is convenient for those who are at their workplace during the daytime and do not have the opportunity to visit the bank. Thus, banks are going to cover the bulk of the employed population. The introduction of the above innovative services confirms that commercial banks are actively competing, trying to attract more and more customers to maximize profits. At the same time, despite a number of innovations in the banking system that facilitate the interaction of financial structures with the population, there are a number of problems and shortcomings in terms of observing the rights and legitimate interests of consumers of banking services and expanding financial inclusion. The main imperfection is the excessive centralization of powers in decision-making on issuing loans, a too complicated mechanism for considering loan applications and the lack of the possibility of issuing microloans by commercial banks, which was noted in the speech of the President of the Republic of Uzbekistan Shavkat Mirziyoyev [6]. This limits the ability to quickly obtain loans, and high interest rates on the services of microcredit organizations and pawnshops often lead to a deterioration in the financial condition of consumers. In addition, the low level of development of the retail banking market and the lack of modern approaches to building partnerships with clients create grounds for excessive bureaucracy and red tape. The elimination of existing shortcomings will contribute to the further development of the banking sector, in particular, the improvement of new banking services.

**Conclusions and suggestions.** In order to ensure the implementation of these tasks, certain work is being carried out to develop an information system for remote identification of customers in cooperation with the Unified integrator for the creation and support of state information systems UZINFOCOM, the State Center for Personalization and the European Bank for Reconstruction and Development. At the same time, in order to create a competitive environment in this area, commercial banks are testing software solutions developed abroad. To date, cooperation has been established with the International Finance Corporation on the introduction of remote biometric identification of customers, the developed legal documents are posted on the portal



www.regulation.gov.uz. In turn, commercial banks and payment organizations are allowed to use remote identification in test mode. In this case, assessing the risks in accordance with the internal control rules, it is possible to register a client as a user of the mobile application, attach a bank card to the mobile application and use it to detect suspicious transactions. In addition, in order to develop an additional regulatory framework for the regulation of payment systems, the Central Bank, together with experts from the Financial Inclusion Alliance, have developed and are in the process of agreeing on documents regarding the licensing of the activities of payment system operators and payment organizations, supervision of payment systems, consumer protection in remote services and introduction of agency services, as well as ensuring the security of online settlements and mobile payments. It should be noted that the Decree of the President of the Republic of Uzbekistan dated October 5, 2020 No. PF-6079 "On approval of the Strategy "Digital Uzbekistan - 2030" and measures for its effective implementation" provides for the development of digital financial services in the next two years. To solve the tasks set, the following work is planned:

- integration of retail payment systems Humo and Uzcard in order to rationally use the existing payment infrastructure and expand the network of payment terminals and ATMs throughout the country;
- wide use of the latest financial technologies (fintech) in order to reduce the current costs of organizations providing financial services, improve the operational efficiency of financial services and ensure their quality;
- access to reliable data, reduction of the human factor in the process of data collection, introduction of a modern automated system for collecting, processing and analyzing data in the banking system;
- effective organization of the Central Bank's Unified Data Warehouse and implementation of an analytical system of banking business processes;
- creation of a modern FinCERT center at the Central Bank to protect information and prevent cybersecurity breaches in the banking and financial sector, take measures to counteract and respond to financial fraud, as well as implement an effective information security and cybersecurity system in banks, payment systems and payment organizations;
- increase in the volume of non-cash payments of the population due to the offer of banking products provided by bank cards, improving the quality of banking services. In short, the need to overcome fierce competition in the field of payment and banking services imposes certain requirements on banks in the context of the growing financial culture of the population. In this case, banks that provide quality digital banking services will definitely have an unconditional advantage. In a competitive market, only those banks are stable that have transformed their activities in accordance with the new requirements of the banking business and modern information and communication technologies. The measures taken and the tasks planned for implementation in the near future will also contribute to further development, the establishment of systematic control and the elimination of shortcomings in the banking system.

Commercial banks represent a wide range of innovative banking services, of which the most important are credit operations for industrial, commercial and other enterprises, the population, as well as the provision of settlement, cash and deposit services. During the study and research, it turned out that at the present stage, most of the services provided are not profitable for the bank. But their presence in the basket of banking services is necessary, first of all, in order to attract new customers and retain old ones. However, there is a certain basic set of services, without which a bank cannot exist and function normally, such as accepting deposits, making cash payments and settlements, and issuing loans. And this is an integral part of commercial banks in all developed countries. There is a certain focus on more profitable operations. In Uzbekistan, as in many countries with a market economy, commercial banks pay special attention to deposit and credit operations. This is explained by the fact that deposits form the main resources of banks, which are then distributed to other market segments, thereby forming new banking services. It is also important to maintain competition between banks, since it is competition that stimulates banks to improve, create

new services, etc.

Banks, wanting to survive in the competition, are sensitive to the needs of their customers, changing their environment. In our country, this is facilitated by antitrust laws. Given the above, I would like to make the following suggestions to improve the quality of banking services: - it is necessary to expand the scope of work with individuals and corporate clients through the use of remote banking systems using the "personnel-bank" system through Internet banking, telephone banking; - ensure the submission of applications for a loan via the Internet, as well as reduce the time for consideration of a loan application to 5 days or a shorter time (for example, when using on-line lending; - carefully select potential borrowers of organizations in terms of the risk of non-payment on a loan by applying scoring models under conditions of uncertainty - to create a cash-back service both independently from a commercial bank and in mutually beneficial cooperation with other retail outlets in the country Implementation of these proposals will help improve the quality of services in accordance with the requirements of innovative banking.

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# IMPROVING METHODS FOR ASSESSING THE EFFECTIVENESS OF THE POTENTIAL OF TOURIST DESTINATIONS IN THE SUSTAINABLE DEVELOPMENT OF TOURISM

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## ABSTRACT

In this paper, methods for attracting tourists by evaluating the effectiveness of a "tourist destination" are studied, and at the same time, the necessary conditions for the development of tourism activities are studied. Methods for a complete inventory of attractive tourist resources have been studied.

**Keywords:** capitalization, customs and traditions, inventory, tourist destination, tourist resource, infrastructure, organization of tourist space, tourist zone, tourist region, location, tourist potential..

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## INTRODUCTION

For the past twenty years, one of the most important areas of the global economy has been tourism. In Uzbekistan, the number of visitors is rising each year. 423,700 international tourists traveled to Uzbekistan in January 2023, according to the statistics office. This indicator has risen by 254,100 individuals, or 2.5 times, to Uzbekistan in January compared to the same period last year. 103,2 thousand individuals - 41.9 thousand individuals in Russia - 6,7 thousand individuals in Turkey - Korea - 2,4000 individuals Turkmenistan has 2.3 thousand inhabitants. 1.1 thousand individuals are from India. Azerbaijan has 7,000 inhabitants. - Belarus R. - 7,000 individuals United States: 600 individuals Germany has 5,000 individuals. - There are 3,000 individuals in France. - Great Britain - 4,000 individuals A total of 4,000 visitors toured China. Today, the intensive economic activities in the field of "supporting tourism and industries directly related to it, preserving hundreds of thousands of jobs and qualified specialists, maintaining their incomes, as well as rapidly restoring the tourism sector depending on the improvement of the sanitary and epidemiological situation in the country" was defined as the priority line of reforms. The Technical Committee on Standardization of STQ 4 "Tourism and Cultural Heritage" under the "Certification Center for Tourism Services" under the SUE recently approved the state standard for adventure tourism. Security administration programs. It was decided to create a "requirements" statutory norm. This national standard was approved by the Technical Regulatory Agency of Uzbekistan's directive No. 03/127 dated January 18, 2023. The collection of methodological instruments used in the execution of this research involves the study of economic science components, specifically the originators of the discipline of tourism economics, namely tourism planning.

Following the intricate rules of the tourism industry will help us comprehend the truth of tourism. We can list historicity, spatial distribution, causality, economic integration, sociality, regionalism, ecological benefit, and strategic planning principles for the tourist industry as examples of such principles.

Considering each component of cultural legacy in terms of its economic and historical significance, as well as its social, cultural, artistic, scientific, or educational structure, we believe the principle of comparative advantage stated above plays a significant role. The extraction of value markers for each goal reflects the intricacy of this strategy.

The ecological principle is concerned with how people and the ecosystem interact in terms of preserving and protecting the environment. Therefore, the study of the effect of human impacts on natural groups and the search for methods to maintain and protect the ecosystem in its natural condition are all part of the analysis of natural legacy.

The above-mentioned concepts must be applied consistently if regions are to improve and increase in capitalization. The desired objectives can be attained by using a growth strategy based on a variety of approaches that ensures the mutual harmony of theory and practice. A unique reference system for the constant application of business principles is the creation and execution of strategies that allow for the greatest productivity and incorporation of tourist activities. A special focus should be placed on the area's systematization efforts, the primary driver of which is the application of planning strategies to capitalize on tourism by utilizing the region's beauty resources.

### **Literature review**

At the cost of tourism, natural and cultural heritage is acknowledged in the context of intensifying globalization as an essential component of tourist heritage. Tourist buildings and resources created with the intention of profiting from tourism activities are referred to as tourism legacy. Comenescu (2013, p. 20) states that tourism legacy includes "natural, social, economic, and cultural elements, as well as all structures." (communication, represents the totality of accommodation, rest, treatment, food, entertainment). With scientific and theoretical research and development in the field of tourist destinations, E.I. Bogdanov, V.V. Pakhomov, M.D. Lamont, E.A. Scientists such as Mashkovich, A.A. Ryabtsev, D.A. Tsapuk were also involved. Territorial approaches to the development of the tourism sector in Uzbekistan, issues of increasing the tourist area and its competitiveness B.N. Navruz-Zoda, N.S. Ibragimov, N.T. Tukhliev, M.K. Pardaev, I.S. Tukhliev, M.M. Mukhammedov, D.Kh. Aslanova, B.Kh. Toraev, O.K. Khamidov, M.T. Alimova, B.Sh. Safarov, Z.O. Rakhimov, G.A. considered in the scientific works of such economists.

### **Research Methodology**

The research procedure employed synthesis, analysis, and comparative analysis techniques.

### **Result and discussion**

An inventory of the natural, cultural, or anthropogenic tourist potential (architecture, folklore, monuments, customs and traditions, national costumes, etc.) should be conducted along with other economic aspects of the region in question, and they should be evaluated qualitatively and quantitatively before the tourist potential of the region is realized and its capitalization is ensured. "A set of all cultural, natural, and anthropogenic elements that can be the subject of tourist attraction and reflect a number of opportunities for capitalization through functional and indirect specialized activities for tourism," is how we can describe tourism potential. The growth of tourism in a particular region depends on its visitor potential. A tourist location, a tourist resource, even a tourist fund, and a main tourist offer are all examples of tourism possibility.

As "the outcome of combining the tourist fund and the material and technical base (infrastructure) related to it in one place," it is synthetically assessed and expressed as follows:

$$T_p = T_f + B_t$$

Here:

$T_p$  – tourist potential,

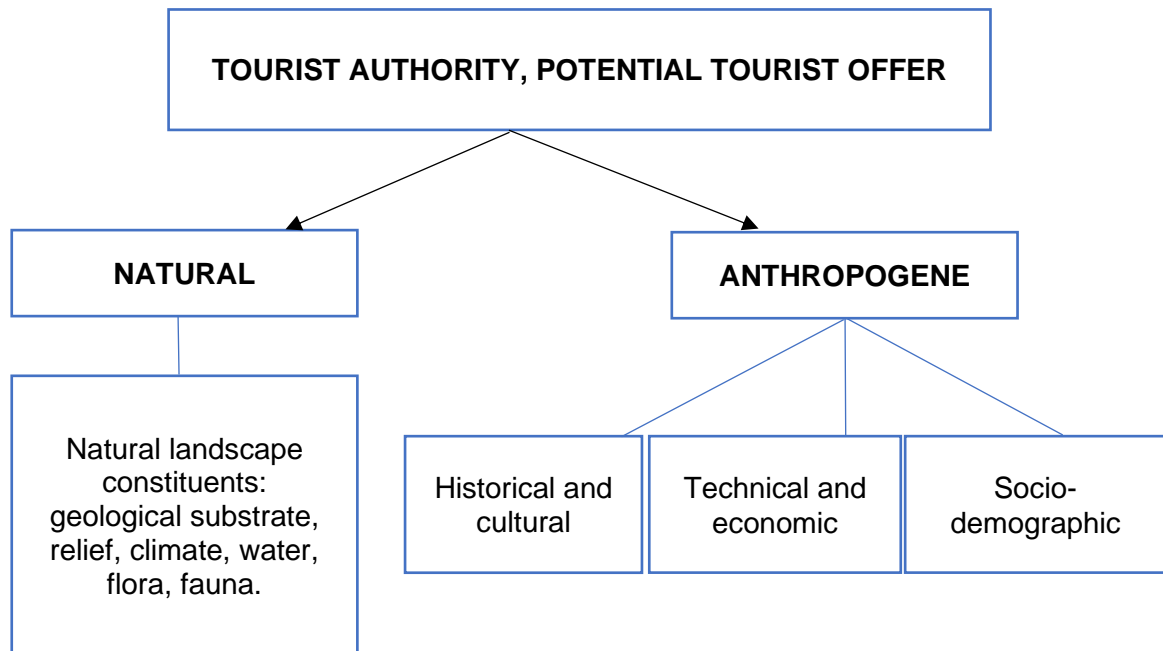
$T_f$  – tourist fund,

$B_t$  – technical base.

We believe that "the tourist potential of the region represents a set of natural elements, economic organizers, and cultural-historical organizers that represent certain possibilities of capitalizing on tourism, provide certain functions for tourism, and, at the same time, provide the necessary conditions for the development of tourist activity."

Experience has taught us that, depending on the goal of organizing a tourist area, it is crucial to have a thorough understanding of the territorial truth or equilibrium in terms of a full inventory of all the desirable tourism resources within the area under consideration. The study and elucidation of

all components of cultural and natural assets, as well as anthropogenic regions of interest to tourists in the implementation of tourism activities, are all included in the scientific method known as the inventory of tourist potential. Figure 1



**Figure 1. Structure of tourist potential <sup>1</sup>**

The inventory stage involves creating an inventory list for each item and gathering the data required for the assessment process. The format of an example inventory sheet should enable the analysis of cultural heritage items, which are essential for the growth of tourism, in accordance with specific analysis criteria, such as their appeal, intricacy, degree of knowledge, tools, and accessibility to objects. The tourist potential of the world's cultural and environmental legacy is crucial to the growth of tourism. Because of this, numerous scientists and scholars have spent a long time attempting to develop a formula for determining this indicator. In order to conduct a quantitative assessment, the assessment actions, particular parts of the tourist demand and its rate of change, as well as a description of each tourist resource, are carried out at the first step of the intended purpose's study.

Performing qualitative and quantitative assessments is a special beginning point that enables choosing the analytical tools and methods that match the objectives and paths of tourism research.

**A)** According to Rosenberg (1956), the connection between the total of an object's unique characteristics and visitors' acceptance of those characteristics can be mathematically explained as follows:

$$A_j = \sum_{i=1}^n (V_i) * (I_{ij})$$

Here:  $A_j$  – the attractiveness of certain tourist destinations,  $V_i$  – the importance of the given description,  $I_{ij}$  – The existence of  $j$  alternative levers with respect to  $i$ ,  $n$  – number of descriptions.

**B)** I. for quantitative assessment of tourist potential. Shandru (1970) suggests the following mathematical expression:

$$P = I_i * I_d * I$$

Here:  $P$  – tourist potential,  $I_i$  – touristic value and price index,  $I_d$  – affluence index;  $I$  – availability index.

**C)** Another method of evaluating the tourist attractiveness potential of regions was developed

<sup>1</sup> Author development.



$$V_t = \sum_{0-16} 1 + \sum_{0-5} 2 + \sum_{0-18} 3 + \sum_{0-8} 4 + \sum_{0-10} 5 + \sum_{0-8} 6 + \sum_{0-24} 7 + \sum_{0-11} 8 = 100$$

Here:  $V_t$ - tourist expensive,  $\Sigma 1$ - morphotourism fund,  $\Sigma 2$ - climate related tourism fund,  $\Sigma 3$ - hydrogeographic tourist fund,  $\Sigma 4$ - biogeographical tourist fund,  $\Sigma 5$ - historical and cultural tourist fund,  $\Sigma 6$ - ethnographic and folklore-tourist fund,  $\Sigma 7$ - material base,  $\Sigma 8$ - communicative potential.

The obtained points allow for the classification of potential into six categories, as follows: I - above 60 points, II - in the range of 50-60 points, III - in the range of 40-50 points, IV - in the range of 30-40 points, V - in the range of 20-30 points, and VI - Categories below 20 points. These categories allow for the achievement of a specific degree of sequence (at the level of each type of resource) or a general sequence, providing the opportunity to make the best decisions (Ciangă N. and Dezsi Ș., 2007)<sup>4</sup>.

In the international scientific literature, the main emphasis is on determining the attractiveness of tourism, studying the movement of tourists and the factors that affect their decision to visit this region as opposed to others, outlining the attractive tourist factors and analyzing them from various (sociological, geographical, locational, and economic) points of view, and focusing on the assessment of the impact of the organization of tourist zones.

Ferrario's "Evaluation of Tourism Resources: A Practical Methodology" (1979), for instance, proposes a technique for assessing the allure of tourism potential. The author believes that when assessing the tourism potential, it is important to consider the reciprocal harmony of visitor supply and demand<sup>5</sup>.

### Conclusion and Recommendations

We attempted to use a different approach while conducting study on the evaluation of tourist sites that are culturally significant. In this, the two major groups of tourist sites—primary attractions and secondary attractions—were ranked according to their specific gravity. The following criteria—the existence of originality, additivity, beauty, and fame factors—are used to analyze the major draws. A specific number of points is given to each criterion, and the total points are then tallied. Analyzing auxiliary draws is the same as above, but based on factors such as compatibility with the major attraction, correlation with the main attraction, geographical closeness to the main attraction, and proximity to the main attraction. It will be put to use. The suggested analysis is helpful in determining the tourism destination's general attractiveness and in ranking the area's draws in order of attractiveness. The development of more alluring tourist product packages can benefit from these activities.

The significance of tourist places in the healthy growth of tourism cannot be overstated, and it is crucial to be able to evaluate them to determine their quality. In order to summarize the various techniques for evaluating tourism, it is necessary to state that in tourist locations, it is essential to have visitors for tourists, adequate and certain quality services for catering and organizing their leisure, and the presence of a developed transit system. The following recommendations were made in response to this requirement:

1. Smart chances must be created, and the current tourism infrastructure must be improved, to increase the number of visitors to the tourist attractions.;
2. It is crucial to pay close attention to which types of travel a location is best suited for when assessing it. Local customs and cuisine in some tourism locations may be sufficient to draw visitors. By taking quick trips to these places, the intended result will be achievable.
3. It is thought essential to properly assess the offerings of tourist locations and the environments made there, as well as the skills of locals and workers working here.
4. By building tourism destinations near to one another, it will be possible to establish friendly

<sup>4</sup> Ciangă, N., Dezsi Șt. (2007), *Amenajare turistică*. Cluj-Napoca: Presa Universitară Clujeană

<sup>5</sup> Ferrario, F. (1979), "The Evaluation of Tourist Resources: An Applied Methodology," *Journal of Travel Research*. 17 (3): 18-22 and 17(4): 24-30.

relationships, contribute significantly to the socioeconomic growth of these regions, and foster a competitive environment.

5. Additionally, it should be remembered that highways are crucial to the success of tourism locations because they make it simpler for visitors to travel there.

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## BARRIERS IN ENSURING EFFICIENT USE OF LOCAL RESOURCES

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### ABSTRACT

The article discusses some theoretical issues of ensuring the effective use of local budget funds in Uzbekistan.

**Keywords:** local budget, revenues and expenditures, financial printouts, meeting the local budget, the minimum cost, the maximum yield, the taxpayers' money, social effect.

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### INTRODUCTION

In a market economy, everyone tries to use the available funds as effectively as possible. This is a separate derived individual, family, business, etc. will be affected. However, despite this, observations of life and scientific research have shown that this problem becomes more complex as it goes from the bottom up. In particular, one of these challenges is the effective use of funds within local budgets. However, in our opinion, there is a certain paradox here. This is due to the fact that countries operating in market relations and in civilized countries of the world (USA, Canada, Germany, Great Britain, France, Austria, Holland, Italy, Japan, South Korea, etc.).)d) this problem has already been successfully solved. No one doubts that the funds allocated from local budgets in these countries are spent effectively. This is evidenced by the fact that the real situation there is. But if we talk about the efficiency of spending funds on the accounts of local budgets in Uzbekistan, unfortunately, this can not be said.

#### **Literature review.**

Effective management of local budget revenues and expenditures studied by S. Fischer, K. McConnell, Stanley L. Bruce, A. Laffer, A. Sheremet, V. Panskaya, D. Chernik, A. Vakhobov, T. Malikov, O. Olimjonov, N. Sobirov, K. Yakheeva was founded by Uzbek scientists.

#### **Analysis and results.**

However, Uzbekistan also pays serious attention to the effective use of local budget funds, especially in the following years. The activities of the Ministry of Finance and its subordinate bodies, as well as other relevant competent bodies (in particular, the accounts chamber) are aimed at ensuring the effective use of funds, including local budgets. Despite this, in our view, ensuring the effective use of local budget funds in Uzbekistan is not at the level of the requirements of a modern market economy. For these purposes, must be carried out inspection, which revealed numerous financial errors on the control objects, the size of the detected amounts of financial mistakes, allowed a deficit of funds and material values, and their assimilation, are illegal expenditure, etc. they allow us to conclude the same way. In these circumstances, it is natural that an important question is put on the agenda about where the root denial of the solution to this problem is. In this article, we will try to answer basically the same question.

First of all, it should be noted that the use of expenditures of any budget, including local budgets, is also carried out at the expense of budget financing. In this regard, it should be noted that in General terms, when it comes to budget, you need to understand the system of providing funds from the budget entities to implement the plan's measures. The same system is characterized by specific forms and methods of providing funds, as well as relying on a specific set of seals. In turn, the principles, forms and methods of financing from the budget are considered as structural elements of this system and have an impact on the results of its implementation (in particular, on its effectiveness

too). Entering a new stage of its strategic development, the importance of a rational and effective system of budget financing from the point of view of ensuring efficiency at the present time, which solves important socio-economic problems in Uzbekistan, increases even more. Speaking about the basics of ensuring the effective use of local budget funds, it should be recognized that the principles of financing play an important role in this process, first of all. In this regard, it should be noted that the principles of financing from the local budget, applied in practice, can be divided into General and private groups. Naturally, the General principles will apply to the activities of all entities that will receive funds from the local budget. And private principles determine the procedure for providing local budget funds, depending on the organization of the subjects' activities. Below we will focus, in particular, on the General principles of financing from the local budget, which play a fundamental (root) role in ensuring the effective use of local budget funds. International practice shows that the General principles of financing from the local budget can be as follows:

1. Get the maximum (high) effect by spending the Minimum (less). Local budget funds should be provided only when the maximum effect of their use is ensured. This effect can be expressed, on the one hand, in the solution of various tasks of socio-economic development of the country, and on the other hand, in the redistribution of funds to the local budget due to the growth of income of recipients of local budget allocations. Now, if we take into account those that are reflected in this paragraph 1, it is natural that the following questions will be put on the agenda: a) are local budget funds provided in our country's practice at the highest level of their use at all times? b) how do they pay attention to this aspect of the issue when providing funds from local budgets? c) how are various tasks of socio-economic development of our country solved as a result of providing funds from these budgets? d) what positive changes are taking place in this direction? e) is there a redistribution of funds to the local budget due to the growth of income of recipients of local budget allocations? and so on. Based on the actual situation in our country, we believe that it is inappropriate to give a positive answer to any of these questions (except in rare cases, if any). Therefore, the first logical conclusion that can be drawn here is that in the practice of financing from local budgets, it is impossible to ensure the effective use of local budget funds in our country if they do not strive to obtain maximum (high) efficiency at the expense of minimum (low) costs;

2. Target characteristics of the use of local budget allocations. Legal entities can receive funds from the local budget based on a pre-determined and approved budget. Strict compliance with this principle prevents inefficient use of local budget allocations.

Now let's pay attention to how the requirements of this principle are observed in our country, although only slightly. Even the results of a superficial or superficial analysis may indicate insufficient compliance with the requirements of this principle in the process of using local budget funds. This is evidenced by the results of inspections conducted by special controlling bodies of the financial Department and the accounting chamber, both complete and continuous. Therefore, the second logical conclusion to be drawn here is as follows: until the target characteristic of the use of local budget allocations is fully achieved in practice, ensuring the effective use of funds from these budgets remains problematic;

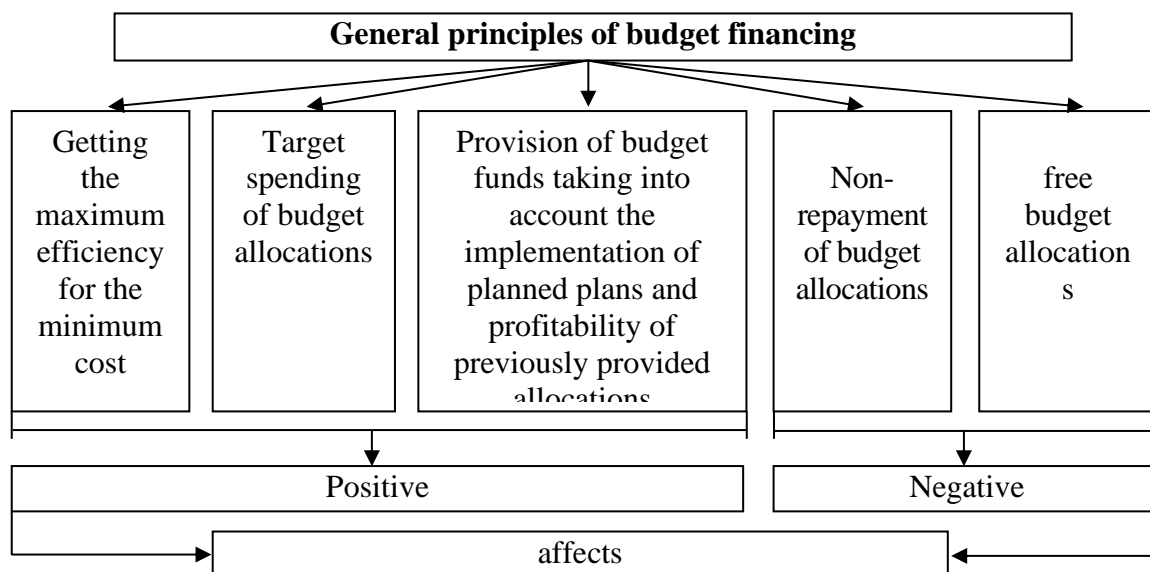
3. Implementation of the planned plans and provision of budget funds, taking into account the use of previously provided allocations. The dependence of budget financing on the performance of indicators allows financial authorities to exercise effective and efficient control over the activities of enterprises, organizations and institutions.

Despite this, there is a lot of evidence that it is not always possible to ensure the correct proportionality between the implementation of plans envisaged in practice and the allocation of funds from local budgets, as well as the use of previously provided allocations, and the provision of funds from these budgets. This, in turn, indicates that this principle is not fully implemented (not implemented) in the practice of our country. Therefore, if the plans envisaged in practice are not implemented in a timely manner and are not used to the full extent of the previously provided allocations, then it is necessary to strictly observe that there are appropriate changes in this process. The third logical conclusion that follows from this, in our opinion, can be formulated as follows: it is

impossible to imagine without curves from the provision of budget funds, taking into account the implementation of plans that provide for the effective use of local budget funds, and how previously the provided allocations were used;

4. Non-repayment of budget allocations. Budget allocations are provided to entities on the condition that they are not subject to mandatory return to the budget. This, of course, has its reasons. After all, budgetary institutions, first of all (as a rule), do not engage in entrepreneurial activity (almost or literally). However, despite this, it should be noted that over the next few decades, both in our country and in the market economy, in terms of the content of this principle, although a little, changes need to be made. In our opinion, one of the principles that, despite its objective basis, cannot have a sufficient impact on ensuring effective spending of local budgets is that budget allocations are not refundable. In fact, this principle, in our opinion, represents calmness, apathy, irresponsibility, irresponsibility in relation to the fate of the user of budget funds, and so on. Such sentiments give rise to the fact that all of them, in a certain sense, contradict the nature of the market economy. Therefore, the question of the relationship to the essence and meaning of this principle should be reconsidered, taking into account the fact that in our country there is a market economy and increased opportunities for budgetary institutions to engage in business activities. The fourth logical conclusion that follows from this can be formulated as follows: the principle of non-repayment of budget allocations is a principle that has the opposite effect on ensuring the effective use of local budget funds. Therefore, its content and form should be revised, at least taking into account the changes that have occurred in the socio-economic sphere of our country in subsequent periods;

5. Free budgetary allocations. Allocations from the budget are allocated to entities in the form of interest without paying any revenue to the state or other forms of payment for allocations. As can be seen from this, there are also aspects of this principle that have a positive impact on ensuring the effective use of local budget funds. After all, in our wise people, the words of the tribe "there will be no value for something unearthly" are not in vain pronounced and do not require proof. Thus, within the framework of this article, we have tried to analyze the General principles of budget financing, including ensuring the effective use of local budget funds, based on the requirements of the modern market economy and draw appropriate conclusions from them. Based on them, we can make the following General drawing, in our opinion:



**Figure1. Fundamentals of ensuring effective use of local budget funds and its consequences<sup>1</sup>**

<sup>1</sup> Developed by the author based on the results of the study

As can be seen from the position shown in Fig. 1, the General principles of financing from the budget, which are considered as the basis for ensuring the effective use of local budget funds, are divided into two groups, the first three of which are (minimum) expenditures and obtaining maximum (high) efficiency; target characteristics of the use of budget allocations; it is obvious that the implementation of the planned plans and the provision of budget funds (taking into account the use of previously provided allocations) will have a positive impact on the achievement of this goal. However, in comparison with the last two of them (non-repayment of budget allocations; turnover of budget allocations), in our opinion, such an opinion cannot be expressed. They, on the contrary, create feelings of indifference, irresponsibility, and, consequently, contrary to the nature of the market economy, which ensure the effective spending of these funds. In this situation, the emphasis on them as General principles of budget financing, from our point of view, does not have a sufficient basis. They, on the contrary, create feelings of indifference, irresponsibility, and, consequently, contrary to the nature of the market economy, which ensure the effective spending of these funds. In this situation, the emphasis on them as General principles of budget financing, from our point of view, does not have a sufficient basis.

### Conclusions and suggestions.

In General, since the quality of the basis for ensuring the effective use of local budget funds is considered in the General principles of budget financing, based on the above, in our opinion, several conclusions can be formulated here. In our opinion, the most important of them are:

1. The basis for ensuring effective use of local budget funds is generally recognized (including in international practice) General principles of budget financing. It is impossible to solve the problem of ensuring the effective use of local budget funds without their strict compliance and achievement;
2. General principles of budget financing, such as obtaining maximum (high) efficiency with minimal (low) costs, target characteristics of the use of budget allocations, as well as the implementation of planned plans and the provision of budget funds taking into account the use of previously provided allocations, have a positive impact on ensuring the effective use of local budget funds. Therefore, in practice, if possible, it is necessary to achieve full compliance with the requirements of these principles;
3. General principles of budget financing, such as the irrevocability of budget allocations and fixing budget allocations, have a negative impact on ensuring the effective use of local budget funds, including. Therefore, it should be clarified that they are also recognized as General principles of budget financing;
4. Since the General principles of budget financing, such as gratuitous and non-refundable use of budget allocations, do not have a positive impact on ensuring the effective use of local budget funds, it is advisable to refuse to Express them in this form and content;
5. Taking into account the requirements of the modern market economy, integrating the new content into the principles of non-transparency of budget allocations and their irrevocability, it is necessary to formulate this principle in the form and content of "budget allocations that are actually taxpayers' funds, have the character of repayment in the form of uncertainty and social efficiency".

In our opinion, the conclusions formulated above are of fundamental importance, and their consideration can make a worthy contribution to ensuring the effective use of local budget funds, including in a modern market economy.

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# INTERNATIONAL HOTEL CHAINS AND THEIR EFFECTIVENESS IN THE DEVELOPMENT OF TOURISM AND HOSPITALITY INDUSTRY

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## ABSTRACT

Every day of our life we encounter thousands of brands and trademarks. In the hotel business there are about 150 hotel operator names or hotel chain brands. In fact, branding has become a very important part of the hotel industry over the last hundred years. But only a few hotel brands have made the list of the world's 100 most famous brands. As a result of the expansion of the hospitality industry in recent years, many tourist destinations have enriched their potential with the presence of such prestigious hotel brands.

**Keywords:** tourism, hotel, hotel chains, brand, Marriott International, IntercityHotel, Hilton Worldwide, Hyatt Hotels Corporation, Radisson hotel group, Ramada, Wyndham Worldwide.

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## INTRODUCTION

The first hotels appeared in ancient Assyria in 2000 BC. Since then, the appearance of residences has changed dramatically, and the range of services provided in them has expanded considerably. Hotels with modern appearance began to open in the late 19th century. The main feature of hotel business development was the active spread of network forms. In the process of analysis of international hotel chains tendencies it is possible to allocate 4 main stages of their development.

1. Formation of the first national hotel chains (end of the 19th century - beginning of the World War II);
2. expansion of American companies to the international market of hotel services in close cooperation with airlines (after World War II - till the 70-s of the 20th century)
3. internationalization of European companies. (70s-80s of the 20th century)
4. Gradual decline of American hotel chains' share of the global hotel services market and emergence of Asian, Australian and Latin American companies in the world. (from 90th of the 20th century up to now).

The first national hotel chains began to form in the U.S.A., Canada and Western European countries. The purpose of organizing hotel chains was to increase the efficiency of hotel operations at the expense of the benefits derived from strategic cooperation. [5, p: 3-30]

**A hotel chain** is a group of hotels and often brands with a common management and product concept. Centrally managed hotels appeared more than half a century ago, but at first this management phenomenon was not widespread. By the end of the Second World War the number of chain hotels began to increase, and after its end the hotel chains worked on the market and became leaders by the number of members who joined them. [4, p: 53-63]

## Main body

Currently, hotel chains are firmly established in the market of hotel services. Every major city in the world has hotels that belong to the group of large hotels, and their formation allows the promotion of high standards of service in the hospitality industry to the world tourist market. [7, p:



147-150]

In general, the main characteristics of hotel chains are:

- similarity in terms of territorial location;
- uniformity of hotel style in architecture, interior design, etc.;
- unity of identification and external information;
- uniformity and speed of customer registration;
- rooms designed for different categories of tourists;
- system of flexible definitions;
- unified management, marketing and communications service.

Modern hotel chains can include hotels in one or several countries, i.e. be national or international. While most major hotel chains are headquartered in the United States, other countries are increasingly playing a role in hotel management. [6]

The advantages of the hotel chain include:

✓ Purchasing large quantities of goods and services at wholesale (discounted) prices. Since the owner of the chain manages several facilities, he can make bulk purchases and give away equipment, accessories, cleaning and washing products, communications equipment, etc. to members of the chain hall. At very low prices.

✓ The network implements centralized hospitality training, which greatly reduces the individual costs of each network member. In addition, participation in the network gives its members access to the services of highly paid specialists - experts in their business. One hotel cannot pay for this. Not all independent hotels have these amenities.

✓ Promotion and advertising. An advertising campaign usually puts a huge burden on the budget of independent hotels.

✓ Hotel chains allow their members to share the cost of advertising and promotion among themselves. Then everyone can enjoy the results of the advertising campaigns.

✓ A centralized reservation system allows individual network members to consolidate their business. A large number of bookings, which would otherwise go to competitors, are made by hotels within the same chain.

✓ Financing a group of hotels is easier than an individual entrepreneur. It is easier for a chain to raise capital and direct it toward expansion or operational efficiencies.

In our country at the state level, tourism is given priority importance as a strategic sector of the national economy. In this regard, favorable conditions are created for investors, including investments in the construction of hotels. Entrepreneurs in tourism sphere are given close privileges. In order to stimulate the growth of hotel construction, the state introduces a procedure to compensate investors for part of the cost of building hotels. [9, p-377] As a result of these and other measures to support and protect the private sector is expected a strong growth in hotel construction. As a result of these and other measures to support and protect the private sector, hotel construction is expected to grow strongly. [1] While an average of about 100 hotels will be built annually in 2017-2018, this year the figure is expected to exceed 170. The rate of growth in hotel rooms in the country this year is 37%, compared to 4% and 5% in 2017 and 2018.

The hotel industry is one of the fastest growing and most successful industries in Uzbekistan, growing 15-20% per year. However, due to the coronavirus situation, this business has not yet fully recovered. Nevertheless, this crisis revealed the main shortcomings of the hotel business and helped to determine the ways of development of this industry in Uzbekistan. Any crisis requires quick measures, and one of them is strengthening cooperation with foreign experts in this field.

As a result of the wise policy of the President of the Republic of Uzbekistan during the pandemic, a number of privileges and preferences were provided to entrepreneurs in the tourism sector, as well as to investors. As a result, we are witnessing the construction of new hotels and tourist facilities in various regions of our country due to such state support for the tourism sector. In addition, the Decree of the Cabinet of Ministers № 433 approved the provision for allocation of funds

from the State Budget for partial funding, the allocation of subsidies to investors for the construction and equipping of new hotels, as well as how to finance organizations based on commercial concession agreements. In accordance with this provision, funds from the state budget are allocated to investors and organizations to cover part of the costs of construction and equipping a hotel. [2] 40 million soums per room in 3-star hotels and 65 million soums in 4-star hotels. The subsidy is provided from January 5, 2019 till January 1, 2022.

Also, according to the information provided by the Ministry of Tourism and Culture, the share of investments attracted to tourism is increasing. Particularly, in 2021, the investment projects allocated funds to the amount of 11.4 trillion soums and 495 projects were implemented.

On the basis of state investment program, 62 projects worth 1.2 billion soums were allocated jointly with local authorities and 31 projects were put into operation.

By the end of 2022, 727 projects worth 32.6 trillion soums will be launched in the tourism sector and over 22 thousand new jobs will be created.

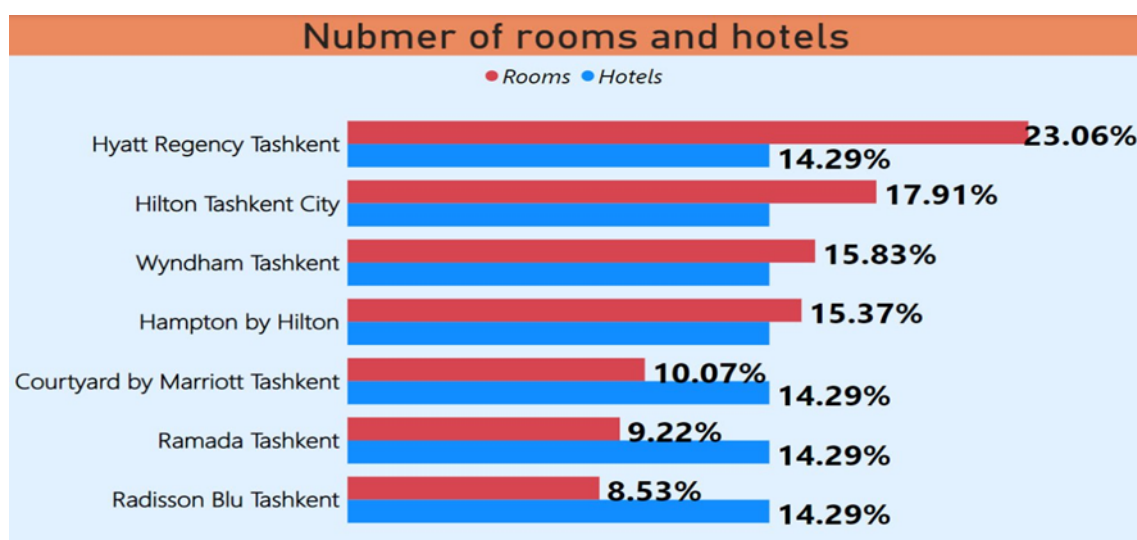
The leading hotel brands such as Hilton, Marriott, Hyatt, Wyndham, Intercontinental, Hotels Group and Accor enter the tourist market as a result of the attention given to development of entrepreneurship, attraction of investments and creation of competitive services.

In the field of hotel services in Tashkent (at the end of 2022) the following international brands are operating

#### Hotel chains in Uzbekistan

No	Brand	Number of chains globally	Number of chains in Uzbekistan	Hotels in Uzbekistan	Rooms	Degree (stars)
1	Accor	810	Mercure Tashkent	1	126	4*
2	Marriott International	1100	Courtyard by Marriott Tashkent	1	131	4*
3	IntercityHotel	40	IntercityHotel Tashkent	1	122	To be opened
4	Hilton Worldwide	585	Hilton Tashkent City Hotel Hampton by Hilton	2	433	5*
5	Hyatt Hotels Corporation	200	Hyatt Regency Tashkent	1	300	5*
6	Radisson hotel group	451	Radisson Blu Tashkent	1	111	4*
7	Ramada	650	Ramada Tashkent	1	120	4*
8	Wyndham Worldwide	9280	Wyndham Tashkent	1	206	4*
9	Total	13116		9	1549	

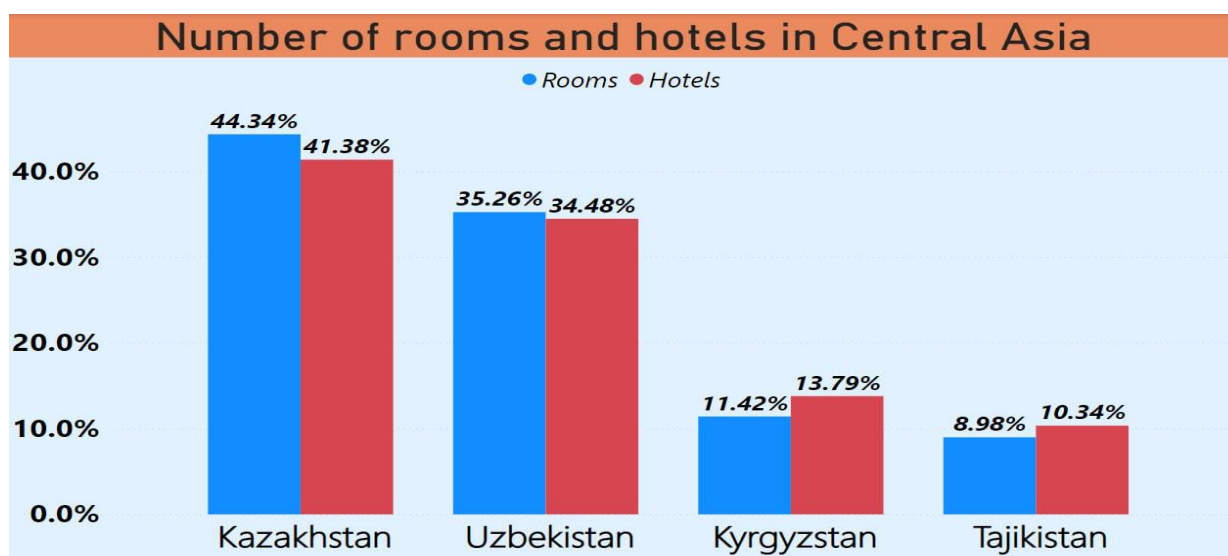
Source: [https://m.101hotels.com/hotel\\_chain/uzbekistan](https://m.101hotels.com/hotel_chain/uzbekistan)



### Lists of brand hotels in Central Asia

Source: <https://planetofhotels.com/guide/ru/blog/top-mirovykh-gostinichnykh-setey>

№	Uzbekistan	Kazakhstan	Tajikistan	Kyrgyzstan	Turkmenistan
1	Mercure Tashkent, 4*, 126 rooms	Holiday inn Aktau, 5*, 124 rooms	Hyaatt Regency Dushanbe, 5*, 211 rooms	Hyaatt Regency Bishkek, 5*, 147 rooms	
2	Courtyard by Marriott Tashkent, 4*, 131 rooms	Ritz-Carlton, 5*, 145 rooms	Hilton Dushanbe, 5*, 140 rooms	Sheraton Bishkek, 183 rooms, 5*	
3	IntercityHotel Tashkent, 122 rooms	Holiday Inn Almaty, 4*, 227 rooms	Dushanbe Serena Hotel, 5*, 85 rooms	Novotel Bishkek, 5*, 160 rooms	
4	Hilton Tashkent City Hotel, 5*, 258 rooms	Hilton Astana, 5*, 253 rooms		Ramada by Wyndham Bishkek, 64 rooms, 4*	
5	Hampton by Hilton, 3*, 175 rooms	Sheraton Almaty Hotel, 5*, 188 rooms			
6	Hilton Garden Inn Samarkand, 4*, 162 rooms	Marriot Executive, 4*, 143 rooms			
7	Hyatt Regency Tashkent, 5*, 300 rooms	Wyndham garden, 4*, 183 rooms			
8	Radisson Blu Tashkent, 4*, 111 rooms	Double Tree by Hilton, 5*, 112 rooms			
9	Ramada Tashkent, 120 rooms, 4*	Ramada by Wyndham Almaty, 4*, 164 rooms			
10	Wyndham Tashkent, 206 rooms, 4*	Park Inn by Radisson, 5*, 248 rooms			
11		Hilton Garden Inn, 5*, 248 rooms			
12		Mercure Almaty City, 4*, 117 rooms			



In 2022 **Reikartz** launched 9 hotels and became the largest local hotel chain in Uzbekistan: Reikartz Paitaxt Andijan, Reikartz Bahor Bukhara, Reikartz Qokand, Reikartz Majestic Samarkand, Reikartz Registon Samarkand, Reikartz Amirun Tashkent, Reikartz Surmezgen Tashkent, the third Reikartz in the capital – Hotel Razio Tashkent is also preparing to launch.

In 2022 the **Accor** also showed its activity: in December 2022 the Mercure hotel in Tashkent started accepting guests, the hotel in Bukhara is also ready to accept guests, the Mercure hotel in Khiva has been announced to be open in 2025. They will organize their activities not only in Tashkent, but also in Bukhara, Samarkand and Khiva.

**The Silk Road Samarkand** multi-purpose tourist complex started operating in the city of Samarkand in September 2022. The complex is located on an area of 260 hectares and includes world-class hotels, spacious public areas, hotels with various health centers, various restaurants and recreational facilities, as well as a large congress hall for international events.

According to statistics, as of November 2022, 4,879 accommodation facilities are operating in our country, of which 3,384 guest houses and hostels, 939 hotels and 66 recreation bases have received certificates. [12]

There are 352 hotels registered in Tashkent, the number of rooms - 12562, the number of places - 24771.

In the city of Samarkand 140 hotels are registered, the number of rooms - 3562, the number of places - 7319.

In Bukhara city there are 186 hotels, hotel room capacity - 4038, number of places - 8369.

In 2022 the country was visited by 4,700,000 tourists. By the end of 2023 it is expected that there will be 7,000,000 foreign tourists and 12,000 citizens of Uzbekistan.

Undoubtedly, these figures set the task before the state authorities to further improve tourist infrastructure in our country, to create decent conditions for the rest of foreign tourists visiting Uzbekistan, to improve the quality of services, to build new hotels.

Not so long ago the hotel market of Uzbekistan was considered as underdeveloped, because there were very few international hotels. Some international companies were forced to curtail their business due to the unstable investment climate in the country and the lack of guarantees. [8, p-15]. In particular, Intercontinental Group, Dedeman, Le Meridien and Sheraton closed their business. Undoubtedly, this had a negative impact on the development of the tourism industry in Uzbekistan.

A new InterContinental Tashkent brand is scheduled to open in Tashkent in 2023.

*["For information, he worked with InterContinental Tashkent brand franchise in Uzbekistan for 15 years and resigned in May 2012."]*

InterContinental Hotels and Resorts is an international hotel chain (brand) owned by the

British company InterContinental Hotels Group.

The brand opened its first hotel in 1946 in Belém, Brazil. The chain operates more than 180 hotels worldwide: 40 in North America, 33 in Europe, 30 in the Middle East, 27 in Latin America and 51 in Asia-Pacific. [10]

The presence of international hotel brands in the country is a psychologically important factor when planning a vacation for foreign tourists. The presence of large hotels indicates the openness of the country, its positive image, high level of comfort and safety. [3, p-440]

Studies conducted by world-renowned consulting companies have shown that foreign tourists highlight safety as one of the main advantages of hotels. In "safe" countries it is even more important. Therefore, foreign tourists trust and prefer to use the services of famous brands managed by international hotel operators.

Here are some advantages of branded hotels: the most reputable hotel companies offer hotel owners the following tangible and intangible factors, from operational knowledge and marketing capabilities to development experience and technical components.

#### **Operational advantages:**

- The consumer confidence, stability and earning power that the chosen hotel brand has to offer;
- Internationally recognized performance standards that guarantee continuous control of all hotel services;
- After the end of the management contract, continuous training of the hotel staff, which significantly improves the efficiency of the hotel and the qualifications of its employees;
- Continuous maintenance of all hotel equipment, which will keep it in perfect condition after the end of the contract;
- Preservation of the position in the market, guaranteeing the owner a high prestige and brand value during the entire term of the contract with the management company;

#### **Marketing advantages:**

- Access to international booking systems (booking portals, call centers, GDS and E-distribution);
- The sales and marketing team works to increase hotel occupancy and profitability through the synergy of brand offices worldwide and agreements with major international corporate clients, tour operators, travel agencies and consortiums;
- Sales management in accordance with brand standards and cost control policies;
- Knowing and retaining customers through loyalty programs;
- Engage in global strategic alliances that benefit alliance owners with regional hotel partners, airlines and other market participants;
- Familiarize yourself with technical specifications and development issues.

Hotel brands often offer guests a range of non-contractual services, including:

- Professional assistance and advice in the design and development of new hotels or upgrades to existing hotels;
- Research, teaching, management activities in the period before the opening of the hotel;
- Financial analysis of the development and implementation of the project.

#### **Conclusion**

Based on the above-mentioned opinions and considerations, the following priority areas of international hospitality industry development in Uzbekistan were identified:

- introduction of modern management technologies and complex systems of deployment facilities;



- introduction of improvement of hotels classification system and technical characteristics in accordance with international standards;
- to promote investment opportunities and potential of Uzbekistan in the hotel sector abroad, to attract international hotel chains to the country;
- organization of trainings and activities to improve the skills of specialists in the field of hotel and accommodation management;
- attraction of innovative technological solutions supporting digital transformation of the branch.

Using experience of international hotel companies allows Uzbek hotel business to strengthen its position in domestic market and activate strategy of entering the world market of hotel services. Brands, as the most important intangible assets of enterprises, have already proven their ability not only to provide enterprises with strong competitive advantages, but also significantly increase their market value.

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## INNOVATIVE ACTIVITY DEVELOPMENT TENDENCIES IN AGRICULTURE

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### ABSTRACT

The article is devoted to the problems of innovative development of agriculture. On the basis of economic analysis, the current state of innovative activity in the agricultural sector and the characteristics of innovative processes are determined. Problems and trends limiting the innovative development of agriculture were identified. In general, it is concluded that innovations are not common in the agro-industrial complex. The innovative products produced are mainly directed to the domestic market, technological exchange processes have unstable dynamics, and the patent-licensing component dominates the technology transfer. Based on the results of the research, the general directions for improving the innovative development of the agro-industrial complex were determined.

**Key words:** innovation system, technological modernization, fundamental and practical researches, agrarian sector, innovations, innovative activities, agriculture.

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### INTRODUCTION

Currently, innovation and innovative activities are the basis for providing a competitive advantage, as well as increasing the efficiency of production development and maintaining market positions. According to the conclusions of a number of international experts, about a third of the economic growth is provided at the expense of innovative technologies [1].

The purpose of this study is to determine the modern characteristics of innovative activity in the agricultural sector of the economy of Uzbekistan.

Agriculture is the most important component of the economy of Uzbekistan, the producer of basic products necessary for human life.

The importance of agriculture is confirmed by the data on its share in the gross domestic product. According to the data of 2021, it was 26.2% [22]. The level of food and biological safety in the country largely depends on the efficiency and rationality of its management [4].

#### **Literature analysis**

The work of many research-economists is devoted to the development of innovative processes and issues of innovative development. For the first time by K. Freeman, "National innovation system" was used as a type of institutions in the public and private sector, it is emphasized that the economy, its activities and interactions initiate, create, change and stimulate the spread of new technologies. [1]. B.A. Lundwell defined the national innovation system as a system of innovation formed by interacting elements and relationships in the production, distribution and use of new and economically useful knowledge [2]. The methodological principles of these authors are based on J. Schumpeter's ideas of innovations or "new combinations" and entrepreneurs whose main economic task is to implement innovations, as a factor determining the institutional aspect of innovative activity, its structure and content [3]. J. Schumpeter revealed the connection of waves of inventions and innovations with production in the researches of N. D. Kondratiev, the starting points of the theory of innovation [4]. Kondratiev's researches and conclusions are based on the statistical

analysis of the growth of the big cycle wave in the period of time of the economic indicators of different countries, profound changes in engineering and production technology, significant changes in the concrete conditions of the economic life of the society, fundamental innovations, the main based on the emergence of inventions and discoveries. The improvement of technology is subject to a long-term cyclical process.

Foreign scientists involved in the development of the innovation system in the agricultural sector include R. Daniels [5], B. A. Lundwell [2], R. Nelson [6], D. North [7], M. Porter [8], P. Romer [9], B. Santo [10], K. Freeman [11], S. Huntington [12], G. Chesborough [13], J. Andryev [14], J. Schumpeter [15] and others made great contributions and scientific research led Also, Russian A.I. Anchishkin [16], O.G. Golichenko [17] researches are devoted to issues of national innovative system modeling, innovative development.

### **Research Methodology**

In the article, expert estimates and calculations of economists published in scientific literature, report documents and reports of research organizations and the Ministry of Agriculture of the Republic of Uzbekistan, as well as materials of periodicals were studied. The methodological basis of the research is the scientific development of scientists in the field of management of innovative development processes in agriculture. The research process was based on a comprehensive approach to the subject under study using economic-statistical, abstract-logical, calculation-constructive, monographic, expert methods.

### **Analysis and results**

The world experience of economically developed countries shows that the efficiency of innovative activities and the level of involvement of commodity producers in the innovation process largely determines the success of entering the world agricultural market and the competitiveness of agricultural producers.

Many different systems of indicators and indices have been developed in the world, which allow to evaluate the level of innovative development of different countries and regions. For example, in order to evaluate the level of innovation development of 14 countries of the world based on the rating, Global Innovation, which includes 80 different variables that describe in detail the ratio between the costs of innovation and the result obtained from them, was developed by the staff of the international business school INSEAD in France. The method of calculating the index (The Global Innovation index) is proposed. In 2022, the scope of these studies covered 131 countries of the world. The following countries are in the top ten of this rating: Switzerland (64.6), USA (61.8), Sweden (61.6), Great Britain (59.7), Netherlands (58.0), Korea (57, 8), Singapore (57.3), Germany (57.2), Finland (56.9), Denmark (55.9), the Russian Federation is 47th in this rating, Uzbekistan (82nd), Kazakhstan Estonia took the 83rd place, and Tajikistan took the 104th place [19].

The analyzes show the need to implement measures for the rapid introduction of modern innovative technologies to all sectors of our national economy, social and other fields, with the wide use of scientific and technical achievements in our country. As a result of Uzbekistan's integration into the community of technologically developed countries in the world and its choice of the path of innovative development, participation in the Global Innovation Index rating compiled by international organizations that evaluate innovative technologies has been launched.

The world's leading agricultural economy corresponds to the sixth technological form, its development is related to the results of the transfer of innovations in the field of nano and biotechnologies, alternative energy and new information technologies.

Most of the agricultural producers of Uzbekistan show the level of production according to the third or fourth technological order.

This puts increasing demands on the modernization and development of the local agricultural industry, implementation, and the use of innovations in this field, making it one of the main principles of strategic development principles.

**Table 1. Dynamics of volume and costs of innovative products, works, services in the Republic of Uzbekistan (million soums)**

<b>Years</b>	<b>Volume of self-produced innovative products, works, services - total</b>	<b>Including agriculture, forestry and fishing</b>	<b>Expenditure on technological, marketing and organizational innovations - total</b>	<b>Including agriculture, forestry and fishing</b>
2010	1849026,5	3874,8	264445,8	34,5
2011	1348657,8	3920,5	372646,3	119,7
2012	3635933,2	1443,3	311879,9	942,7
2013	4614656,2	6488,1	4634230,1	3988,2
2014	7042964,5	33912,1	3757372,2	1841,9
2015	8023628,5	16105,8	5528278,7	1775,3
2016	10688245,6	35520,3	2571405,6	8144,3
2017	18543331,0	47941,3	4162263,7	15684,6
2018	28871465,3	118539,4	4707211,8	71,3
2019	26371356,2	105485,4	6603474,9	26413,8
2020	29496504,2	117986,0	6829968,6	27319,8
2021	24523128,8	98092,5	17680789,0	70723,1

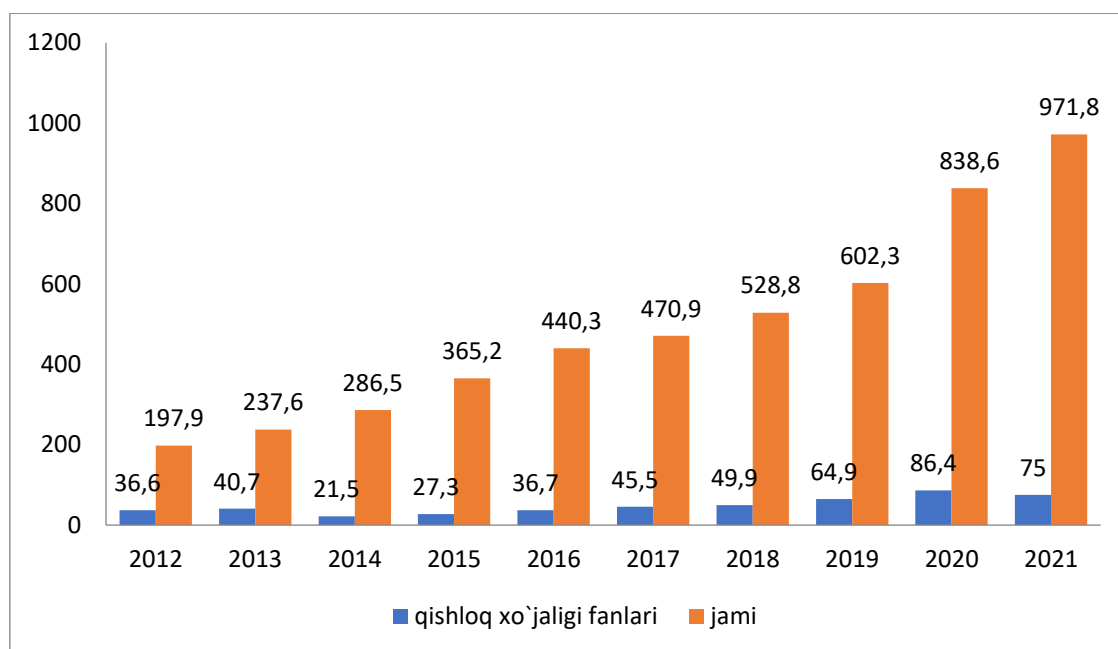
*Compiled by the author based on the data of the Statistical Agency under the President of the Republic of Uzbekistan.*

As can be seen from the table, the total volume of innovative products, works, services produced by own power in 2021 increased by 13.2 times compared to 2010 and amounted to 24523128.8 million soums.

Including, the volume of innovative products, works and services in agriculture, forestry and fisheries increased from 3,874.8 million soums in 2010 to 98,092.5 million soums in 2021. increased to soums. However, the fact that the share of agriculture, forestry and fisheries in the total expenditure on technological, marketing and organizational innovations is less than 0.5 percent, and its sharp decrease in 2018 compared to 2017, indicates that there are serious problems in this area. However, as a result of the attention given to the development of innovation, by 2021, a positive balance can be observed both in the volume of innovative products and in the expenses spent on innovations in agriculture. Including spending on technological, marketing and organizational innovations - in total in 2021 compared to 2018, 4707211.8 million. from soums to 17680789.0 million soums or increased 4.5 times.

The analysis of the total costs of scientific-research-experimental construction developments (ITTKI) in the fields of science also shows that the share of agricultural sciences in the structure of total costs is relatively low (Fig. 1).

The analysis of the data shows that in 2010-2021, total expenditures on (ITTKI) increased from 197.9 billion soums to 971.8 billion soums. increased by 491.0%, while expenditures on agricultural sciences increased from 36.6 billion soums to 75040.9 billion soums, i.e. by 205.0%. However, the fact that only 7.7% of the total ITTKI expenses for this sector in agriculture cannot be considered as a positive situation.



**Figure 1. In 2012-2021, ITTKlar expenses in the fields of science, billion soums**

*Compiled by the author based on the data of the Statistical Agency under the President of the Republic of Uzbekistan.*

At the same time, 54.1% of the total expenditures are for natural sciences, 16.0% for technical sciences, and only 7.7% for agricultural sciences.

Or we can see this situation in more detail in Table 2. During 2015-2021, in relation to the gross agricultural product, the costs of scientific research and experimental construction development in agricultural sciences are 7.5%, 8.3%, 9.7%, 9.4%, respectively. %, 7.6%, 10.3%, 7.7%.

This situation, on the one hand, shows that agricultural scientists are not presenting enough innovative projects, and on the other hand, it creates the need to improve the innovation environment (Table 2).

In the effective development of agriculture, the agro-industrial complex complicates the management of innovative activities and limits it under the influence of a number of factors. Among them are the uncertainty of the economic situation, fierce competition, inflationary processes, decrease in demand, disproportion of prices, insufficient investments in the main funds of enterprises, and the need to replace imports.

The analysis of the current situation allows us to conclude that the agricultural producers of Uzbekistan are implementing individual innovative projects, but the prevalence of innovations, in general, is not at the level required for the agro-industrial complex (Table 2).

This creates the need to increase the importance and contribution of agriculture in the innovative development of the economy of Uzbekistan.

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**Table 2. Expenditures allocated to agricultural sciences in scientific research and experimental development**

	2015	2016	2017	2018	2019	2020	2021
<b>Otal expenses for ITTKI, million soms</b>	<b>365160,1</b>	<b>440285,2</b>	<b>470938,3</b>	<b>528777,5</b>	<b>853404,4</b>	<b>838633,8</b>	<b>971801,5</b>
<b>To agricultural sciences</b>	<b>27345,8</b>	<b>36706,1</b>	<b>45539,7</b>	<b>49951,8</b>	<b>64937,6</b>	<b>86386,4</b>	<b>75040,9</b>
<b>including:</b>							
<b>to basic research</b>	4952,8	6474,2	7337,3	7933,8	6314,7	8528,8	8430,8
<b>to case studies</b>	16671,6	19061,8	28876,4	31902,8	46493,7	62427,8	31459,9
<b>to scientific and technical development s</b>	4362,8	5238,2	5064,7	4826,3	6585,4	6929,2	7684,8
	7,5%	8,3%	9,7%	9,4%	7,6%	10,3%	7,7%
<b>Share of agricultural sciences in total ITTKI expenditures, in %</b>	0,027%	0,032%	0,031%	0,027%	0,030%	0,035%	0,025%

*Author's development based on the data of the Statistical Agency under the President of the Republic of Uzbekistan.*

For comparison, the countries where ITTKI expenses are the highest in the world as a share of the country's GDP, as well as the world average values of these indicators, according to the latest data, were selected. The analysis is based on the assumption that in order to maintain global competitiveness, Uzbekistan should be proportional to the world average, and for leadership, it should be proportional to the indicators of the most developed countries in this regard.

The average share of ITTKI expenses in GDP in the world is 1.92%. In the Republic of Korea, which is the leader in this indicator, this value is 4.81%. China has the lowest figure among the leading countries, its share in GDP is 2.4%.

For Uzbekistan, this value is 0.13%, that is, it is approximately 10-30 times lower than the world average or the Republic of Korea.

If we analyze this situation in the cross-section of subjects of the Republic, we can observe the low rate of innovative development in this regard (Table 3).

**Table 3. The average share of ITTKI expenses in GDP in the regions of the Republic of Uzbekistan (in %)**

Regions	The average share of ITTKI costs in the GDP
Republic of Karakalpakstan	0,08
Andijan region	0,12
Bukhara region	0,14
Jizzakh region	0,09
Kashkadarya region	0,02
Navoi region	25,2
Namangan region	0,13
Samarkand region	0,07
Surkhandarya region	0,46
Syrdarya region	0,29
Tashkent region	0,51
Fergana region	0,14
Khorezm region	0,34
Tashkent city	1,53

Within the framework of state programs related to scientific activities for 2020-2022, the total cost of higher education and research institutions for the development of agriculture, veterinary medicine and environmental protection in our republic is 201.1 billion. 137 soums (of which 110 applied (148.3 billion soums), 10 innovative (10.5 billion soums), 7 fundamental (26.9 billion soums) and 10 international joint projects (15.4 billion soums) are being implemented.

In the past period of 2022, 12.6 billion will be spent on agriculture. 14 commercialization and pre-commercialization projects were financed. As a result, more than 18 types of import substitution products are produced (Table 4).

During 2021-2022, 104 developments related to agriculture were commercialized, totaling 44.39 billion. products worth 14.08 billion soums were produced. 5.78 billion soums worth of products were sold. Soum services are provided.

**Table 4. List of pre-commercialization projects funded in 2022 in agriculture**

No	Name of the project:	Executive organization	Amount of financing (in thousands of soums)	Enterprise funds - Cost sharing (thousand soums)
1	Creation of the technology of in-vitro reproduction of grape vine seedlings and their drip irrigation.	"Akhrorhoja Sojida" farm	569 908,90	147 840,00
2	Providing food to small farms engaged in animal husbandry by growing natural feed using the hydroponics method.	"ART STROY INFO" LLC	1 011 406,00	413 856,00
3	Creation of new knitted products under the "Chust" brand based on the separation of spun fiber from bright cotton fiber and waste from the spinning process.	"Porloq Chust Brandy" LLC	1 137 989,30	268 800,00



4	Establishment of an in vitro biotechnology laboratory for growing fertile mulberry seedlings to increase the quality and productivity of the silkworm feed base in the republic	"SILK PLANT CLUSTER" f/x	1 345 864,50	
5	Introduction of artificial breeding and fertilization technology of queen bees in the conditions of Ohangaron district of Tashkent region.	"HILAL ASALCHI BAHOR" LLC	181 210,00	39 984,00
6	Organization of seed production of new varieties of cotton "Ravnaq-1, Ravnaq 2 and Guliston" and their introduction into the cotton-textile cluster	"Poly Tech Sirdaryo" LLC	1 216 195,76	5 997 642,66
7	Production of new environmentally friendly "TERIA" series of bacterial fertilizers to increase the productivity of saline and degraded soils and the productivity of agricultural crops	"INNOVATION - IDEAS" LLC	801 079,00	114 240,00
8	Production of "single brucellosis antigen for AR, KBR and KUMBR" and "colored brucellosis antigen for milk reaction (XR)" for express diagnosis of animal brucellosis disease	IIC HK "BioAgroVet" LLC	447 036,00	157 864,00
9	Production and introduction of GOA formalin vaccine against rabbit pasteurellosis in multi-sectoral farms in the Republic	IIC HK "BioAgroVet" LLC	320 000,00	78 624,00
10	Creating a nursery for growing high-quality strawberry seedlings using "Invitro" and "Frigo" technology	"ELEMENTAREE" LLC	937 490,00	766 980,00
11	"Starting the preparation of extruded feed for fish farming, poultry farming and animal husbandry from feed raw materials rich in carbohydrates and digestible substances (wheat, sorghum, reed, alfalfa, corn, soybean, semolina, etc.).	"GOLDEN PURE FEED" LLC	1 150 000,00	1 400 000,00
12	"Organization of production of feed products for animal husbandry and fisheries using products made by hydroponics method, reeds and reeds"	MEGACLUSTER LLC	1392680	212 200,00

13	Production of vitamin-rich fodder for livestock, rabbit breeding and poultry farms based on licorice, wormwood, sugarcane crop residues, carrack, yantok and hydroponic technology.	"Syrdarya Mirzachol Khazina Barakasi" LLC	1 265 360,00	1 517 940,00
14	Starting the production of granulated fodder from a combination of sorghum, reed, alfalfa, licorice, corn and amaranth plants.	"Sons of the Comrade Sheikh" f/x.	798 590,00	355 696,00
			<b>12 574 809,46</b>	<b>11 471 666,66</b>

*Compiled by the author based on the information of the Innovation Development Agency of the Republic of Uzbekistan.*

### Discussion of research results (Discussion)

Increasing innovative activity and transition to an innovative type of development is defined in the innovative development strategy of the Republic of Uzbekistan in 2019-2021 and in the innovative development strategy for the period until 2022. is to provide. [20]. However, despite the many implemented programs (the Concept of Agricultural Development for 2020-2030, the Law "On Science and Scientific Activity" was adopted), there is a lack of innovation activity of the agro-industrial complex. the opportunities and potentials, created conditions, privileges are not being used sufficiently, which is largely related to the effective implementation of the organizational and economic mechanism of adopting innovations [21].

Local agricultural entities lag behind their counterparts in developed countries in terms of productivity, which is due to the presence of less developed technical, technological, scientific, personnel and management potential. The state of most of them is on the verge of maintaining balance, allowing for simple reproduction.

Innovation in agro-industrial production is a set of interrelated actions to create new or improved agricultural products or to process them, to create specific models of its production, in the conditions of continuous development of science and technology. Innovative activity of agricultural organizations is a type of aggregate assessment of the intensity of creation, introduction and practical use of innovations.

Innovative processes in agriculture have a number of characteristics arising from specific aspects of agricultural production:

- variety of agricultural products;
- interconnection of technological processes, participation in the production of living organisms (plants, animals, microorganisms) that occur in the natural environment;
- significant differences in agricultural production technologies, their dependence on unpredictable weather and climate conditions;
- seasonality of production processes of certain types of agricultural products;
- territorial dispersion of agricultural production;
- various relative differentiation of types of agricultural producers in terms of ownership forms, specialization, size, integration and cooperation;
- weakness of scientific and technical production relations between agricultural producers and organizations;
- insufficient demand for innovative activity, scientific-technical and science-requiring products in agricultural activity;
- potential consumers of innovations in agriculture, as a rule, are characterized by insufficient own funds and low creditworthiness and investment resources for attracting credit, as a result of

which innovation processes in agriculture are carried out without state participation and effective state that it cannot be done without help;

- lower than the standard of living in the village;
- insufficient qualification of workers in the field of innovation management;
- the variety of scientific and technical developments proposed for use in the agro-industrial complex, their different target orientation;
- first of all, the long process of selection and breeding works of innovative development;
- insufficiently developed organizational and economic mechanism of transfer of achievements of scientific and technical development to peasants and farmers;
- innovations, as a rule, are not negative, but fundamentally improving.

Thus, despite the increase in the share of innovative goods in the total volume of production, their share in agricultural products is low. In particular, the share of innovation in the field of plant breeding is 4.2%, in livestock breeding - 3.9%. At the same time, the average indicators for the total economy are twice the value of the agricultural sector.

The following data also indicate the low level of innovative activity of local agribusiness. Smart agricultural technologies are used by about 5-10% of producers, in the EU - about 80%, in the USA - 60%.

Today, a number of factors affect the innovative development of Uzbekistan's agriculture and require specific tasks:

- establishing a clear concept for the development of innovative activities in agriculture and complex production and a mechanism for its stimulation;
- take measures to eliminate low technological modernization of agriculture and imbalances in it;
- ensuring the growth of the main factors of gross product production through its intensive development, taking into account the fact that the growth of agricultural entrepreneurship is generally extensive in nature;
- the fact that the introduction of innovative technologies is mainly aimed at the modernization of the material and technical base;
- expanding the scope of delivery of marketing activities to consumers;
- creation of an effective demand support mechanism for innovative products and its practical application;
- taking measures to increase the competitiveness of domestic innovative developments in foreign markets;
- to take measures of state support in order to strengthen the work of directing leading agricultural enterprises to purchase foreign scientific and technical solutions and technologies;
- further improvement of the existing mechanisms for stimulating the development of innovation in agricultural producers;
- underdevelopment of innovative infrastructure;
- lack of information about new technologies;
- the need to take measures to increase the scientific and technical potential of local agricultural specialists;
- the existence of a gap between scientific research and directions of demand and needs in production;
- lack of practical research works;
- insufficient amount of funding of scientific research from the budget and limited amount of private investments in scientific research works;
- high loan rates for agricultural organizations;
- due to the financial situation in agriculture, the availability of innovative technologies with high capital capacity mainly among large commodity producers;
- low level of labor productivity in local agriculture compared to the production of foreign agro-industry.

As a result, on the one hand, there is an important contradiction in the necessary conditions for innovation due to institutional changes in the existing agro-industrial complex and the influx of private capital to modernize production, on the other hand, the most important factor that significantly limits the scope and attractiveness of innovation is potential the lack of financial support to the agricultural sector for investors creates a crisis situation in the majority of commodity producers.

This does not correspond to the real needs of updating the main production funds of the economy and expanding the production of radically new competitive products. Marketing and organizational innovation costs are very low and their share does not exceed 3%.

**Table 5. Demand for new technologies by economic entities of the agro-industrial complex**

Technological activities	Farming	Farms	Organizations engaged in agriculture
Organic agriculture	H	M	L
Smart agriculture	L	L	M
Large "conveyor" livestock	L	L	H
Dry farming	L	L	M
Keeping livestock untethered	L	L	H
Drop by drop	L	L	M
Individual preparation of fertilizer mixtures	L	L	H
Integrated pest management	M	M	H
Urbanization of agriculture	L	L	M
Automated and computerized	L	L	M
Unproductive agriculture	H	H	M
Biofuel	L	L	M

Explanation: H-High, M-Medium, L-Low.

Source: author's development based on information from the Ministry of Agriculture.

The data show that the highest demand for new agricultural technologies in agriculture is provided by large and medium-sized agricultural enterprises and organizations (organizations engaged in agriculture).

The results of the analysis of the data on the introduction of innovations, among the process innovations, the most demanded are the introduction of direct supply chain (farm to table), precision farming, deep re the use of the process of collecting and storing genetic information in work, production leads to such conclusions in agriculture. Among the technological innovations introduced to agriculture, full automation of individual business processes, advanced accounting systems and fully automated process chains, and cloud information technology dominate. (Table 5).

### Conclusions and recommendations

In conclusion, it should be noted that one of the most urgent tasks in modern reality is the creation of conditions for increasing the innovative activity of agro-industrial enterprises of the agricultural economy of Uzbekistan.

Efforts and mutual cooperation of state bodies for effective innovative development of national agricultural production (creation of favorable economic conditions and direct support for innovations), development of science, advanced technologies, education (training and retraining of special personnel) and investment in business innovation.

In order to move to the innovative path of the development of the agro-industrial complex, it is necessary to improve the regulatory framework for innovations, technical and technological re-equipment of agricultural enterprises, to develop a more improved mechanism for stimulating innovative activities, and to provide appropriate support for the development of agriculture. it is necessary to use support mechanisms, develop infrastructure, establish a system of providing

information and advice to producers of goods, train and retrain highly qualified personnel, increase the efficiency of scientific research, deepen and expand the integration of agricultural science and production.

Increasing innovative activity leads to economic growth, development of the agro-industrial complex of Uzbekistan, increasing the competitiveness of commodity producers, development of local agriculture, production of high-quality food products, increasing the economic potential of the industry and its competitiveness in foreign markets.

In the effective development of agriculture, the agro-industrial complex complicates the management of innovative activities and limits it under the influence of a number of factors. Among them, the uncertainty of the economic situation, fierce competition, inflationary processes, a decrease in demand, imbalance of prices, insufficient investments in the main funds of enterprises, and the need to substitute imports.

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## AGGLOMERATION DEVELOPMENT CLUSTERING SYSTEM

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### ABSTRACT

This article proposes the formation of a cluster system of agglomeration development. In the development of urban agglomeration, infrastructure development through clustering and effective indicators of economic and social activity analyzed.

**Keywords:** Region, production system, production forces, international division of labor, economic region, economic landscape, standard, monopoly profit, dumping, tax system, state border, international trade, technical progress, development pole, development centers.

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### INTRODUCTION

In the article, it is proposed to form a system of agglomeration clusters as a priority for the longevity of the region's population. The cluster should be organized internationally as a "regional infrastructure complex".

Concepts of long-term socio-economic development of clusters using innovative high technologies have been developed in our country. In the development of the region, the cluster approach is used as an effective type of economic and social activity.

In the agriculture of our country, the initial clusters were formed as a result of the merger of low-capacity farms. It is possible to develop the country's agriculture by actively introducing the Kurdish cluster approach from foreign experiences. One of the main trends in agriculture is the consolidation of farms. Basically, clusters are specific to agriculture and are characterized by a combination of components of farms

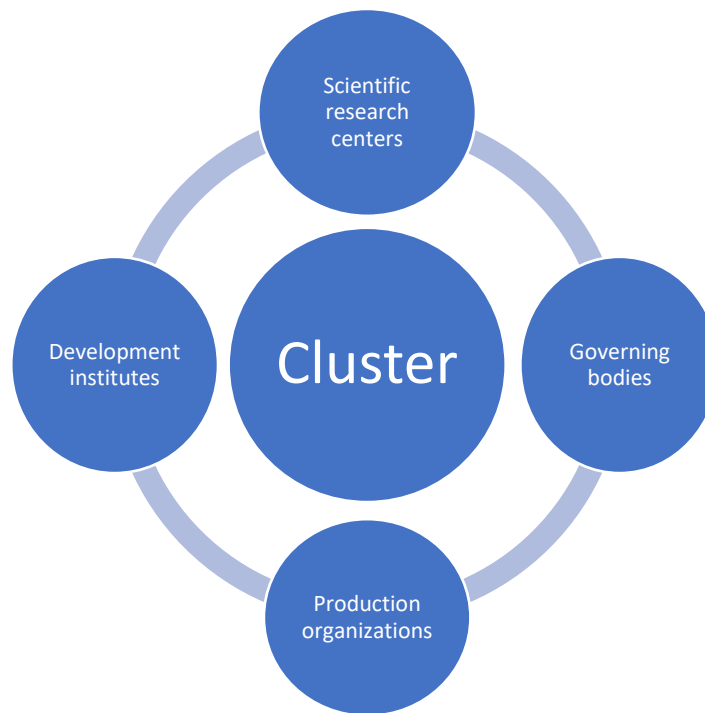
#### Research methods

When economic growth theories of the neoclassical direction are considered, the issues of agricultural location, taking into account space and time, are among the economic factors. A. Marshall studies the economic feasibility of clustering. According to A. Marshall's teaching, the concentration of small businesses in local areas [1] will have higher efficiency indicators. The research shows that small and medium-sized enterprises operate in the same way, and that industries concentrated in a certain area operate as large enterprises, increasing efficiency.

According to the theories of H. Sibert, regional growth consists of such factors (labor, land, capital, level of education) as are interrelated to the volume of production [2].

We can see clustering theories of cumulative growth from the works of F. Perroux, J. Boudville, P. This method (accumulation method) is one of the methods of determining the capitalization coefficient (rate) when the capitalization coefficient is added.

Clustering is based on the leading idea in the theory of growth poles of Pottier and F. Perrou. Attention is paid to the role of industries that create new goods and services. This leads to the production concentration of enterprises and the formation of poles of economic growth [3].



Picture 1. M. Porter's cluster concept

Production concentration means an increase in the number of large enterprises and an increasing share of the means of production available in society.

In polar theory, competitiveness is a long, ramified, and pressing path of economic diversification and integration passed [4]. *Diversification* by achieving high efficiency in production, obtaining economic benefits, by economic integration, we understand the convergence of various enterprises and industries, as well as countries, in the production sphere, and the inextricable connection between them

And J. Boudville linked the theory of F. Perrux to a specific geographical location. He showed functional communication in geographical space.

Economic development of regions is carried out by starting the mechanism of self-development [5]. According to P. Krugman's theory of "agglomeration", the main factor of growth is concentration of industry. G. Myrdal begins the development of the region with the discovery of the random factor [6]. Thus, there are theories of enterprise placement based on many foreign experiences. To study the economic efficiency of enterprises and their activities, due to significant differences in socio-economic development, theories of cumulative direction are used [7]. N. Kolossovsky, PM Alampiev, Yu. G. Saushkin and others studied the territorial distribution of enterprises. They are the founders of the concept of "regional production complexes" [8]. The theory of regional production complexes develops the economy of the region through targeted efficient production. Co-operation of different branches of local enterprises has been used in areas with low density of primary industries. The theory of regional production complexes was used for the development of weak areas of population and manufacturing industry [9]. Clustering of places with dense natural and human resources of the region increases the competitiveness of the region [10]. The founder of the theory of clustering is M. Porter, who defines a cluster as "a geographically adjacent interconnected group." Companies operating in a certain field and related organizations are complementary". Co-operation of different branches of local enterprises has been used in areas with low density of primary industries. The theory of regional production complexes was used for the development of weak areas of population and manufacturing industry. Clustering of places with dense natural and human resources of the region increases the competitiveness of the region. The founder of the theory of clustering is M. Porter, who defines a cluster as "a geographically adjacent interconnected group." Companies

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To date, the formation of innovation clusters is an important policy element in foreign countries. According to experts, clustering covers about 50% of the economy of leading countries [12]. In order to activate innovations and increase the number of clusters, it is the task of clustering to establish a strong relationship between economic indicators as the most effective mechanism for developing and increasing the national economy [13]. The positive experience of cluster development in foreign enterprises became the basis for the introduction of clusters in the economy of our country.

As an effective type of economic and territorial development of the region, scientific centers will appear as a result of the formation of high-tech productions and scientific research.

### Result and discussion.

Optimization as a result of the introduction of "Economic Development and Innovative Economy" clusters is a requirement of the current era. It is necessary to organize production chains to increase the position and competitiveness of local enterprises.[14]

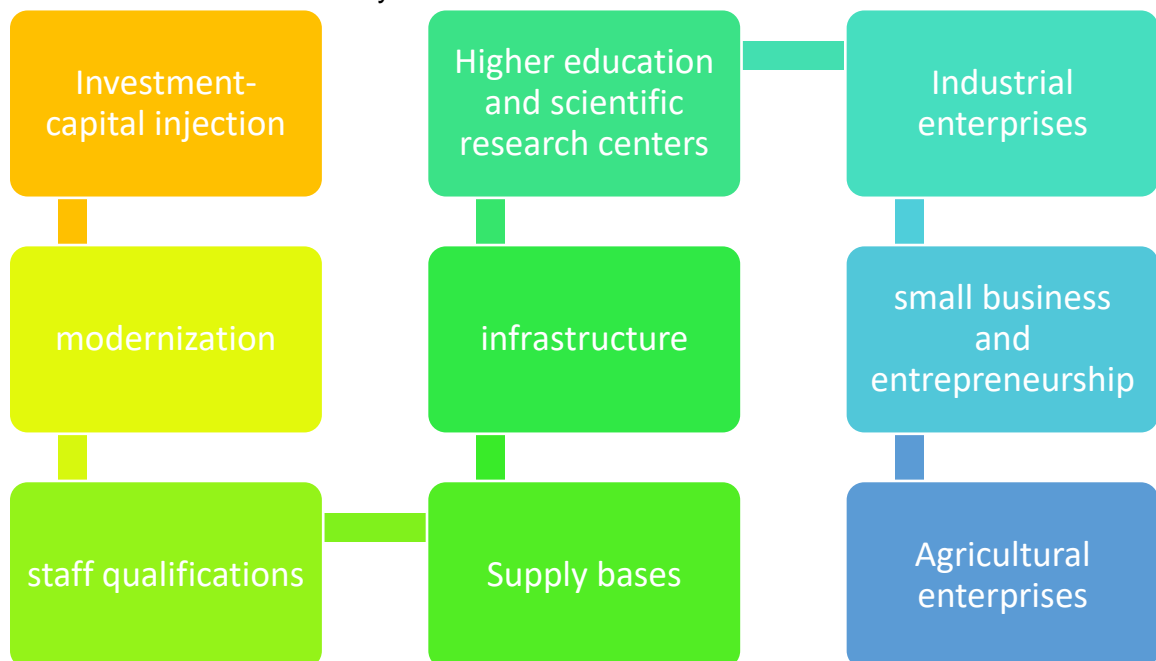
In the modern economy, the cluster approach continues to be supported by the state.

It means that it is necessary to move to the model of "modernization of the regional economy". Multipolar spatial development and "cluster formation of poles" in the region will increase competitiveness.

The flexibility and ambiguity of the "cluster" concept, the constant expansion of boundaries and the cluster approach lead to the emergence of new definitions and diversity.

Common key features of regional clusters are:

- geographic concentration of participating firms and resources;
- specific specialty;
- functional interdependence and a wide range of participants;
- intra-cluster competition and cooperation;
- innovative direction of activity.



Picture.2 Is the concept of the cluster approach  
For these characteristics, each researcher depends on the field of study

and direction, adds his views on the definition of "cluster". Menshenina IG defines a cluster as a form of territorial organization of the economy, and mutual cooperation of a group of companies to realize competitiveness shows the advantages of the region [15]. According to Rozhkov, GV says that clusters are a group, the same interrelated economic objects [16]. Naumov compares VA with "Locomotives for economic development" and creates clusters. clusters as large competitive structures [17]. According to Kutsenko, clusters are a place of high innovation activity, and the main purpose of implementing clusters is to increase global competitiveness and transition to a new technological base [18,19].

Due to the common proximity, both geographically and in the field of activity, the members of the cluster receive great economic benefits. The "synergy effect" arising from the geographical result contributes to the localization and formation of participating firms, resources, and consumers. Spatially expressed territorial zones [20, 21] of the advanced economy grow through continuous experience and information exchange and dissemination.

Introduction of the latest technologies, advanced developments, discoveries, implementation of innovations as a result of the interaction of science and business, creation of new ones, in turn, introduction of innovations helps the development of enterprises. The economy plays a direct role in the formation of clusters, because clusters are components of the theory of territorial regulation of the economy [22].

Clusters are economic formations aimed at increasing and strengthening the competitiveness of the region, development and promotion of small and medium-sized businesses, small enterprises, collection and flow of special information[23,24,25]. According to KZ Adamova, clusters explain that certain types of crafts or approaches to crafts are usually developed and used within strictly limited territorial boundaries» [26]. "As a result of increasing clusters, growth points for the domestic market appear. [27]

Scientific centers and educational institutions, which are part of the production and high scientific potential of the cluster members, form a scientific base and perform the function of scientific concentration. The potential of the region is exploited as a driver of regional development to create human capital in the future.

In foreign practice, the cluster approach is supported by the state. Half of the national economies of the world's leading countries are covered by clusters.

The network of organizations implementing information and education is a consultant and assistant for the development of clusters.

The European Cluster Policy Group - the developers of the cluster development guidelines - has created a cluster innovation platform. The creation of necessary conditions for the formation of clusters increases the potential of the region. The presence of the main competitive enterprises is classified into clusters, depending on the location of the participating firms, depending on the specific specialization.

Industrial clusters are characterized by functionality and relatedness of participating firms, as well as geographic concentration.

In this study, spatially significant clusters are characterized by geographic concentration and determined by the interdependence of cluster member objects. Territorial proximity and functional dependence relations in the field provide an opportunity to sell goods and services. T. Anderson defines the territorial cluster as follows: it is a spatial agglomeration of relevant forms of economic activity, a feature that forms the core of the environment and contributes to the overflow of knowledge.

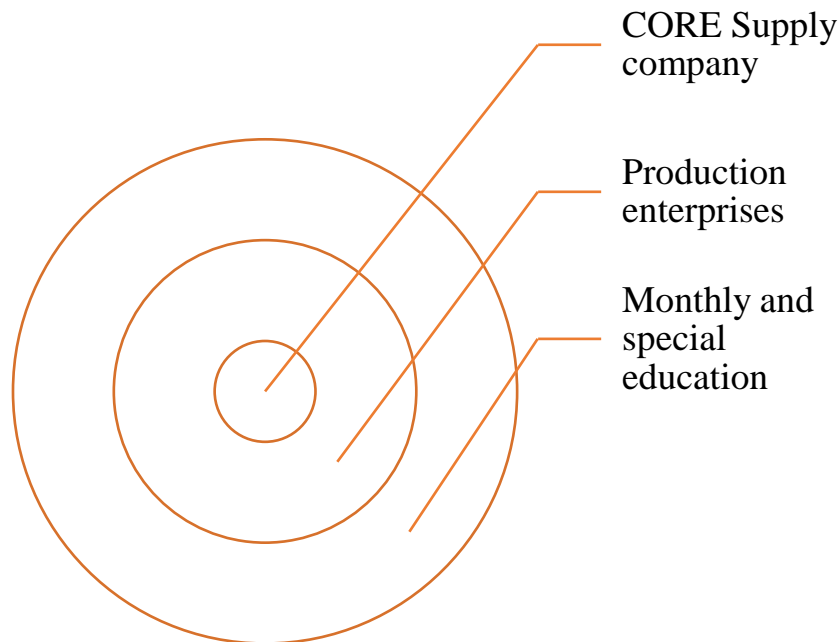
The peculiarity of this type of clusters is that the territorial concentration of participants provides unhindered access to the labor force. Intellectual resources create the interaction of companies within the cluster and create a business environment that promotes the formation of new resources. Where clusters exist, they benefit from both intra-cluster linkages and development, and restore linkages internationally.

According to M. Porter, the founder of the cluster theory, there is a need for regional concentration of cluster members, they should be located in the same city, region or local area. Therefore, there are different interpretations of the concept of "Cluster". According to Pilipenko IV, the territorial distribution of participants in the cluster represents 2 large groups. Groups are non-spatial (industry and national) and spatial (regional, cross-border and local). In Chamansky's research, the concept of "industrial clusters" defines interconnected networks.

Spatial concentration of enterprises uses the concept of industry [36]. In the Cluster Policy Implementation Guide

The same cluster enterprises can be located close enough and in close proximity.

The analysis of domestic and foreign literature made it possible to determine the main composition of cluster members (Pic. 3), which includes:



Picture 3. Composition of cluster members

- profile enterprise - core of the cluster;
- Small and medium-sized enterprises are cluster members of the same specialization core;
- Enterprises - service providers;
- Scientific and educational institutions;
- innovative infrastructure facilities;
- service facilities;
- commercial objects;
- Engineering and transport infrastructure facilities.

A characteristic feature of all clusters is autonomy, the presence of a core, the presence of intra-cluster connections. The development of clusters occurs in different ways in different regions. The differences between them depend on the historical, demographic, geographical features of the development of states.

A cluster is defined as typical, but is subject to and adapted to each individual case. Labor cooperation, specialization units, and knowledge spillovers help new firms enter existing clusters without problems.

Creating clusters in a region is a complex process that requires detailed information. Analyzing the current situation, studying the terrain, determining resources is a complex issue. There is no official copy of successful foreign clusters in the regions. Having this opportunity is almost always fraught with risk.

Petrov AP proposes a cluster formation algorithm, which consists of determining the clustering possibilities based on factor analysis, determining the cluster kernel, and modeling the cluster. Methodology of formation of regional clusters as a result of study of classic and modern studies. At the first stage, the resources of the region and the possibilities of creating a cluster in the region are determined.

The rational use of resource potential is an important component. It is an area characterized by specific specialization, with the potential of forming a cluster through available natural, material and technical, human, financial, informational, scientific, investment, logistics, business, labor, etc. resources. It is characterized by human and production resources with a small network and well-established relationships with medium-sized enterprises, research institutes, universities, suppliers and consumers.

At the first stage, clustering is formed in places where "big breakthrough" is expected and is provided with production techniques and technologies.

In the second stage, the composition of the cluster is determined, the core will consist of enterprises that will be the basis of the whole cluster's activities. These institutions are often the enterprises that make up the city.

Institutions that perform related or additional functions to which the members of the third stage are allowed to enter. Later, vertical and horizontal chains are created between the main and auxiliary members of the cluster are formed.

In the fourth stage, the level of cooperation is determined and mutual relations, transport and production relations are formed. Financial, scientific, infrastructural institutions aimed at ensuring the provision of cluster level, including formed service facilities, determine the full operation of the cluster.

Finally, the boundaries of the cluster are determined, from now on the strategy of increasing the competitiveness of all is launched, the competitiveness of the members of the cluster and, accordingly, of the entire region will increase. The advantage of the formation of such cluster systems increases the regional development potential

In this study, foreign and local experience in the formation and development of clusters of agricultural enterprises was analyzed. As a result, a typology of clusters of agricultural enterprises was developed. This analysis showed that there are different types of combined clusters/

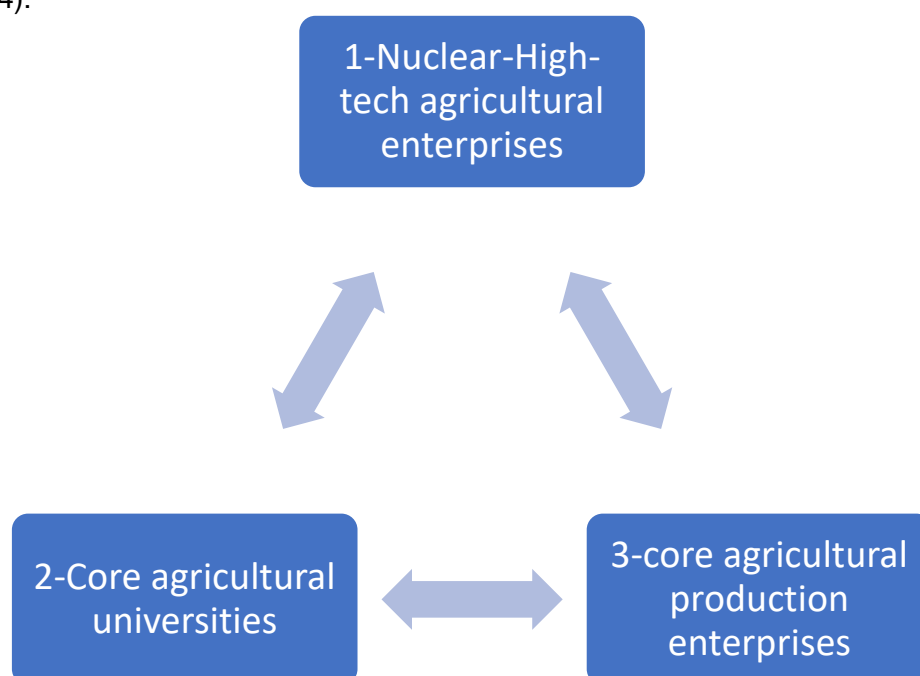
A common parameter is the territorial concentration of objects-participants:

- clusters of agricultural enterprises;
- towns of agricultural enterprises;
- rural clusters within innovation districts;
- scientific parks and technological parks;
- agricultural enterprises educational-scientific complexes (university + university).

The Federal Law "On the International Medical Cluster" is a set of medical clusters. The infrastructure of the cluster area consists of mechanisms of interaction between project participants and project participants.

Cooperation of small and medium-sized firms, that is, the core, does not obey the definition, but innovation districts are distinguished by their multifunctionality and presence. The main function is to provide different medical campuses with high technologies.

This research is devoted to the study of regional clusters, 3 main models of medical clusters are formed (Pic.4):



Forming a cluster around a large anchor enterprise, determining the specialization of the cluster, uniting medium and small firms around itself.

Model 1, depending on the specialization of the anchor enterprise, can have 3 forms:

Core 1 is a large multi-disciplinary high-tech enterprise that combines research and educational institutions;

The 2nd nucleus is the main agrarian university, which works in cooperation with university experimental parks and research centers;



The 3rd core is the main agricultural production enterprise and small and medium-sized industrial enterprises, scientific research centers around it.

This represents innovative changes at the level of agglomeration.

As a result of the cooperation of small and medium-sized enterprises, cluster formation is specialized in the production of agricultural products in the local area.

As part of a larger innovation cluster formation center partnered with other clusters. In the innovative direction of agglomeration level, the main characteristics of each model, the features of placement in the city planning structure, the typical cluster of the type model, as well as the points where the population level defined models are used, the characteristic models of cluster formation in the city are defined.

The study of local and foreign experience allowed us to identify 4 clusters. The main schemes of the composite placement of functional blocks are the spatial structure of medical clusters:

- block (centralized, decentralized, mixed);
- linear;
- quarterly;
- combined.

A block diagram is characterized by a large number of individual buildings, contains functional blocks. A block diagram can be of three types:

- centered,
- decentralized and mixed.
- centralized scheme.

Presupposes the placement of all blocks in one building. Decentralized placement implies separate placement of functional blocks. A mixed scheme is a combination of the two previously described models.

The linear scheme is mainly characterized by the development of the cluster. Transport artery. This scheme is reflected in the formation of scientific parks (for example, the Hong Kong Science Park). A distinctive feature of the linear scheme is the placement of each functional unit in a separate building. The system consists of a linear scheme of composite arrangement of clusters of individual buildings located along the main transport artery forms.

The quarterly scheme consists in the fact that additional planning elements are formed in the cluster in the form of quarters, and functional blocks are placed inside it. This scheme is typical for a large cluster.

The combined scheme is the most common and flexible and includes the use of several of the above models in the area.

Analysis of medical clusters to identify functional areas allows to determine that medical clusters consist of 6-8 functional zones.

As a result of the analysis, it was found that a third of the territory of the clusters is organized.

The analysis of foreign and domestic experience made it possible to show the author's classification of medical clusters. The classification was made according to several parameters.

Functional specialization parameter

- best practices and lessons;
- high-tech clusters;
- innovative clusters of agronomic sciences and production of agricultural products;
- industrial cluster in the field of agriculture;

Residential parameter within the urban area and urban agglomeration

- Placement in the central zone of the agglomeration core
- Placement in the middle zone of the agglomeration core
- Placement on the edge of the agglomeration core;
- Accommodation in the suburbs of the agglomeration.
- Accommodation in a satellite city of the agglomeration

Connection parameters within the cluster

- Territorially concentrated in the local area;
- spread throughout the city;
- Cross-border (distributed in different countries).

**Conclusion.** The activity of the cluster consists in the creation and development of innovative agricultural products. The core of the cluster consists of production enterprises and auxiliary institutions that unite small and medium-sized enterprises. included in this type of cluster. The production subsystem of the urban system located in the peripheral zone consists of agglomeration

cores, taking into account all sanitary and hygienic requirements.

This type of clusters is small and formed as a result of integration in the local area. Clusters are located in the peripheral zone of the agglomeration core and adapt to the environment near the suburban agglomeration and water bodies in areas with a favorable environment.

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# ASSESS THE IMPACT OF FACTORS ON THE MANAGEMENT PROCESSES OF ENTERPRISES IN THE CONSTRUCTION INDUSTRY

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## ABSTRACT

In this article, we consider some issues of the socio-economic nature, the main components, the factors of formation and development of the innovative potential of industrial enterprises. In addition, based on a comprehensive analysis of existing approaches to determine the innovative potential, the author's variant of the interpretation of the term is presented.

**Keywords:** innovation, potential, innovative potential, scientific and technical potential, economic potential, intellectual potential, innovative resource, innovative activity, innovative process.

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## INTRODUCTION

Democratic market reforms in our country and Socio-economic development of Uzbekistan for 2017-2021 designed. The focus of the action strategy is One of the important priorities is the structure of the national economy deepening change, leading the national economy its due to the modernization and diversification of industries increase competitiveness. In particular, "increasing the share of industry in the structure of the national economy, high-tech industry and the rapid development of processing industries, further the industry modernization and diversification of the industry of each region Ensuring comprehensive and efficient use of potential, new industry enterprises and the establishment of small industrial zones.

Indeed, the head of our state Sh. M. Mirziyoev is in the country sectors of the economy, in particular the development of industrial potential criticizing shortcomings in the implementation of targeted programs "The effectiveness of targeted programs that demonstrate the effectiveness of reforms. These include industry and others economic and financial indicators of industry development the state of existing production facilities, costs and costs reduction, localization and level of profitability, product is to unconditionally increase its competitiveness"

### Analysis of the relevant literature

Theoretical and methodological aspects of the innovative potential of industrial enterprises aspects, innovation capacity assessment and management mechanisms the problems are studied in the works of many economists and political scientists reported.

From foreign scientists M. Dogdson, G.Grossi, J.Genri, D.Uolker, F.Vestley, X.Minzberg, B.Taker, Y.Shumpeter and in the works of others issues of modern innovative management theory are widely covered.

From CIS scientists A.Abalkin, A.Anchishkin, I.Afonin, E. Balatskiy, V.Barancheev, V.Abramov, A.Bovin, G.Gamidov, P.Zavlin, S.Ilenkova, N.Kochetkov, E.Lapteva, A.Mazin, V.Medynskiy, A.Trifilova, V.Barancheeva, V.Gunina, G.Jitsa, D.Kokurina, O.Korobeynikova, V.Moseyko, R.Fatxutdinova, I.Shlyaxto and innovative management in the work of other scientists depending on the issues of theoretical and practical analysis of innovative potential will be displayed.

Economy in Uzbekistan, taking into account national characteristics innovation potential in industries, in particular, directly in industrial enterprises scientific-theoretical and methodological bases of development N.Yuldashev, A.Bekmuradov, economists of the republic, M.Ikramov,

Sh.Zaynutdinov, M.Mxalqova, R.Nurimbetov, Sh.Mirsaidova, It is widely covered in the works of Y. Goldman.

Also, a group of researchers of the republic Sh. Mustafakulov assessment of socio-economic and innovative potential of the regions Analysis of existing methods of transmission, H.Mukhitdinov innovative institutional to analyze capacity formation and development approach, U.Gafurov is small in the implementation of innovative ideas activation of business participation, I.Umarov, S.Saidkarimova,

Innovative potential of industrial enterprises analysis of indicators, and A. Qahhorov on road transport Innovative potential of enterprises and its assessment, B.Ruziev higher issues of developing innovative potential in the education system studied some theoretical and methodological issues.

However, in the scientific work of the authors listed above theoretical assessment and management of the level of innovative potential cases are listed, but this condition is sufficiently functional failure to do so prevents the theory from being put into practice. To research also in many areas of innovation theory despite its innovative potential and its assessment methods, innovative to study the factors that determine the potential of the enterprise evaluating the effectiveness of innovation capacity management mechanisms insufficient attention has been paid to the analysis of the criteria. This is our article indicates the relevance of the topic.

Management of innovative potential of industrial enterprises scientific research on improving mechanisms including the world's leading research centers and higher education institutions Organization for Economic Cooperation and Development (OECD) (France), European Commission (Luxembourg), Swedish International Development Cooperation Agency (Sweden), World Bank, National Science Foundation (NSF,USA), Harvard Business School, Cambridge University, Oxford University, McKinsey & Company (USA), Cass Business School is one of City, City University, London (Great Britain), University of Valencia (Spain),

Amsterdam University (Netherland) the Serbian Academy of Sciences and Arts (Serbia) and Tashkent State University of Economics (Uzbekistan) is carried out by.

### **Research methodology**

The article deals with scientific observation, abstract-logical thinking, comparative analysis, induction and deduction evaluation methods were used

### **Analysis and results**

Innovations in almost all modern economic theories recognized as a source of development. Innovative potential not only an individual economic entity, but also an entire system is a separate primary source of growth that provides development.

The concept of "innovative potential" dates back XX century to the late 1970s began to actively enter science from. He is the methodologist of a number of scholars, identified and developed in theoretical research. But that's it to this day it is the only universally accepted definition of the concept not developed. Every scientist or expert is from his own state specific interpretation of innovative potential, taking into account the characteristics reaches.

Considering the different interpretations of the concept of 'potential', we will focus on the definition of innovative potential. The concept of "potential" is Latin derived from the word "potential," meaning "opportunity, power, might," meanings. The concept of "potential" in a large economic dictionary there is a "set of tools available", "opportunities in any field" resources, engine, backup

A general overview of the above interpretations of the concept of 'potential' as an aspect required to achieve certain goals in the implementation of some set of tools, something that is consists of the existence of some possibility.

The economic life cycle of the enterprise in the assessment of innovative potential and as an important component in determining its competitiveness considered and the result of the use of existing economic potential, it is the basis for further development.

There are many of the concepts of "economic potential" in the scientific literature There are



interpretations. As well as the authors of the economic potential differ in their interactions with categories such as "innovative potential" they look. For example, **in the first approach**, the economic potential is national interpretation of all sectors of the economy as opportunities. L.I.Lopatnikova, L.P. Kurakova, V.N. Mosina and D.M. Kruk is economical potential - "industrial, agricultural products of the national economy manufacturer, capital builder, shipper and the public all opportunities in the service sector "

**In the second approach** B.Plyshchevskiy, A.V, Todoseychuk, Yu.Lychkin and A. CIS scientists like Tsygichko had the potential of economic potential in practice all as labor, investment, financial resources and in terms of the content of the concept of "potential" "resources", "investment", "investment resources", "number of employees" replace with concepts such as.

In our view, the concepts of "resources" and "potential" are fundamental has a number of differences in terms of in particular, the resources of the existing system are independent of the subjects of socio-economic activity of the system potential is inseparable from the subjects of socio-economic activity. Also, the "potential" category is from tangible and intangible resources in addition to the available resources or tools of the socio - economic system The ability to achieve high productivity using, ability and preparation.

**The third approach** the concept of "economic potential" and "economic power" the same as the notion of 'national economic potential', is considered synonymous. Another author disagreed the concept of "economy" in turn has a broader meaning than the concept of "economy" The category of "national economic potential" is economic potential" is broader than the category.

**In the fourth approach**, economic potential is economic activity the result of mutual industrial and economic relations of the subjects interpreted as. According to L.S. Sosnenko, to economic potential in the production of goods and services of the social and industrial system to make full use of their potential, industry and management you need to look at the relationship.

The existing capacity is mainly the development of productive forces achieved at the organizational level and the potential of the production apparatus The key is created at the level of maximum use of capabilities the set of funds and the value of the gross product of the industries or the state describes gross domestic product. The economic potential of the future optimal use of resources, under ideal production conditions develop the highest possible range of goods and services available the maximum of the economic system, which predetermines the release options.

Based on the above, we can say that it is innovative potential is one of the most important parts of economic potential and in the scientific literature, the concept of innovative potential is widely used alongside the concept of scientific and technical potential.

Scientific and technical potential in the broadest sense, the development of this system level, which depends on the quality and quantity of resources, an idea designed to put these opportunities into practice and the existence of a development fund is defined as a set of scientific and technical capabilities of the economic system. Practice innovation the application of scientific and technical potential occurs in the process of implementation will be.

Thus, on the one hand, the scientific and technical potential of the state Real possibilities of objective use of FTT achievements, on the other hand while - is characterized by its direct participation in it. So, scientific the concept of potential is inextricably linked with the concept of scientific and technical potential.

Scientific potential is for scientific-fundamental and fundamental research a set of resources and conditions focused on implementation.

Scientific and technical potential is an experimental design and technical to carry out practical research work covering the work a set of conditions and resources (scientific and technical).

Thus, the scientific, scientific-technical and innovative potentials are unique an interdependent and complementary component of the innovation cycle the parts are: *emergence of ideas - fundamental research -practical research - experienced designer and technical developments -example experiment - industrial testing - mastering in production-serial production -*



*commercialization - application of the product in practice (machinery, equipment, technology).*

The innovative activity of any system determines its profitability, is one of the main ways to ensure high rates of development and competitiveness.

Innovative activity of individual subjects Innovation is vital the cycle includes five extended stages: 1) *scientific research work*; 2) *experimental design work*; 3) *innovations production*; 4) *exploitation of innovations*; 5) *innovations routinization*

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## THEORETICAL ASPECTS OF HEALTH TOURISM IN UZBEKISTAN

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### ABSTRACT

**Abstract :** This article is based on analyzes and observations made from the findings of theoretical studies. The interest of such a study lies, first of all, in the need to fill the lack of local research on the topic (balneo-climatic potential, its use, accessibility of resorts in Uzbekistan), as well as a useful tool for planning and developing tourism or developing transport infrastructure. The hypothesis that this scientific approach comes from is that Uzbekistan has a high and diverse balneo-climatic and tourism potential, but, unfortunately, it is not used enough. By separating it in an effective way, it would be possible to increase the competitiveness of the region through the development of tourist facilities and even access road infrastructure. Research requires the use of certain methods. The methodology for carrying out this study combines both classical and modern elements.

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### INTRODUCTION

In ancient times, man was forced to adapt to harsh environmental conditions, which also entailed an ever deeper study of natural phenomena, which, on the one hand, impressed him, and on the other hand, frightened him. As the diversity of his activities, a person felt the need to study nature more and more, and the conclusions to which he came were that phenomena do not arise at all by chance, which led him to a variety of phenomena at the place of their manifestation, namely in the air, in water or on land, thus delimiting the first branches of the natural sciences. The study of the Earth's atmosphere has been a long and difficult process, to which the great figures of world science have contributed. Research into the Earth's atmosphere has been going on for more than three millennia. In the beginning, the process of learning was slow and lacking scientific consistency, but with the passage of time and the invention of meteorological instruments, from the primitive thermometer of Philo of Byzantium to modern meteorological equipment, which today is becoming more sophisticated and efficient, the leap in meteorological observations has been significant. There is evidence that some meteorological observations were made in ancient times. The first meteorological observations were episodic and were made in areas around the Mediterranean Sea, in China, Egypt and India. The first evidence of meteorological observations dates back to the Yin Dynasty (section XII BC) on a piece of bone on which data on cloudiness, snow and winds are recorded, with an interval of 10 days of observations. In the 7th-5th centuries. BC e . throughout ancient China, a network of meteorological observation posts grew, with observations of the rainfall regime, which were used for agricultural purposes. The Greeks observed the wind, a vital climatic element for them in maritime navigation. Hesiod of Boeotia (c. VIII - VII centuries BC) in the poem "Works and Days" shows that "harsh winters in Greece are due to the north wind, which blows with Thracian gusts." Later, Thales of Miletus (c. 624–526 BC) made detailed observations of the winds, even compiling a "weather calendar" for sailors. Homer described the four winds of the Mediterranean: Boreas - a cold strong wind blowing from the north, Nothos - a warm rainy wind from the south, Zephyr - a cool wind from the west and Euros - a wind favorable for sailors from north to east. The historical sage of antiquity Herodotus made the first observations on the appearance of

the weather in 484 BC. The Greek physician and philosopher, called the "father of medicine", Hippocrates of Kos (460-377 BC) writes the first article, which contained medically valuable data, assigning an important role to atmospheric factors in maintaining health and causing diseases, the results of which were published in Aphorisms. Aristotle (384-322 BC) in his work entitled "Meteorology" refers to some optical phenomena in the atmosphere - the halo and the rainbow. In ancient Rome, Seneca (4 BC) studied electrical phenomena in the atmosphere. The first textbook on agrometeorology and some useful tips for growing plants according to the seasons and their specific meteorological events appeared in China in 400 AD. At the beginning of the Middle Ages, in the ninth century, the Arabs explained the reason for the blue color of the sky by establishing 80 km of the upper limit of the atmosphere. In 1270, the Englishman Roger Bacon studied the optics and acoustics of the atmosphere and laid the mathematical foundations of meteorology. In the Middle Ages, due to religious pressure and the Inquisition, meteorological research developed very slowly. Only at the end of the 19th century did we witness advances in meteorological research. Long-range weather records appear in Europe in Zurich for 1545-1546; 1550-1576 taken by Hasler, in Denmark at the astronomical observatory at Uraniborg for the period 1528-1597. Brahe, in Germany in Kassel Hassen for the period 1623-1646. and Kepler between 1617 and 1629 or Dampierre's data on the winds of the world's seas for the interval 1652-1652. 1715. In eighteenth century France, the importance of meteorology increased so much that King Louis XVI ordered all scientists and physicians to make meteorological observations. In its rudimentary forms, the tourism phenomenon has manifested itself since ancient times, but has become a complex and well-defined phenomenon only in the last half century. The first to popularize travel were the ancient Greeks. Through their travels, they were able to spread the culture of Ancient Greece throughout the Mediterranean. In order to be able to travel safely, they entered into contracts between persons of the same profession. These "contracts" were inherited from father to son and provided for trips to "foreign countries". The first information about tourism activities can be found in the works of great travelers such as Strabo, Herodotus, Xenophanes and others. The first forms of tourism were medical and religious. The Greeks showed particular interest in the use of thermal baths. These baths had a "cleansing" effect on them. They had a known attraction for sacred sites such as Delphi, Epidauros, Dodona or Kos. Interest in the competitions organized for the gods Apollo and Zeus attracted a large number of visitors. In ancient Rome, interest in recreation was closely linked to economic prosperity, political and social life. Roman civilization paid great attention to the development of infrastructure, the safety of travelers, which made it possible to travel to the most remote areas of the world. The Romans showed great interest in the exploitation of healing baths, which led to the construction of spas, some of which have survived to this day (Vichy, Royat, Nèris in France, Ems in Germany, Bath in England, Herculaneum Ad Aquas). With the discovery of hot air heating, the Romans built the famous "Terme 2", where they came from all over the empire for recreation, cultural and sporting events. These bathrooms had a simultaneous capacity of about 60,000 people.

Asian civilizations have traveled for various purposes such as recreation, relaxation and even therapeutic treatment. In the medieval period, after the fall of the Roman Empire, tourism developed very slowly, pleasure trips almost disappeared, numerous wars and frequent epidemics hindered the development of tourism. At the same time, economic and political interests have shifted to increasingly diverse and remote regions. The only ones who made a significant contribution to the knowledge of new territories were the famous travelers of the era of the Great Geographical Discoveries. The travel diaries of Marco Polo, Pigafetta and others are also mentioned here. Between 1800 and 1890, socio-economic life deteriorated and the standard of living was low, which led to a regression of spa tourism. Immediately after the revolution, the material complex of the resorts fell into decay and became dilapidated, there was a decrease in the tourist flow, and the network of resorts was subordinated to the Ministry of Health and passed under the jurisdiction of the Ministry of Tourism. This transit led to the privatization of many resorts in order to generate profitable economic profits, while the basics of treatment were ignored. We believe that balneoclimatic

research in the coming years should focus both on publishing the results of balneotherapeutic research and tourism research, but more on climate/bioclimate research that will emphasize the relationship between atmosphere and climate. often downplayed or even ignored.

In conclusion, self-analysis of the history of studying the balneo-climatic potential of the tourist resorts of Uzbekistan highlighted the achievements in this field, as well as the directions that should guide the future: analysis of the balneo-climatic potential, renewal, redefinition and strengthening of the tourist profile of the Moldovan resorts, re-analyzing the role that individual perceptions and local communities can play in the development and management of tourism activities.

### **Bioclimatic characteristics of Uzbekistan.**

Human comfort is closely related to weather and local climatic conditions, since their continuous spatial and temporal variability requires constant adaptation of all physiological systems of integration and control of the human body. The state of comfort or bioclimatic discomfort that the human body experiences under certain conditions of temperature, humidity and air dynamics directly depend on the processes of caloric metabolism of the human body. So, on hot and humid summer days, the loss of body heat is especially facilitated by the intense evaporation of water that occurs on the surface of the skin due to increased sweating. In this regard, it is important to emphasize that, respectively, the evaporation and cooling of the body surface depend primarily on the content of water vapor or the degree of humidity in the air. The higher the humidity, the more difficult it is for the human body to eliminate the excess heat accumulated inside, since the physiological mechanism of thermolysis is disturbed, causing an increase in the internal temperature and causing a state of thermal discomfort due to heating. On the contrary, on cold and humid winter days, the physiological action of thermoregulatory mechanisms is to limit heat loss from the body surface in order to maintain the internal temperature at parameters that ensure the normal functioning of all physiological systems. This is possible both due to an increase in internal heat production, and due to a decrease in the processes of its external transport and release (by radiation, convection, thermal conductivity, etc.). But, if either with a sharp and prolonged decrease in external temperature (which causes an increase in heat losses of the human body), or if the mechanisms of thermogenesis are violated (which causes a decrease in metabolic heat production), the basal temperature decreases below the parameters of optimal functionality, a pronounced state of discomfort during cooling. Subjective ideas about the state of comfort or bioclimatic discomfort that the human body experiences under certain conditions can be quantified through biometeorological and / or bioclimatic indices that express the impact of climate on human health, as well as on tourism activities, both in terms of the individual action of each climatic variable (air temperature and humidity, atmospheric pressure, solar radiation, wind, etc.), as well as in terms of the synergistic action of two or more such variables.

A detailed analysis of bioclimatic indicators is extremely useful when studying their variability in space and time according to a single reference scale in order to identify the main areas and periods of discomfort or bioclimatic risk to which the inhabitants of the study region are exposed. In the dynamics of this influence, both periodic variations associated with the daily and annual regime of climatic characteristics, and non-periodic variations are observed. From this point of view, in this study, we analyzed the evolution and distribution of a series of 14 bioclimatic indices, of which only 10 are relevant and satisfy the conditions of applicability for both hot and cold seasons. The indices used make it possible to outline areas of bioclimatic risk due to the impact of severe weather conditions in Uzbekistan, providing a synthetic and representative image not only of their spatial extent, but also of their level of intensity. Other indices that do not meet the applicability conditions for the study area will be analyzed later to the hourly level.

### **Data and Methods**

The research methodology used in the work is based on the results obtained by processing climate data on temperature and humidity, atmospheric pressure and wind obtained from a number of fourteen remote meteorological stations (1961 - 1961 2013) located at representative points (from the point of the typology of the underlying surface) for the analyzed territory and on all three levels

of the relief. Formulas for calculating these bioclimatic indicators are established in domestic and foreign literature. All bioclimatic indices were calculated for each weather station in several variants, due to their range of applicability, based on the monthly average values of the main climatic elements from 1961 to 2013. The calculation of these indices was the moment of the transition of the Sun to the meridian of the place, after which it gradually decreases towards the evening hours, when it tends to zero. This diurnal variation of global solar radiation can be influenced by atmospheric transparency, earth surface albedo, nebulosity is done using Microsoft Excel statistical software, and spatial analysis and distribution was done using ArcGis v 10.2.2 platform using several analysis methods such as linear regression, conventional kriging, etc. Since some bioclimatic indices apply to all months of the year, and others only to some of them, the number of submissions made differs from one index to another. At the end of this study, we made a synthesis of ten bioclimatic indices, grouping them into two categories (representative for the hot and cold seasons), and built two maps of the distribution of bioclimatic discomfort states (for cooling and heating) using different GIS analysis methods. Then I combined these two maps to make a general bioclimatic map of Uzbekistan. To be able to calculate these indices, we first interpolated the climatic elements included in them.

### **Main climatic factors and elements**

In this subsection, we can briefly dwell on the genetic factors of the climate in Uzbekistan (solar radiation, general circulation in Moldova, general characteristics of the climate of Uzbekistan, in the preamble, representations of temperature, humidity and wind), supplemented by cloudiness, duration, precipitation and atmospheric pressure. Solar radiation. Radiation factors depend on the main, defining features of the climate in Uzbekistan. Without analyzing the space-time distribution of the values of radiant energy received by the territory of Uzbekistan, the methods of its production and use, we cannot characterize the indicated territory in terms of climate. Global radiation is the main source of energy for the earth's surface. Consisting of direct solar radiation and scattered radiation, it will change over time depending on the fluctuations in the values of the two components, due to changes in the angle of the sun's altitude, the opacity of the atmosphere, cloudiness and the duration of the sun's brightness. The sun's rays are received when in contact with the earth's surface. During the day, the intensity of global solar radiation increases from the morning hours until it reaches a maximum at the moment the Sun moves to the meridian of the place, after which it gradually decreases towards the evening hours, when it tends to zero. This daily course of global solar radiation can be affected by the transparency of the atmosphere, the albedo of the earth's surface, and nebula. Measurements made at radiometric stations in Uzbekistan show that global radiation values for June can vary from 140 Wm-2 to 161 Wm-2 Ah (at 06 am), up to 705 Wm-2 and 705 Wm-2 respectively at noon. At 18:00, the global radiation flux drops to 122 Wm-2 and 154 Wm-2. Analyzing the spatial distribution of global radiation in Uzbekistan, we notice that it fluctuates between 1588 and 405 kWh/sq.m/year. The average global radiation in the region is 1149 kWh/sq.m/year.

Winters are characterized by negative thermal conditions throughout the region. The lowest average cold season temperatures are in January. In the warmest time of the year, the hottest month is July. This month, the average air temperature for the period 1991-2023. ranged from 15.8°C. relative humidity. The amount of water vapor in the atmosphere is an important climatic component included in the calculation of bioclimatic indicators. Only a small part of the atmospheric moisture resources over Uzbekistan is indigenous, coming from the evaporation of small water surfaces of rivers, ponds or reservoirs. Therefore, the humidity of the atmosphere depends on the origin of air masses and the distance traveled by them on the continent to the territory of the highlands of Uzbekistan, the frequency and amount of precipitation, and the structure of the local active surface. The wind is a vector of movement of cold and hot, wet and dry air masses, with all their characteristics, it plays an important role in frontogenesis, contributing to the redistribution of the physical properties of air masses from the earth's surface and lower layers of the atmosphere, where



life is concentrated in general. It is the most dynamic meteorological element, with an important role in balancing the atmospheric contrast resulting from differences in active surface heating with the trends of constant uniformity of differences between moving air masses. The average annual values of bioclimatic indices calculated according to the method described above are useful for interpolating the characteristic values of weather stations within the study area not only for the main bioclimatic regions, determined by the type of bioclimatic comfort or discomfort during cooling or heating, secondary ones that can be adjusted based on the analysis of physiological sensations, experienced by the human body, within each major class of comfort or bioclimatic discomfort. Let's analyze one of the indices, the index of the actual effective temperature - equivalent (EET) (°C) The equivalent temperature is the internal temperature of the considered volume of air under conditions of constant pressure, which it would reach by releasing the latent heat of the air. evaporation of water vapor from its contents. It is expressed in °C and is relatively constant in humid-adiabatic processes, expressed in ascending and descending movements of saturated air, in the absence of any heat exchange with the environment. If the atmospheric pressure ranges from 800 to 1100 hPa, this figure may be representative of the temperature range from + 20 °C to + 45 °C. For temperatures above 45°C, even under conditions of relative humidity and atmospheric pressure, the EHS index will only indicate values corresponding to the uppermost class describing "snowy" conditions. The equations for calculating this indicator in the literature are different: for example, the calculation of EET in the absence of air flows in the indoor climate is carried out according to the formula [1] of Hogton Yaglow (1947), confirmed by Landsberg (1964).

$$EET = 0,4(DBT + WBT) + 4,8 \quad [1]$$

where:

EET - equivalent effective temperature;

TCT - dry bulb temperature;

WBT - the wet bulb temperature at wind speed.

Experimentally, we used a different calculation formula (Missenard, 1937), with both calculation formulas applied to a short data series, noting that the difference in results between the two formulas is very small (less than 0.3°C).

We chose the second formula [2] because it was no longer necessary to calculate the wet bulb temperature.

$$EET = 37 - \frac{37-t}{0,68+0,00014f+(1:1,76+1,4v0,75)} - 0,29 \left(1 - \frac{f}{100}\right) \quad [2]$$

Where:

t - dry thermometer (°C);

v - wind speed (m/s);

f - relative humidity (%).

$$TEE (°C) = Tusc + W \cdot \frac{r - 2,326 \cdot Tusc}{cp + w \cdot cw} \quad [3]$$

Where:

Tusc - dry bulb temperature;

r - the latent heat of vaporization of water (cal/g-1), its value is 585 cal/g-1;

w - the ratio of the actual mixture, i.e. the ratio between the mass of water vapor and the mass of dry air (g/kg-1).

cp - specific heat capacity of air at constant pressure (cal °C g-1), its value is 0.24 cal °C g-

1.

cw is the specific heat capacity of water (cal°C g-1 ), the value of which is equal to 1 cal°C g-

1.

From all these given values, the actual mixture ratio (W) is calculated using the formula [4]:



$$W = \frac{E}{P} \quad [4]$$

Where:

W is the saturation coefficient of the mixture;

E - steam pressure (hPa); this is calculated from the relation [4a].

P - air pressure;

w -  $UR \cdot W / 100$  where: UR - relative humidity (%) and w - coefficient of the actual mixture.

The equivalent temperature index - EET indicates the actual temperature felt by the human body, and is calculated according to the limits of applicability only for the period June - August. In the calculation equation of the EET index, the average monthly values of climatic elements and parameters for the study period (1991 - 2023) were used when the air temperature changed from +20°C to +45°C, atmospheric pressure from 800 and 1100 hPa, and relative humidity rose to values above 50%. Analyzing the spatial distribution of the values of the EET index in Uzbekistan, we noticed that June is the first month of the warm season, for which climatic data allow us to calculate this index with values in the range from 34°C to 46°C EET, falling into the class of bioclimatic uncomfortable, characterized by heat and a single type of hot bioclimate. Analyzing the month of July, we notice that the same range of EET values between 40°C and 46°C remains, with lower values typical for the northern regions, the western and the highest in the southeastern territories. In August, the situation of the territorial distribution of EET values is similar to July. According to this indicator, all the summer months for which it is calculated fall into the zone of bioclimatic discomfort due to heat, the prevailing type of hot bioclimate. The month with the highest values of the EET index is July, when the TEE temperatures exceed 40°C in 60% of the study area.

In conclusion, I would like to say that the combination of all the quantitative information obtained during the study period, and the conclusions confirmed by the research methods, into a coherent, unified, essential material and the proposal of a set of measures, can help to develop health tourism throughout Uzbekistan.

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# INTERNATIONAL EXPERIENCE IN THE DEVELOPMENT OF THE HOTEL BUSINESS

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## ABSTRACT

The article discusses the growth and development of the tourism industry in Uzbekistan, with a focus on the government's efforts to improve infrastructure, regulatory framework, and international cooperation. The number of tourists visiting Uzbekistan has increased significantly in recent years, with a record of 6.7 million tourists in 2019. The article also highlights the demographics and purposes of tourists visiting Uzbekistan, as well as the contribution of the tourism industry to the country's economy. The government has implemented various incentives and subsidies to promote tourism, including tax reductions and exemptions, and the simplification of the visa regime. The article concludes with a discussion of future plans and prospects for the tourism industry in Uzbekistan.

**KEY WORDS:** hotel industry, enterprise, hotel, civilization, clustering, statistics, society, development, experience.

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## INTRODUCTION

Tourism is one of the leading industries in the global economy. International tourism contributes to the creation of new jobs, increases the flow of hard currency, and affects the development of the region's economy. The development of international tourism affects the development of the hotel industry.

The development of hotel facilities is associated with the development of society. This is evidenced by the history of the emergence of the first hotel farms. In the ancient eastern civilization, two thousand years ago BC, the first guest enterprises appeared. They are the prototypes of modern hotels.

The prototypes of inns first appeared in the late era in ancient Rome. The Romans built special buildings along the roads for travelers, who mainly came for public purposes.

The appearance of the first hospitality enterprises was influenced by the emergence of large trade routes in the territories of the Middle East, Asia and the Caucasus. At that time, caravans with goods moved along these routes. For the stay and rest of these travelers, special accommodation facilities were created. Caravanserais were such accommodation points; they had pens for horses and camels. Caravanserais were surrounded by high walls, which guaranteed the safety of goods, protected from various natural disasters, so these points were not empty.

Archaeologists claim that the very first accommodation facilities had indoor and public spaces. Inner living quarters had sleeping rooms, corridors, halls and vestibules occupied public spaces. The accommodation facilities had subsidiary farms, where they were engaged in heating water for the pool. In the pools, guests washed their feet or swam.

The accommodation facilities also had kitchens, shoe and clothing repair shops, and shops with essential goods. The main service of such accommodation facilities was the provision of

overnight accommodation, and other services could be supplemented. Even in those ancient times, when the first states appeared, the government adopted regulations that guaranteed the safety of travelers. According to these legal documents, the responsibility for the safety of travelers was assigned to the owners of the first hospitality enterprises.

During excavations, archaeologists discovered frescoes, various decorative items in the places where the first guest enterprises were located. This suggests that gardeners-decorators and artists were invited to decorate the interiors of the first guest enterprises.

The location of these objects near busy roads attracted a large number of travelers.

In the Middle Ages, the development of hospitality was influenced by religious traditions. People who made pilgrimages to holy places sought shelter, they stayed in monasteries. The monasteries organized meals and lodging for the pilgrims. These services were provided free of charge, which stopped the development of existing private guest enterprises at that time. Inns did not attract travelers because of the lack of food.

Inns were developed in the 12th-13th centuries in Rus', they were called pits. The inns were located very close to each other, as there was a great demand for them.

In the 14th century in England, the monasteries were transferred from church property to secular property, so the monasteries could no longer serve guests for free. In England, in addition to inns, taverns were developed.

The development of a regular horse-drawn transport and postal network was the next step in the development of hotel enterprises. Postal stations appeared along the roads, where it was possible to simplify the procedure for changing horses and for the coachmen to rest from a long journey and hide from the weather.

The first hotels appeared in France in the 18th century. Former European taverns have been renamed hotels. They looked like apartment buildings, received guests for a day, a week, a month. After some time, the concept of "hotel" spread in America. The Americans were the first to pay attention to the technical equipment of hotels.

The first City Hotel was opened in New York in 1794 with seventy rooms.

The first first class hotel " Tremont " was opened in 1829 in Boston. This hotel had locks on the doors of the rooms. The hotels had single and double rooms. This hotel provided free soap. These innovations surprised the country. Other hotel enterprises have begun to use these innovations in their practice.

Hotels with central heating appeared in the middle of the 19th century. At the end of the 19th century there were two types of hotels. Some outdated small hotels offered services at low prices. Others - large, chic - had electrical equipment, an elevator, toilets, a luxurious lobby.

American Statlar and Swiss Caesar Rinz were fans of the hotel business. In the hotel business, they were the ones who made innovations. The modern European hotel chain is named after Rinz . The Rinz -ideas restaurant in the hotel had an orchestra playing music that made the patrons linger. Visitors ordered drinks, due to this, income from the sale of drinks grew. Rinz gave the idea of a play of lighting in the hall, so that the decorations of the women of the guests of the hotel restaurants would shine in the light.

The ideas of paired placement of rooms during construction, uniforms for hotel staff, light bulbs over the guest's bed, the appearance of a telephone in the room, a large mirror in the room and a switch near the door belong to Statler . His idea of a double room optimized the costs of hotel businesses. The main approach to service "the customer is always right" is the slogan of Statler .

Upscale hotels began to be in demand among representatives of the upper circle, who began to invite their ladies to the restaurants of the hotel.

Travel became a fashionable pastime for millionaires in the late 19th and early 20th centuries. They traveled the world and stayed in luxurious hotels. Today these hotels are called five-star hotels.

The hotel industry has evolved and gradually evolved into an important hospitality industry. There were organizations and enterprises that were interested in the construction of hotels, training, pricing. Owners from different countries of the world began to unite to create an international union of hotel owners. Notable among them until World War II were the French Hosts' Union and the International Union of 1,700 Innkeepers.

International hotel chains emerged after World War II. Hilton is the first international hotel chain. It appeared due to the development of air transport companies in Latin America. Planes made flights to Latin American countries, but there were no hotels where big businessmen used to relax. Therefore, conditions were set for the Hilton Hotel in Buenos Aires to be similar to the Hilton Hotel in New York.

Modern leading international chains Marriott, Sheraton, Choice, Best Western, Hilton, Holiday Inn and others are known all over the world <sup>1</sup>.

## **MATERIALS AND METHODS**

In the course of the study, to study the experience of foreign countries in the field of hotel business, a dialectical-system approach to the study of economic systems and relationships, a comprehensive assessment, comparative and comparative analysis, a statistical-dynamic approach, grouping methods were used, as well as optimal methods for assessing the effectiveness of the employment service, substantiated the need to use.

## **ANALYSIS AND RESULTS**

The improvement and development of tourism is a topical issue in Uzbekistan. Constant attention is paid to the restoration of monuments and the preservation of national traditions and customs. There is a process of renewal of the hospitality industry. The regulatory framework is also being improved for this area, given that tourism is today the leading sector of the global economy.

In this regard, cooperation is deepening with various international organizations. Having established such relations, we can help fulfill the desire of foreign tourists to visit our country for various purposes of travel. There are concrete results from this promising initiative, our magnificent homeland is visited by guests from Japan, China, India, Russia, France and many other countries.

The tourism potential is growing due to the regular visit of 160 representatives of 30 media from the USA, Japan, China, Indonesia, Russia, Indonesia and other countries. <sup>2</sup>.

During 2022, 5.2 million tourists visited the Republic of Uzbekistan. Compared to 2021, the number of tourists visiting our country increased by 3.4 million people, that is, more than 2.8 times.

More than six billion soums were allocated for the development of tourism in 2022, as well as more than four billion soums of subsidies for the development of domestic tourism. From the statistics of the Ministry of Tourism and Cultural Heritage, in 2016, the number of domestic tourists was 8.8 million, in 2019 it rose to 14.7 million, in 2021 it exceeded 15 million domestic tourists. Tour operators received subsidies in the amount of 25% for organizing tours in Uzbekistan, 15% of which were allocated for air and railway tickets, 10% for hotel enterprises. But not only the benefits of the government contributed to the growth of the profitability of the tourism industry, tourists were attracted by our hotels, which are designed in the form of apartments.

Benefits and preferences were extended until 2022. In particular, the tax rate was reduced by 50%, the social tax rate was reduced by 1%, and exempted from property tax and land tax.

Therefore, with so many conditions for development, 2021 was profitable compared to 2020. While the numbers for 2019 are more attractive, to achieve at least these figures, we have to do a lot in this area. For example, constantly offer tourists a new tourist product, except for visiting the historical sights of Samarkand, Bukhara, Tashkent, Khiva.

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<sup>1</sup> Zh.M.Kurbonov, Sh.T.Maksumov. Organization of the hotel industry. Lecture course (I-part). SamIES, 191-p.

<sup>2</sup> <https://uz.sputniknews.ru/tourism/20200110/13185741/Skolko-turistov-posetilo-Uzbekistan-za-2019-god---itogi.html>

Let's go back to 2019, which was an indicative year in the field of tourism. This year, 6,748,500 tourists visited, in 2018 this figure was 5,346,200 people.

Basically, our Republic is visited by middle-aged people aged 31-55. Their share among all those visiting our republic is more than 50.3%. More than 20.2% are people over 55 years old. 20.4% are young people aged 19-30. Persons under 18 make up only 8.1%.

If we consider the attendance of tourists by country, then they mainly come from Central Asia. Further from the CIS countries and far abroad.

According to the purpose of the trip, 81.8% of tourists come to visit their relatives, 15.5% of guests come to rest, 2.7% of visitors come for treatment, business meetings, shopping.

Uzbekistan in 2018 received 1 billion US dollars from exports tourist services. The highest export rate tourism services in recent years was in 2019 - 1.3 billion US dollars.

The volume of exports of tourism services for 9 months of 2022 was equal to more than 1.1 billion US dollars. For the same period in 2021, tourism revenue was \$273 million. This suggests that this figure has increased by 3.7 times.

As part of export services, tourism ranks second after transport services. Tourism for 9 months of 2022 brought our Republic 7.8% of export earnings.

The total volume of tourism services, when compared to recent years, was high in 2019 - 1.5 billion US dollars.

The growth of visitors was influenced by the simplification of the visa regime between the countries in 2018. This lowered the cost of registration while providing mobility for citizens. In 2018, a visa-free regime was introduced for 9 countries. 47 countries received visa-free travel in 2019. This number is growing every year. In 2020, 20 countries added to this list, in 2021, 5 more states.

A rapid recovery of the tourism industry in Uzbekistan is planned. This is evidenced by the data of the Ministry of Tourism and Cultural Heritage. In March 2022, in addition to domestic tourists, guests from Russia - 16.8%, Kazakhstan - 15%, Tajikistan - 6.3%, Turkey - 5.5%, Afghanistan - 5.7%, China - 6.1%.

883 new hotels have been built over the past four years. They work effectively in the hotel services market of Uzbekistan.

In total, there are 1,442 accommodation facilities in 2022. They have 33.4 thousand rooms, designed for 71.2 thousand beds. As of the beginning of 2022, there are 1327 hotels and other accommodation facilities. There are 384 hostels in Uzbekistan, they can provide 12584 people with places to stay, and 2481 guest houses with 21239 beds.

In terms of regions, the loading of accommodation facilities in Namangan region is 40.6%, Fergana region - 42.7%, Jizzakh region - 52.5%, the Republic of Karapakistan - 62.6%, Syrdarya region - 68.8%, in Andijan region - 65%, in Navoi - 74.3%, in Tashkent region - 76.1%, in Khorezm region - 81.5%, in Samarkand region - 82.3%, in Tashkent city - 85.7%, in Bukhara regions - 96.6%.

Bukhara region occupies a leading position. The second place is occupied by the city of Tashkent. Samarkand region is also among the top three in this area.

Higher educational institutions of the Republic of Uzbekistan train qualified specialists for the tourism industry and the hotel business, as well. For the training of graduates, such higher educational institutions as the Tashkent State University of Economics, the Silk Road International University of Tourism and Cultural Heritage, the Samarkand Institute of Economics and Service, Urgench State University, Bukhara State University make a great contribution to the development of the tourism industry.

For the first time in the years of transition to a market economy, our government created the conditions for the organization of the tourism industry, including its constituent element of the hotel business. The initiative to develop the tourism business in the country was correctly directed, for this, at that time and now, the prospects for the development of the industry were determined and the problems that needed to be solved were identified.



Then we observed transformations in this industry, it was privatization. This process of denationalization proceeded for more than 9 years. Today, 90% of tourism enterprises are privately owned.

Large investments have been made in this industry for many years. In the cities of Tashkent, Samarkand, Bukhara, due to these investments, large hotels were built that meet international standards.

The state tourism development policy has helped to open guest houses that receive not only domestic tourists, but also tourists from far abroad. They use the funds of the republican budget and private investments for the implementation of various business ideas in this area.

Separately, unresolved problems do not allow raising the share of the tourism sector in GDP. Today it reaches hardly 2%. Before the pandemic, we observed at the beginning of 2019 3.4%. It is necessary to eliminate shortcomings in this area.

To study the internal features, we study the process of development from a quantitative side. But we must know the qualitative side of events. This issue is jointly solved in the sections of economic science thanks to interdisciplinary connections. For example, the relationship of tourism statistics with economic theory and economics of tourism.

Tourism statistics helps to correct, substantiate and prove hypotheses, suggestions, as it has a set of digital information. Improving tourism statistics is a topical issue in Uzbekistan. There is no unified statistics in the tourism industry, this is due to the fact that each department has separate statistics. Information about foreigners registered for more than three days is given by the Ministry of Internal Affairs, statistics of the declaration of material and foreign exchange values are registered by the State Customs Committee. Statistics on arrivals and departures is maintained by the State Customs Committee at points of arrival and departure - railway stations and airports. The Tourism Development Committee takes into account the number of tourists served.

The development of tourism always raises the issue of improving tourism statistics.

If we recall the history of the development of tourism statistics, then it is connected with the history of the development of statistics itself. 3000 BC to the middle of the 17th century, we observe the first process of the development of statistics, the second process begins from 1654 to 1746, then continues from 1747 to 1899. From 1990 to the present day, we are witnessing a new process of statistical development. Each process used its own methods and functions. Starting in 1920, the entry and exit of visitors began to be regularly recorded. But there were no distributions for the number of domestic tourists and foreign tourists.

Data on visiting tourists from European countries have been preserved. According to 1929 data, two million tourists visited Austria, one and a half million people visited Switzerland, and more than one million tourists visited Italy. In those days, tourism statistics were carried out for national security purposes. Controlled the migration process and compliance with laws. The statistics did not take into account the interests of the tourists themselves. Only in the 21st century, when the role of tourism in modern society was revealed, did they begin to be interested in statistical data on the purpose of tourist trips.

When the UNWTO was transformed into a specialized agency of the United Nations, it had a special mission to control all institutions that were involved in the collection, processing and analysis of statistical materials. Tourism "accounting" began to improve, in 2000 the international standards for statistical "accounting" of micro and macro indicators of the countries of the world were updated. In tourism statistics, the visitor and the tourist trip have become related concepts.

## **CONCLUSION**

In order to solve the problems affecting the development of the tourism industry, and, accordingly, the hotel business in our country, we propose to take the experience of foreign countries, get closer to international standards and use the following areas:



improve the legal framework at the state level. Adopt a legislative act on tourism statistics, where everything is clearly spelled out. How to control, for example, private traders in the timely delivery of their data to the statistics department.

There are differences in international tourism concepts and terms, they need to be eliminated.

The Republic of Uzbekistan does not consistently use international tourism standards adopted by the UNWTO. Statistical reporting of tourism services and tourism satellite accounts adopted by UNWTO are not used.

To date, there are discrepancies in the purposes of travel. Determining the purpose of travel in Uzbekistan is very different from international standards. There are eight types of travel purposes in the border zones of our country: study, medical treatment, business, visiting relatives, business, tourism, work, permanent residence. In hotels and other similar accommodation facilities, the list of purposes is somewhat in line with international standards, these are: leisure or recreation, treatment, business and professional.

Tourism statistics should be actively disseminated, it should be of high quality and in demand. To obtain high-quality data, foreign hotel enterprises use tourism statistics in the marketing and planning process. Domestic hotel enterprises should also be able to obtain accurate, timely statistical information. All this is necessary in order to raise the level of responsibility and understanding for providing accurate baseline data from domestic hotel enterprises.

It is necessary to establish communication, raise the level of cooperation and interaction between statistical services and tourism administrations. Insufficient understanding of the requests of the opposite side is usually observed with insufficient mutual exchange of information.

It is necessary to continue the active introduction of information and communication technologies to create an information database on tourism, including the hotel business. This can be done using the possibilities of modern programming. The State Committee of the Republic of Uzbekistan for Tourism and its subdivisions have a database of tourists and tourist sites and it is regularly updated in order to record, analyze and centralize information on the development of the hotel business and the tourism industry as a whole.

Taking into account the above directions, solving a number of problems in the field of tourism and the hotel business in particular, a lot can be achieved. Since Uzbekistan has a good potential, its own legal framework and infrastructure in this area has been created. International airports operate in Uzbekistan. Airports in Bukhara, Tashkent, Urgench, Samarkand are called air gates. Khiva, Samarkand, Bukhara are the centers of ancient civilization. They have made a huge contribution to world culture. Tourists enjoy visiting these places.

Tourism itself is a profitable industry. The profitability of this area is growing year after year, if you do not take into account the period of an acute pandemic. Good prerequisites will help prepare a promising future in the industry. We expect intensive development of tourism and hotel business in the regions of Uzbekistan.

The Committee on International Affairs and Inter-Parliamentary Relations for the Implementation of Tourism Legislation, after carrying out its control and analytical activities, showed that the most visited, popular cities are Bukhara, Samarkand and Khiva. It is in these cities, through the media, that certain work is being done to attract guests. Briefings, presentations are held within the framework of the Ministry of Foreign Affairs, embassies abroad.

As mentioned above, a number of higher educational institutions that train personnel for the hotel industry and the tourism industry make a great contribution to the development of tourism not only in the Republic of Uzbekistan, but also for other countries. Since we have joint education projects in our country, people come to study from different foreign countries. The study showed that our country has great opportunities, therefore, further development is required in the field of tourism and hotel industry. A rich cultural and historical heritage, more than four thousand monuments, material and spiritual values open up a potential opportunity for us to improve the mechanisms for the development of the hotel business and tourism in general.

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## METHODOLOGY AND STATISTICAL INDICATORS ON TRENDS OF FOREIGN GRAIN PRODUCERS

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### ABSTRACT

The article includes information on wheat cultivation in the world, data on the volumes of harvest in the main wheat-producing countries (TOP-100). The article is a statistical and forecasting database of the Food and Agriculture Organization of the United Nations (FAO), the Organization for Economic Cooperation and Development (OECD) by experts of the expert-analytical centre "AB-Centre Agrobusiness". As one of the world's staple food crops, wheat plays an important role in the diet of most countries. We commonly eat wheat bread, bread and other pasta products. For this reason, there are many trends in the world's wheat production, with the majority of products being packaged in China, India, Russia, the US, France, Canada, Ukraine, Pakistan, Germany and Argentina. These ten countries account for 57% of world wheat production. Among them, China's production ranks first in the world, accounting for 1/6th of global production.

**Key words:** grain and grain products, grain production, productivity, efficiency, grain independence, agricultural technology..

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### INTRODUCTION

The role and importance of the agricultural sector in ensuring food security of the population on a global scale is increasing day by day. Wheat, in particular, is one of the most common cereal crops. Wheat bread is highly valued for its taste, nourishment and digestibility, using the resources and opportunities available in our country to ensure a secure supply of agricultural products, further increase productivity and interest in introducing scientific advances and modern approaches in the Field is a pressing issue.

Wheat is one of the most common cereal crops. Wheat bread is highly valued for its taste, nutritional value and digestibility. The protein content of wheat grain ranges from 11.0% to 18-19%, depending on its variety and sowing conditions. Protein digestibility of wheat bread is 95%. Wheat grains are also used to make cereals, and wheat flour is used in pasta and confectionery industries. The quality of wheat grain, i.e. the amount of protein and gluten in it, varies depending on the variety of wheat and the soil and climatic conditions of the region where it is grown. Alcohol, starch, gluten, dextrin, glue and various other products are obtained from wheat grain in technology. More than half of the world's population eats wheat bread. Wheat bread is high in protein and starch, and its protein component consists mainly of gluten, which is why it is used to bake quality bread.

#### Literature review

Economists and experts have expressed their views and opinions on the need for stable grain production and its beneficial aspects in their studies and at international conferences. They showed the experience of increasing the production of grain products by natural and intensive way, the role of grain products in the economy of the country and their positive aspects according to the existing conditions of their time.

Atabaeva Kh.N., Khudaykulov J.B. Wheat is considered as one of the most common main

cereal crops. More than half of the people in the world eat wheat bread. Wheat bread is high in protein and starch, and since protein molecules are mainly found in gluten, its flour is used to bake quality bread. Wheat bread is highly valued for its taste, nutritional value and digestibility. The protein content of wheat grain ranges from 11.0% to 18-19% depending on its variety and the time of sowing.[2]

3. M. Ilyina proposes to use the following approaches to analyze the sustainability of the food market in agriculture [3]: static (determining the limits of market development); dynamic (studying the vibration of a number of dynamics); adaptive (factor assessment of the degree of adaptation of the food system to changes in external conditions).

In our article "Factors of increasing the sustainability of grain production and performance indicators" we have analyzed a number of economic indicators and found that the stable development of the food system, in particular, the activity of the exchange mechanism in the trade of grain products in agriculture, is directly related to the stability of grain, as we found out [4].

In the works of foreign scientists in the field of agriculture: E. F. Zavorotin [5, p. 300], V. Z. Mazloev [6, p. 15].

### **Research methodology**

Study of existing scientific research to create prospects for the sustainability of grain production, comparative comparison of tariff-price formation, study of statistical data and economic comparison and analysis, logical thinking, scientific abstraction, methods of analysis and synthesis of information, grouping is widely used definition of relative and harmonic averages.

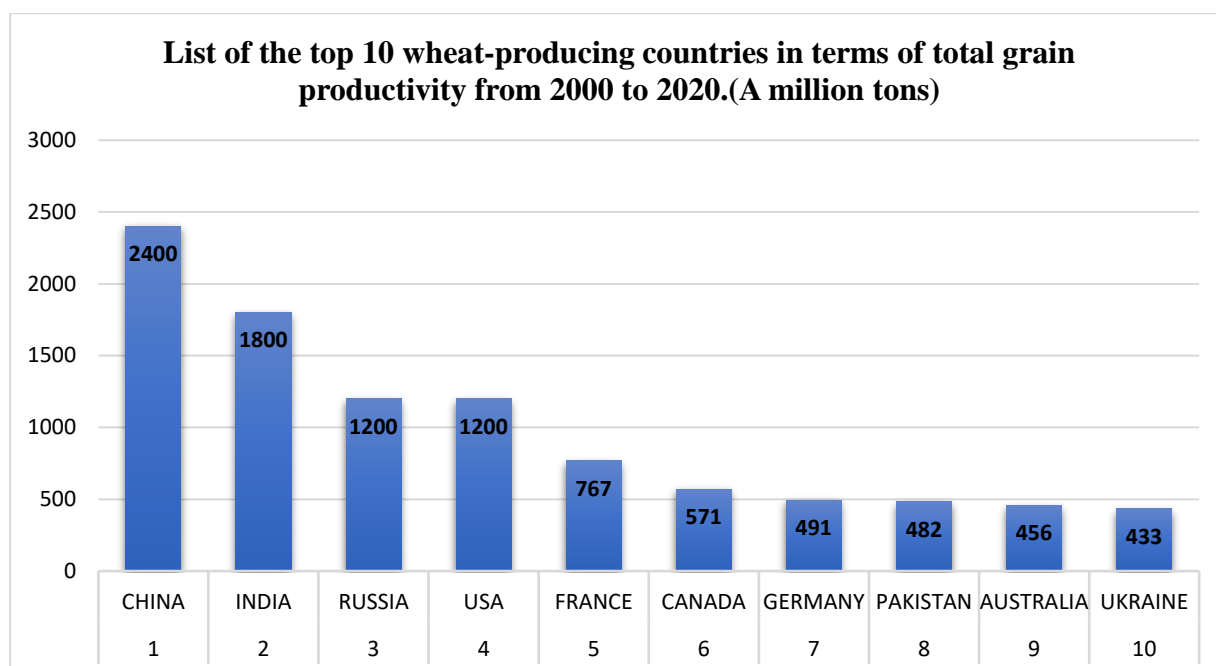
### **Analysis and results**

In conditions of limited resources, their rational use, as well as their optimal ratio is an important factor in reducing the cost of production and building business processes. Excessive consumption or under-utilization of production resources leads to a decrease in the efficiency of agricultural producers, which is further expressed in the inability to expand production and stagnation of the grain industry. Therefore, in the scientific works of domestic and foreign researchers the issues of some aspects of ensuring economic efficiency and sustainability of grain farming were considered. At the same time, considering questions of definition of scientific category "Sustainability of grain production", peculiarities of structure of production-economic potential of grain production, cycles of economic development of grain production, influence of changing weather and climate conditions of released Development of climatic conditions and long-term scenarios of provision of sustainability of grain production remain understudied. At the same time fast changing economic and technological conditions of agriculture, unsteadiness of grain production required.

A July report by the International Grains Council (IGC) predicts that world wheat production will reach 770 million tonnes in 2022-2023, of which 195 million tonnes will be available for trade, compared to 781 million tonnes in 2021-2022.[9]

According to the Food and Agriculture Organisation of the United Nations (FAO), most wheat is produced in a few countries and even fewer of them are major exporters.

Here is a list of the top 10 wheat-producing countries in terms of total yield from 2000 to 2020. See Figure 1 for production and consumption projections for 2022-23.



**Figure 1. (FAO), (OECD) compiled by the author on the basis of statistical and forecasting data.**

#### **1. CHINA - 2.4 billion.**

As the largest wheat-producing country in the world, wheat cultivation is widespread in the Huanghe and Huaihe river basins and mainly in the North China Plain. In the first two decades of the 21st century, China is the world leader in wheat production (17% of the total) at 2.4 billion tonnes. At the same time, the 1.4 billion Chinese are also the largest consumers of wheat. IGC forecasts that China will produce 135.8 million tonnes of wheat in the 2022/23 season, of which 141 million tonnes will be destined for consumption. Wheat has now become one of the staple foods of the Chinese, accounting for almost 40 percent of China's grain consumption.

#### **2. INDIA - 1.8 billion**

Wheat is India's second most important foodstuff (after rice), feeding hundreds of millions of Indians every year. In the first 20 years of this century, India produced 12.5% of the world's wheat. The country is home to 1.38 billion people who consume 104.5 million tonnes of the crop. IGC predicts that India will produce 105 million tonnes of wheat in the 2022/23 season.

#### **3. RUSSIA - 1.2 bln tonnes**

Russia is not only the world's third largest wheat producer but also the world's first exporter. According to statistics, Russia's wheat exports reached 32.5 million tonnes from 2018 to 2019, surpassing the US and Canada among the world's largest wheat exporters. In Russia, winter wheat is the main sown variety and is mainly grown in the western region of Russia. The crop is sown annually in August-October and harvested in July-August of the following year. During the period under review, Russia produced 8.4% of the world's wheat and is the largest exporter. According to IGC, Russia will produce 85.2m tonnes of wheat in the 2022/23 season, of which 37.6m tonnes was supplied to the world market and 44.4m tonnes was consumed domestically.

#### **4. US\$1.2 billion.**

The unit of weight of wheat in the United States is the bushel. One of the major cereal crops in the United States, its production has always ranked second after corn and soybeans, and it is grown in all parts of the country. According to the US Department of Agriculture classification, there are eight varieties of wheat, 50% of which is exported annually, with export revenues of \$9 billion. This is 1.2 billion tonnes of steam. The country's total export earnings are estimated at US\$1.2 billion for the 2000-2020 period. For the 2022/23 season, IGC has estimated wheat production at 48 million tonnes, consumption at 30.9 million tonnes and exports at 22 million tonnes. The country is the

second exporter after Russia.

#### **5. FRANCE - 767 million tonnes**

France is Europe's largest wheat producer after Russia. Its planted area is scattered throughout the country, but it is the largest in northern France. Winter wheat is the main wheat variety in this country. It is planted every year in autumn and harvested in August the following year. The largest producer of wheat in the European Union - 5.4% of world wheat in 2000-2020. FranceAgriMer forecasts wheat production in the 2022/23 season at 32.89 million tonnes and exports at 17.3 million tonnes.

#### **6. CANADA - 571 million tonnes**

4% of total world wheat production in 2000-2020. In the 2022/23 season, IGC wheat production was 32.4 million tonnes and exports were 22.8 million tonnes. Wheat is Canada's most important crop and is used for several purposes such as bread production and livestock feed, and Ontario accounts for 82% of Canada's winter wheat production.

#### **7. GERMANY - 491 million tonnes**

3.5% of total world wheat production from 2000-2020. In the 2022/23 season, wheat production according to the Association of German Farmers' Cooperatives reached 22.65 million tonnes. Germany is one of the largest food-producing countries in Europe. Winter wheat is grown throughout the country, but is mainly concentrated in central Germany. If climatic conditions are right, the crop is sown in October and harvested in August of the following year.

#### **8. PAKISTAN - 482 million tonnes**

3.4% of total world wheat production in 2000-2020. USDA wheat production in 2022/23 season reached 25.4 million tonnes and 29.2 million tonnes for consumption. Wheat is the staple food in Pakistan and the staple food of the people of Pakistan grown throughout the country.

#### **9. AUSTRALIA - 456 million tonnes**

On this list, Australia is the smallest country in terms of population at 25.7 million. In the period 2000-2020. 3.2% of the world's total wheat production, the IPC produced 30.6 million tonnes of wheat in the 2022/23 season and exported 24.7 million tonnes.

#### **10. UKRAINE - 433m tonnes**

Ukraine is one of the world's top five wheat exporters, producing 3.1 per cent of the world's wheat from 2000-2020. Despite developments in Ukraine, wheat production in the 2022/23 season is forecast by IGC at 19.4m tonnes and exports at 10m tonnes. In Ukraine, wheat is sown all over the country, but most of the production is in the central part of the country. and southern areas, which are supplied by the central regions. The crop is sown in autumn and harvested in July-August of the following year.

The world's top 30 wheat-growing countries account for 92.4% of the total crop. In 2014, in addition to the above-mentioned countries, the top 30 countries included Turkey, Great Britain, Argentina, Kazakhstan, Poland, Egypt, Iran, Romania, Italy, Uzbekistan, Spain, Brazil, the Czech Republic, Afghanistan, Bulgaria, Hungary, Morocco. countries. , Denmark, Ethiopia and Iraq. [10]

#### **Conclusion and recommendations**

Grain is one of the most common cereal crops. The multifaceted linkages between cereal production and economic sectors underline that sustainable cereal production is the basis for the stability of all agricultural production and the commodity market. Sustainable grain production has considerable potential for the development of a large part of a country's economic system. More than half of the world's population uses wheat bread for food, and this product is at the top of the 'consumer basket'. Therefore, in an economic situation where the share of demand for bread and bakery products is increasing, ensuring the stability of grain production is very important for the food security of the country. The area covered by cereal crops accounts for 50% of the cultivated land in the world. 2.0 billion a year in the world. about a tonne of grain is grown. This corresponds to 3.1 cwt per capita. Cereals are a staple food and a raw material for industry. Globally, the rate of cereal production increases faster than the rate of population growth. For example, 3-4 tonnes per capita



are grown annually. Grain importing countries are Western European countries. 95% of exported cereals were exported in the form of grain and 8% of exported wheat products were exported in the form of flour.

To ensure the sustainability of grain production, I recommend the following additional suggestions.

- Increasing the number of mills,
- exchange experiences on the methodology of grain production areas,
- Increase the area and yield in the area of grain cultivation,
- to cover the costs of supplying flour and flour products to remote villages, to create a system to cover transport costs
- Avoid shortages by importing flour products from other regions of the country,
- Ensure price stability.

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## MOTIVATIONS FOR THE DEVELOPMENT OF ECOLOGICAL TOURISM AND MECHANISMS OF ITS REGULATION

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### ABSTRACT

*Some theoretical and methodological issues of the development of ecological tourism in the Republic of Uzbekistan are considered. Problems are identified and possible ways to solve them are identified. An assessment of the tourism potential of Uzbekistan, including a new direction for the development of ecotourism in the region, is given. As a result of research, the model of modern motivations for the development of ecological tourism and mechanisms of its regulation is developed. It is concluded that ecotourism should develop as a single system, the tasks of which should be clearly defined at each level.*

**Key words:** *ecotourism, international tourism, development regulation, three-level system, mechanism, modern motivation, ENVIREG, INTERREG, ecotourism development management system.*

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### INTRODUCTION

In economically developed countries, special attention is paid to developing tourism services, which are integral to the service sector.

According to the World Tourism Organization (WTO), in 2023, the number of international tourists is expected to grow to 2 billion people, and the profit received from tourism to 3 trillion. US dollars, a steady increase in the tourist flow of up to 3–5% annually [1]. Today, ecotourism is the most intensively developing tourism industry. According to the WTO, "the annual increase in ecotourism is 30%, and its share in world tourism income is 10–15%" [2]. The intensive development of eco-tourism is explained by the increasing population's need for outdoor recreation due to the negative impact of industrial development on the environment. In the world, scientists carry out some scientific research to determine the directions for improving the methodological foundations for the development of ecotourism, the rational use of natural resources and the development and improvement of the legal framework for ecological tourism. In this process, special attention is paid to the issues of determining the impact of tourism on the environment, maintaining a balance between nature and tourism, and developing a model for the development of ecotourism. At the same time, some essential tasks included determining the contribution of ecotourism to the national economy and the effectiveness of ecotourism in the economy. As a result of reforms aimed at modernization and innovative development of economic sectors in the years of independence in our country, the tourism industry has also risen to a new level. The issue of developing tourism activities, not without reason, was reflected in the priority areas of development and liberalization of the

economy in the Action Strategy for the five priority areas of development of the Republic of Uzbekistan.

In this regard, the issue is implementing research on the scientific, methodological and practical aspects of determining the directions and prospects for developing ecological tourism. Based on the analysis within the boundaries of the terminology, the definition of the concept of "ecological tourism" is given: "Ecotourism is a tourism activity that ensures socially responsible and environmentally sustainable development, conservation and protection of natural and cultural heritage, a highly profitable innovative direction that involves traveling to nature, based on synergistic relations between biodiversity and local communities." Based on the approaches that exist in foreign and local scientific literature, the basic principles for the development of ecological tourism are substantiated, including such guides and their distinctive features as minimizing the negative consequences of environmental and socio-cultural areas, maintaining an environmentally sustainable environment, environmental education and education, participation of the local population in tourism activities and income generation, the formation of a propensity for the protection of nature among the people, contributing to the sustainable development of the regions visited by travelers, economic efficiency. The study of foreign and domestic scientists shows that at present, "... ecotourism in some countries has risen to the level of the leading sector of the economy. Following this, its management is carried out in new forms. The protected areas and the national parks within them have become the main objects for the development of ecotourism. 10–12% of the protected areas are used for recreational purposes."

With the development of ecological tourism and its transformation into a socially significant socio-economic phenomenon, the problems of its effective regulation are particularly relevant. The regulation of the development of ecotourism meant creating tools that would ensure the full and effective coordination of the activities of business entities and ongoing activities at the territorial level.

Regulation of the development of ecological tourism is a three-level system, including:

- ❖ coordination and assist in the development of ecotourism on a global (international) scale;
- ❖ consistency of ecotourism policy at the interstate level;
- ❖ consistency of policy in ecotourism at the national and regional levels.

Coordination and promotion of ecotourism development on a global scale are carried out through international organizations and funds. Despite the relative "youth," ecological tourism has a clearly defined international organization. The most significant international structures assist in developing environmental tourism with a wide range of environmental goals. It economically supports the development of ecotourism as one of the activities promoting the sustainable use of natural resources.

The United Nations plays an essential role in uniting the efforts of the world community to protect the planet's natural resources. Some UN commissions contribute to the promotion of ideas of ecological tourism. The following are involved in the formation and implementation of the global ecotourism policy:

- **UNESCO** - United Nations Educational, Scientific and Cultural Organization (including its program "Man and the Biosphere");
- **UNEP** - United Nations Environment Program;
- **UNDP** - United Nations Development Program;
- **IUCN** - International Union for Conservation of Nature and others

The main focus of the above international programs is the natural protection function and the organization of monitoring of biological diversity, creating a system for the effective management of natural resources and integrating environmental, historical and cultural potential into the socio-economic development of the region.

A significant contribution to the implementation of international agreements and programs for the development of ecological tourism is made by international financial organizations:

- **World Bank — International Bank for Reconstruction and Development;**
- **World Wildlife Fund;**
- **Global Environment Facility.**

For long-term financing of specially protected natural areas (SPNTs), environmental trust funds are created and operated in developing countries that provide financial assistance to national parks and types of nature protection activities and others.

Some specialized ecotourism organizations were created to promote the development of ecotourism in the world: The Ecotourism Society, the Annual International Symposium "Annual World Congress on Adventure Travel & Ecotourism," Natural Conservancy Public Organizations, Audubon Society and others.

The World Tourism Organization (WTO) is an intergovernmental organization established under the auspices of the UN in 1975 to coordinate the actions of the world community to develop tourism and implements a global tourism policy.

The WTO carried out much work to promote ecological tourism in the world from 2001-2002. - during the preparation and holding of the International Year of Ecological Tourism. On May 19-22, 2002, under the auspices of UNEP and the WTO, the World Summit on Ecological Tourism was held in Quebec (Canada) with over 1,100 representatives from 132 countries worldwide. The summit participants developed some recommendations to governments, private business representatives, intergovernmental and public organizations, research institutions, international financial institutions, local communities for the development of ecotourism in the context of its sustainable development.

In the future, the activities of the WTO on the development of ecotourism will be aimed at:

- *dissemination of methods and techniques for planning, managing, regulating and monitoring ecotourism to ensure its long-term sustainability;*
- *expanding opportunities for effective marketing and promotion of ecotourism destinations and products in international markets;*
- *promoting the dissemination of good ecotourism practices, minimum quality standards, and traditional and comparable certification schemes for providers of ecotourism products and services.*

The coherence of ecotourism policy at the interstate level is achieved through the activities of regional tourism organizations and particular bodies of interstate associations.

So, for example, the EU tourism policy is understood not as a local narrow-industry task but as a set of complex tasks arising from various aspects of the union policy, such as environmental policy, regional policy, policy towards small and medium-sized enterprises.[5] The goal of the European regional policy is not only to create equal living and working conditions on the Union territory but is also closely intertwined with the support of the tourism industry and tourist regions. To support the tourism industry, such financial instruments of regional policy as subsidies from European funds and loans from the European Investment Bank are used. Within the framework of this policy, in recent years, more and more attention has been paid to the development of ecotourism in tourist regions. This explains the comprehensive investment support for eco-tourism in EU countries.

The most important financial instruments that contribute to the development of ecotourism in the EU countries include the following structural funds:

- **European Regional Development Fund,**
- **European Social Fund,**

### — European Fund for Orientation and Guarantee of Agriculture.

The European Regional Development Fund allocates funds to finance the construction and reconstruction of ecotourism infrastructure facilities, to develop the endogenous potential of the regions, including natural and cultural values.

The European Social Fund provides financial support for the organization of training and advanced training of personnel involved in ecotourism. Particular attention is paid to attracting young people from rural areas to the production of ecotourism services.

In several EU countries, especially in the countries of Central and Eastern Europe that are part of the Union, most agricultural regions are considered structurally weak. For these reasons, the European Guidance and Guarantee Fund for Agriculture allocates funds for developing one of the most popular ecotourism areas - agrotourism. The purpose of such a policy is to assist those employed in agricultural production in finding additional jobs and sources of income. Agrotourism is also considered a factor in the socio-economic revitalization of rural areas, considering the expanding urbanization and population aging. The European Fund for Guidance and Guarantee for Agriculture also finances the creation of protected areas, the development of ecotourism infrastructure and the implementation of environmental protection measures.

The European Bank for Reconstruction and Development became the first international financial institution to fix in its charter as a priority the provision of assistance to countries in the formation of environmental policies, promotion of the use of market methods in the management of national ecological programs; organization and support of special studies and programs on environmental education of the population.

The European Investment Bank provides credit and loan support to investment projects in structurally weak regions. The financial assistance he sends is used to develop ecotourism infrastructure (construction of small and medium-sized hotels and campsites using new eco-technologies).

The permanent financial instruments of tourism policy in the countries of the Union are complemented by initiative programs of the EU. The tools in this group include:

- **ENVIREG** - a program implemented to improve the state of the environment in tourist regions;
- **INTERREG** - a program to support cooperation between border regions, especially in agrotourism, environmental protection and creating natural parks in the border area.

Ecotourism policy coordination at the national and regional levels is carried out through specially created state bodies, public tourism organizations and institutions.

The experience of some states (USA, Great Britain, Germany and others), which have achieved significant results in developing ecotourism, indicates that effective government management and regulation are essential at the formation stage and are a determining factor in creating a national ecotourism market.

State management and regulation in the field of ecotourism in different countries differs slightly: it mainly provides for legislative support for environmental protection, the creation of an incentive system of taxation and the choice of optimal mechanisms for managing both the development of ecotourism in general and the process of using the resource potential of protected areas.

At the same time, the peculiarities of countries related to their development, geographical location, the population's mentality and attention to its socio-cultural development determine significant differences in the management and regulation system of eco-tourism. In this regard, by lining up investigators in the field of ecotourism development, we are working soon, of course, with international experience. Considering the solutions to this problem statement, the table proposes tools for state regulation of eco-tourism development in our country. (table №1)

**Table 1.**

**Instruments of state regulation of ecotourism development**

<b>Regulation tools</b>	<b>Scope of application in ecotourism</b>
<ul style="list-style-type: none"> <li>— Improving the regulatory framework for ecotourism</li> <li>— Development of methodology for licensing, standardization and certification</li> </ul>	<b>Legal</b>
<ul style="list-style-type: none"> <li>— Tax regulation</li> <li>— Targeted budget financing of development programs</li> <li>— Creation of favorable conditions for investment</li> <li>— Creating conditions for economic incentives for the protection and restoration of natural resources</li> </ul>	<b>Economic</b>
<ul style="list-style-type: none"> <li>— Scientific research</li> <li>— Training of professional personnel for ecotourism activities</li> </ul>	<b>Scientific - education</b>
<ul style="list-style-type: none"> <li>— Формирования имиджа Узбекистана на мировом рынке экотуризма</li> <li>— Marketing support for the promotion of an eco-tourist product on the domestic and world market</li> <li>— Stimulating the participation of ecotourism entities in international programs for the development of ecotourism</li> <li>— Coordination of activities of the public and private sectors in the field of ecotourism development</li> </ul>	<b>Organizational</b>

The development of ecological tourism is directly related to implementing the tasks of sustainable development of the country. By the National Strategy for Sustainable Development of Uzbekistan, the main goal of environmental policy is to develop legal and economic foundations for environmental protection and rational use of natural resources, ensuring the creation of environmentally safe living conditions in the country<sup>6</sup>.

These provisions are legislatively enshrined in normative acts of various legal forces: the country's constitution in the form of norms-principles, legislative acts adopted by Parliament and normative acts issued by executive authorities. Environmental and legal norms are included in some laws: "On Lease," "On Enterprises in the Republic of Uzbekistan," "On Entrepreneurship in the Republic of Uzbekistan" and others. The most crucial state acts in environmental legislation are the laws of the Republic of Uzbekistan "On Environmental Protection", "On the State Ecological Expertise", "On the Sanitary and Epidemiological Well-Being of the Population", "On Specially Protected Natural Territories and Objects", "On the Protection and Use of Wildlife", "On the Tax for the Use of Natural Resources and others<sup>[7]</sup>

The Republic of Uzbekistan actively participates in international environmental cooperation. Documents of environmental law on the territory of the country are international treaties and agreements concluded by the Republic of Uzbekistan on a bilateral and multilateral basis, 12 international environmental conventions and protocols ratified by the Republic of Uzbekistan. In developing international cooperation on a multilateral basis, special attention in our republic is paid to ensuring the implementation of international conventions and protocols to them, the development



of national mechanisms for their implementation, and the intensification of cooperation with the governing bodies of the conventions.

As one of the UN's founders, the Republic of Uzbekistan constantly maintains contacts with its organizations: UNEP, UNESCO, UNDP and others. Uzbekistan is expanding cooperation with such prominent international organizations as the Council of Europe, the Interstate Environmental Council, the TACIS Program of the European Community, the World Bank, the Eurobank and others[8]

Thus, legal regulation in environmental protection in the Republic of Uzbekistan is an attempt to create comprehensive green legislation that can ensure the effective functioning of economic entities in the context of sustainable development of society.

The management process in tourism, as in any other area of human activity, involves creating effectively functioning organizational structures. The leading role in the management hierarchy should be occupied by a state body (usually a ministry), the main functions of which should be: the creation of a regulatory framework, coordination of the direction of development of the industry, control over the implementation of specific projects, and attraction of investments.

In general, the management system for developing ecological tourism in Uzbekistan should include three primary levels of management: national, regional and local (see figure). At the same time, a national ecotourism policy is being developed at the state level that meets the general objectives of sustainable development, mechanisms for its implementation, and an appropriate legislative framework are being created. At the regional and local levels, participants in the ecotourism process coordinate regional and local ecotourism policies that guarantee the protection of nature, cultural heritage and rational use of natural resources. The National Association for the Promotion of Ecotourism Development, which contributes to the implementation of the Strategy for the Sustainable Development of Ecological Tourism in Uzbekistan, could coordinate the actions of participants in the ecotourism process at the national, regional and local levels.

One of the most important modern trends in developing the global ecotourism market is the ever-increasing differentiation of ecotourism policy in the regional context, decentralization of management and regulation of ecotourism activities. The primary management tool at the regional level should be a system of program activities aimed at increasing the effectiveness of intersectoral cooperation in developing ecological tourism. At present, the functions of implementing the regional ecotourism policy are assigned to the departments of physical culture, sports and tourism of the regional executive committees, which only partially allows for stimulating the development of ecotourism in the regions.

The analysis carried out indicates that the socio-economic efficiency of ecological tourism is highest at the local level and the level of individual protected areas. Therefore, the choice of the organizational structure for managing the development of ecological tourism should be made based on the provisions for the vertical and horizontal distribution of management tasks. As we know, the vertical division of labor separates coordination from the direct performance of labor tasks necessary for successful group work. Furthermore, the horizontal division consists of distributing these labor tasks between specialties. Regarding ecotourism management at the regional level, we get two adequate levels of coordination: the level of local administration and the level of administration of protected areas. In addition, it is necessary to distribute management functions at the horizontal level and others at the level of individual districts or ecotourism destinations within the protected areas. Then the process of making managerial decisions on developing ecotourism in the region will be the most effective since decisions will be made at the most competent level, provided with appropriate resources.

The administration of protected areas is the adequate organizational structure of the second level of management, as it has some features and advantages:

- firstly, the development of ecological tourism in protected areas is a non-standard business

and maximizing profits is not its primary goal;

- secondly, the combination of environmental education and ecotourism work significantly increases the efficiency of environmental protection activities in protected areas;

- thirdly, in the organizational structure of protected areas, there are scientific departments whose functions are closely related to the development of ecotourism and which can provide scientifically substantiated nature management.

Implementing tasks at the local level, it is advisable to create a coordinating council for tourism among representatives of various forms of management. The following functions should be delegated to this structure:

- definition of criteria for environmentally sustainable tourism, certification of ecotourism routes and services based on an assessment of their compliance with the principles of sustainable tourism;

- inclusion in a single information space, organization of events for marketing, advertising and promotion of a tourist product outside the region;

- the creation of a center for professional training and retraining of specialists for work in the field of ecological tourism;

- development and implementation of a unified pricing policy in the field of ecotourism;

- the creation of mechanisms for monitoring and control of ecotourism activities in order to prevent damage to natural and ethno-cultural objects;

- coordination of routes and tours, including several destinations;

- marketing support for the promotion of an ecotourism product at the local level;

- development of a standard workflow for formalizing relations with commercial structures;

- introduction of a mechanism for collecting and processing statistical data on Eco tourists;

- holding scientific and practical regional seminars and conferences on critical issues of ecotourism development.

**Conclusion.** The methodology for managing the development of ecological tourism should be based on monitoring the state of biodiversity (assessment of the impact of tourists on natural ecosystems), monitoring the development of tourism activities themselves (the number of tourists, seasonal dynamics, estimates of the length of stay, the frequency of visiting different objects and routes, hotel occupancy and others), monitoring of economic indicators of tourism development (revenues, expenses, costs, benefits, budgetary and non-budgetary financing, dynamics of tax policy, environmental investment and others), monitoring of socio-economic parameters of the local population and local economy (survey data on attitudes towards tourism in protected areas, participation in nature protection, the presence or absence of conflict and its severity and others) and monitoring of environmental education and environmental education. Thus, the structural subdivisions of management at all levels will receive information from complex monitoring, making it possible to adjust the strategy and tactics of ecotourism development quickly.

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## INCREASING THE EFFICIENCY OF USE OF TRANSPORTATION SERVICES

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### ABSTRACT

*This article examines the nature of transport services and the main problems of the market in modern economic conditions. Also, the main trends in the development of the transport services market have been identified.*

**Key words:** *transport services, digital transport services, quality of transport services, economic mechanism, innovation.*

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### INTRODUCTION

Since its inception, the business has focused on making a profit. There are many ways to maximize it: from increasing production to reducing delivery time. The topic of improving the efficiency of the transport system by choosing the optimal carrier was chosen as relevant, because the business of transport services is developing, a large number of companies providing transport services are entering the market; new technologies are emerging that ensure the efficiency of the transportation process, increase its safety and quality.

Transportation plays an important role in today's economy and society and has a major impact on growth and employment. The transportation industry directly employs about 10 million people and accounts for about 5 percent of the country's gross domestic product (GDP). Efficient transport systems are fundamental to the ability of European companies to be competitive in the global economy. The quality of transportation services has a great impact on the quality of life of people. An average of 13.2 percent of the budget of each family is spent on transportation goods and services. Transport services are also heavily dependent on oil resources and are a significant source of CO<sub>2</sub> emissions. The strategy outlined in Transport 2050, the Roadmap to a Single Transport Area, aims to introduce profound structural changes to transform the transport sector[1].

The activation of regional transport cooperation serves to strengthen trade in Central Asia, to increase the volume of trade between the countries of the region, as well as to the development of trade and economic cooperation. For example, in 2017-2019, the volume of trade between the countries of Central Asia almost doubled - from 2.7 billion dollars to 5.2 billion dollars[2].

Another important step was the strengthening of transport cooperation within the framework of international organizations - UN, SCO, CIS. At the 75th session of the UN General Assembly, the President of Uzbekistan took the initiative to establish a regional center for the development of transport and communications interconnection under the auspices of the UN, its establishment will activate joint efforts to develop existing and transport communications. The formation of new transport corridors will increase the competitiveness of Central Asian countries in the global market of transport services and the quality of providing transport services to foreign trade flows. Among the main tasks of the center is the adoption of regional programs, projects and documents of strategic importance in the implementation of joint transport-logistics projects, which will allow the integration of the transport network of the region into a single transport system.

The modern conditions of providing transport services always require increased attention

from motor transport specialists in solving the issues of organization and management of road transport. In order to solve these serious problems, there is a need to improve the accuracy of planning, analysis and cost-effectiveness assessment of the operation of large transport systems and individual vehicles. Only on the basis of accurate calculations and analysis, it is possible to develop rational resource-saving schemes of cargo transportation. The right economic decision is the key to the successful development and stable income of a motor vehicle enterprise[3].

Literature analysis. Until the end of the 20th century, the concept of "transport service" was not used in the organization and management of transport services. Transport service means direct transportation measured by gross indicators such as loading and unloading volume, cargo turnover, etc. However, this method of evaluation took into account only the quantitative aspect of the transport work. In a market economy, the concept of "service" should include, in addition to the volume of work, the quality and level of service that accompanies the implementation of the service[4].

The issues of organizing the market of transport services, features of the process of providing motor transport services were considered in the works of V.V. Baginov, G. Poplavsky, A.I. Ryabchinsky, N.A. Troitskaya, I.S. Turevskiy and others. Economic problems and prospects for the development of the transport system are studied in the works of V. A. Noskov, Yu. A. Hegay, V. A. Shumaev, M. I. Chashchina. The study of market analysis methodology, including in the context of industrial markets, is covered by the works of N.I.Gavrilenko, L.V.Roy, V.P.Tretyak, G.F.Yusupova and other authors.

Unlike industrial enterprises, the result of the activity of transport services is a transport process, that is, a transport service. According to the opinion of many authors studying the problems of transport enterprises, the transport service is characterized by such characteristics as immateriality, inseparability of consumption from the production process, perishability and non-accumulation[5]. As for the characteristics of transport service as a specific type of service, we believe that the conclusions of S. Yu. Morozov[6] are the most correct, that is, they have the following characteristics:

- if the analyzed services are performed using motor vehicles;
- if they occur during the implementation or provision of transportation (movement) of cargo, passengers and baggage;
- the person performing this type of service is a business entity.

In our opinion, the main of these signs is service through the use of different types of vehicles, which is the first of the above signs. Also, one of the signs should be considered as follows: the transport service is provided on the basis of special legislation, which, we emphasize, reflects the specific characteristics of each type of service, depending on the type of transport.

The economic content of transport services, in addition to its wide and spatial movement, may also include related services provided to passengers (consumer of services) aimed at ensuring safe and comfortable transport conditions, as noted by E.M. Tujilova-Ordanskaya and A.R. Muratova[7].

Analysis and results. The current state of the transport services market and its development trends are one of the indicators of the efficiency of state economic activity. The economic importance of transport in the life of society consists in the development of all sectors of the national economy, ensuring communication and coordination. Transport is one of the important components of the state economy, which ensures its normal operation and helps increase the efficiency of social production. Great importance is attached to the transport sector in solving social problems, providing cultural, service and tourist trips of the population, developing cultural exchanges within the country and abroad. Transport contributes to the development of international economic relations, ensures the implementation of mutually beneficial exchange projects between different countries.

Analysis of the market, including the transport services market, consists in determining the characteristics of this market. It consists of the following steps: industry analysis, target market analysis and competition analysis[8]. During the study of the network, its current state is analyzed,



the main development trends are determined. The analysis of the target market includes the study of the following indicators: the share of the target market, its structure according to various criteria. Competitive analysis is an analysis of the activities of competitors. Competitors are similar enterprises occupying a comparable position in the target market, whose activities can directly affect each other's results. The market situation and the level of intensity of competition change under the influence of driving forces, that is, the result of the analysis of competition is an assessment of the driving forces of competition.

Transportation services are generally considered as a means of carrying out various commercial transactions. At the same time, there are specific characteristics of transport services provided by transport enterprises representing an independent type of business activity. Transport services can include:

- direct passenger and cargo transportation;
- loading and unloading operations;
- storage of goods;
- maintenance and preparation of vehicles;
- rental of vehicles;
- delivery of repaired or new vehicles.

When classifying transport services, it should be taken into account that the type of transport service is a set of homogeneous transport services characterized by common technological features. There are no sufficiently effective quantitative methods for objective assessment of the quality of transport services. Therefore, when it comes to the quality level of transport services, the relative characterization of the quality of the provided transport services is based on the comparison of the values of the quality indicators of the assessed service with the main values of the relevant indicators. Based on these considerations, it is important to study the main indicators of the quality of passenger transportation (see Figure 1).

Figure 1.

The main indicators of the quality of passenger transport services

INDICATORS	DESCRIPTION
Information service indicators	Frequency of information transmission About the departure and arrival of vehicles About services provided to passengers and their prices
Convenience indicators	The area (volume) of the space corresponding to the passenger. Cleaning frequency. Air temperature. Illumination. Average (fixed) internal filling
Speed indicators	Duration of the trip. Average movement speed. Stop frequency
Temporary indicators	The percentage of cars departing according to the schedule. The percentage of vehicles arriving according to the schedule. The average interval of traffic of vehicles
Luggage security indicators	Percentage of damaged shipments. Average cost of damage to luggage. Compensation cost for lost baggage
Security efficiency	Reliability of vehicle operation. Professional compliance of transport service providers. The readiness of the machine for certain transportation
Economic indicators	Fare from point of origin to point of destination. The cost of additional services on the road



In the conditions of the market economy, the evaluation of the economic activity of transport services is defined as the difference between the production results and the costs of production resources. As we know, the main indicator of production efficiency is the price of work performed or services provided. The cost of transport services is a monetary expression of the expenses of the enterprise for the production of a unit of transport product. One of the important disadvantages is the low level of labor productivity of workers, which is a result of the low carrying capacity of road transport rolling stock compared to rail and water transport. Therefore, a large share of the transport costs in road transport is the labor costs of drivers and technicians.

Figure 2 presents a diagram describing the functional importance of the transport services market as an economic mechanism. Fulfilling the regulatory function means that the market of transport services acts as a regulator of the formation and placement of transportation opportunities through the ratio of supply and demand. The incentive function is to encourage the reduction of transport costs, the improvement of the quality of transport services and the use of innovations. The information function of the market is less important - a collection of information about the required volume, assortment and quality of services required by customers in a certain period of time. The performance of the intermediary function of the market is expressed in providing the opportunity to choose the transport service provider that best meets the requirements and the customer. The importance of the sanitization function is to "cleanse" social production from economically weak production and stimulate the development of productive enterprises. Performing a social function means differentiating the incomes of market participants by using the market mechanism as an equilibrium of supply and demand.

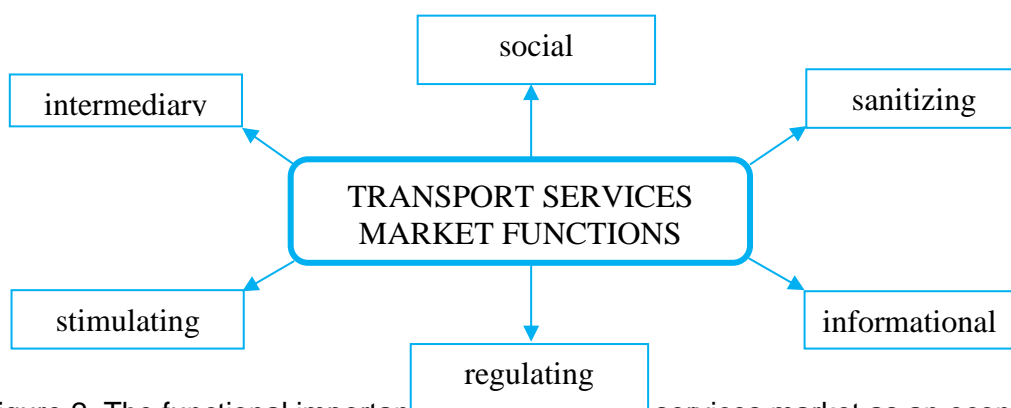


Figure 2. The functional importance of the transport services market as an economic mechanism

The research of transport services market and the development of methods of its regulation are important not only for studying the provision of services, their characteristics, quantity, quality and other parameters. General laws, trends, characteristics, proportions of market environment formation, models and processes of market operation and development, its conjuncture, market processes and factors determining the stability of relations are more important for research.

Today, the transport industry is the industry that is most exposed to innovative changes. In addition, it serves as an infrastructure for other networks. The development of the transport industry is a driving factor for the development of other industries. Looking to the future, we believe that digitization is a huge opportunity to develop the transport industry, creating unprecedented opportunities to improve efficiency, increase sustainability, create new business models and create a more saturated market for transport services.

The main obstacles to the digitization of the sector are the lack of specialized personnel and financial resources, ineffective standards and legal regulation, including electronic document circulation and the low priority of digital transformation for many participants in the transport services market. Digital transportation services optimize routes, create supply chains, monitor driver behavior and the situation around the vehicle, monitor the technical condition of vehicles, and control autopilot

vehicles.

There are three areas of positive impact of digitization in transport services, which are as follows:

1. Technical innovations that directly improve the quality of production of goods or provision of basic services. For example, in the field of transportation, this movement provides the opportunity to increase speed, automate management, robotize warehouse service, strengthen physical infrastructure, and improve the distribution and grouping of goods.

2. Quality changes in service level and provision of additional functions. Often, this is related to the online services available to customers. In the field of transportation, the consumer can get information about tariffs and routes, the status and delivery time of his cargo, as well as purchase tickets online, arrange insurance and customs payments.

3. Transparency of the operating system, simplification of the reporting and internal management scheme will affect the improvement of understanding and decision-making by the supervisory authorities. This can have a positive effect on the competitive environment and reduce the asymmetry of information, improve access to reporting data, and somewhat mitigate the problem of anti-monopoly "hospitality". The problems of adoption of industry standards and the emergence of new risks of restriction of competition, which may arise in the context of various digital technologies, are separate issues.

The first direction gives the main companies a competitive advantage expressed in internal factors: reducing costs, simplifying business and labor costs, increasing safety and reliability, etc. For example, airlines that have successfully implemented internal digital services for the provision of cargo services show more positive financial results due to the automation of business processes and the reduction of production costs due to the increase in the number of customers. Robotics, sensors, wireless communications, and artificial intelligence can improve safety, improve passenger and cargo safety, improve logistics, and impact the urgency and frequency of poisonings, which could benefit intermodal transportation. However, even in the absence of fully autonomous vehicles, technological innovations in this area can improve safety during transportation[9].

On the other hand, these factors can increase the competition of railway transport not only with road transport, but also with air transport (due to the development of speed characteristics and safety) and even pipelines. In the face of digitization, potential new market participants cannot be ignored. Digital technologies in transport affect other sectors of the economy - manufacturing, metallurgy, IT, trade, catering, advertising, etc. Cooperation with companies in other industries has a positive effect from such symbiosis, but it can also have some risks that can have an uncertain impact on public welfare in a competitive environment.

Summary. The development of transport services serves to develop the economic infrastructure and increase the mobility of the population. Transportation plays a crucial role in globalization, which has led to economic and social transformation of many countries. Diversification and development of the transport services system has become the main condition for expansion and activation of production and circulation of goods.

Investments in the development and implementation of new technologies in the transport services industry stimulate economic development in general, and the development of transport infrastructure in particular. The intensity of economic exchange between economic entities is increasing, trade and economic relations are being established, including the formation of trade and economic zones over long distances, transaction costs and market access barriers are decreasing, indirectly, but has a positive effect on the development of other sectors of the economy. Thus, the transport industry is the most important infrastructure for the development of the world economy, and its optimization can significantly increase the efficiency of world production and trade.

First, in connection with the transition to digital technologies, there is an increasing need to ensure digital security, to protect against external access to specific and important information, especially when it comes to trade secrets, production secrets and technologies.

Second, dependence on certain technologies can create a situation of "extortion" when a firm not related to the IT industry (for example, a transport company) becomes dependent on specialists engaged in the development of digital services.

Third, transport markets such as rail transport and air transport have large players with a high potential for lobbying their interests, which significantly distorts regulatory policies in the sector. Small companies are forced not only to adapt to the changing legal framework, but also to spend a lot of money on development in order to try to catch up with large corporations. However, such small transport companies have been very successful in introducing special services aimed at specific areas of demand (for example, low-cost airlines in the aviation industry).

The impact of digitization of transport services on the competitive environment can be multifaceted: on the one hand, technology opens the way for completely new companies, which may not even have their own real capital, but only with convenient software that does not require large investments and can attract a large audience. On the other hand, the focus of the industry may change in such a way that "medium-sized" transport companies with small fleets may become ineffective in the future.

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## THE ISSUES OF HUMAN CAPITAL DEVELOPMENT OF HIGHER EDUCATION SYSTEM IN UZBEKISTAN

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### ABSTRACT

The article examines the issues of intellectual capital activation, which is the basis for the development of innovative entrepreneurship in Uzbekistan. Accordingly, in the context of the introduction of free market mechanisms, a number of problems in the formation of innovation firms and the creation of the final scientific product in higher education institutions are identified and their solutions are indicated.

**Keywords:** Innovation, innovation idea, innovation entrepreneurship, innovational climate, innovation firm, innovational processes, intellectual capital, innovation product.

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### INTRODUCTION

The need to improve the innovative environment in the life of Uzbekistan from now on is defined as one of the 15 directions of our country's strategy, which was established by the initiative of the President of Uzbekistan. "In order to achieve new results and achievements in economy, to increase national competitiveness, it is necessary to introduce innovations on a large scale"[1.138]. In this regard, special attention is paid to human capital. One of the main directions of the Strategy for the innovative development of the Republic of Uzbekistan for 2022-2026 (hereinafter referred to as the Strategy) is to further develop human capital in the management of innovative activities [2]. Accordingly, intensive measures and works are being carried out in our country to implement it, and significant results are being achieved.

Among the prestigious international rankings that evaluate the development of the countries of the world, in particular, in the Global Innovation Index ranking, which shows the level of innovative development of countries, by 2022, Uzbekistan has risen by 40 places compared to 2015 and occupied 82nd place, as well as being noted as a "global leader" in innovation - Uzbekistan is the first became one of the top-3 countries in terms of innovations in the Central and South Asian region after India and Iran [16].

Therefore, in the process of such growth, based on the need to accelerate the reforms carried out in our country, the issue of activating human capital remains an urgent task for our scientists. Based on this thinking, in the article we have theoretically based on the historical decisions of the head of our state aimed at comprehensive development of innovative entrepreneurship, defining the development strategy of our country [2].

The analysis of the literature on the subject revealed the following:

According to our findings, the following scientific views can be given on the nature of human capital and its activation in the scientific environment:

- 1) Western economists Nobel laureates T. Schultz and G. Becker first founded the theory of human capital in the 70s of the 20th century. In this theory, its conditions, its main

characteristics as an investment are shown, and finally, it is concluded that human capital is the main condition of economic growth [4.401];

- 2) in the scientific views of Yu. V. Druk, human capital is considered in a broad sense - as a productive intensive factor in the development of society and family, economic development [5.292];
- 3) O.E. Otto analyzed the factors of formation of human capital on the example of Uzbekistan and determined that the basis of any type of economic system is human capital, which is the most important resource of economic productivity [6.388];
- 4) In the scientific views of A.E.Suleymankadieva, M.A.Petrov, I.N.Aleksandrov and O.A.Papazova, human capital is highly valued, i.e. it ranks fifth among economic growth factors (land, labor, capital, entrepreneurial ability). who also contributed intellectual capital. Also, the main trend in the Russian education system was identified, that is, the development of human capital was interpreted as the foundation of the process of intellectualization of the entire society [7.1557];
- 5) P. Yu. Malekhina and A. G. Dmitriev's scientific views consider human capital as health, knowledge, experience and motivations formed as a result of its investment and accumulation [8.357];
- 6) In the views of L.P. Kleeva, the goals of activating the development of human capital correspond to the achievements of the country's national goals, that is, the idea that the essence of human capital is characterized by indicators of quantity (population growth) and quality (knowledge, experience, skills, etc.) pushed [9.1];
- 7) A. Yarov, based on the theory of T. Schulz, concluded that the need to develop the human factor is a condition and goal of economic growth [10.43];
- 8) A. Artamonova and S. Simonenko, in contrast to the above, (like L.P. Kleeva) consider the problem of increasing human capital dependent on the natural growth of the population in the regions [11.1].
- 9) In N. Zufarova's views, it is considered that the formation of brand capital of universities in the conditions of digitalization of the economy is a difficult issue, and it is said that the basis of this is human capital [12.109];
- 10) T. Kutiboev's theses systematized the existing ideas about human capital only at the beginning of the century and described the need to connect it to market mechanisms to increase its potential [13.694].
- 11) Among these scientific views, it is possible to distinguish: For example, O.E. We find that Otto described the activities of higher education institutions in Uzbekistan. However, we did not find a single opinion that approached the issue critically. However, today in the scientific environment, a number of ripe problems in the development of human capital are not studied. Therefore, identifying them and finding a solution led to dealing with this issue.

**The purpose of the study** is to support the creation of an effective working mechanism of innovative entrepreneurship in the process of introducing free market mechanisms in Uzbekistan, based on the experience of developed countries.

**Research methodology.** In the article, we considered the process of human capital activation and its management using historical, economic, logical principles, deterministic approach and discourse analysis method. Also, the methods of scientific abstraction, grouping, and systematic analysis were used in the implementation of research.

**Research results.** It is known that in any economic system, human potential is a part of the national wealth of the society. Only in the conditions of the market economy, the creative and productive forces of a particular person appear as human capital.

The value of the theory of human capital is that this theory puts the education, health, culture and science sectors, which were previously considered "cost sectors", on a par with the sectors of



material production. At the same time, the competitiveness of economic entities directly depends on material, technological, innovative and other similar factors.

Therefore, the source of innovative entrepreneurial activity is intellectual capital. In turn, the so-called intellectual capital or human capital is the source of creation of innovative products and services in this process.

The term "human capital" was first introduced to science in the 70s of the last century by Theodore Schultz, who received the Nobel Prize in 1979. In particular, Schultz, while researching the reasons for the unusual post-war economic growth of Germany and Japan, came to the conclusion that the speed of recovery of the national economy depends on the health and education of the population.

The experience of these countries shows that even if a country is completely destroyed, if it has quality human capital, it is possible to restore the country and achieve further economic growth [4.401].

T. Shultz defines that the improvement of the standard of living of poor people depends not only on land, technology or work, but on knowledge. Schultz calls this qualitative level of the economy "human capital" and puts forward the following definition: "All human abilities consist of innate or life-acquired abilities." According to this, he says that each person is born with an individual set of genes that determine their innate abilities.

According to this opinion, T. Schulz found the following in his research. Human capital: - is a reserve in the form of abilities, skills; - requires large expenses; - the investment period is long, i.e. 12-20 years, providing the investor with economic and social benefits and high income; - since its carrier is a living person, it cannot be separated from it; - managed by the person who owns it; - the level of its use depends on the personal behavior of the owner; - therefore, it is the main condition of economic growth.

The results of the majority of studies conducted in developed countries after a quarter of a century have confirmed the conclusion of T. Schulz's partner, Nobel laureate G. Becker, that "the quality of human resources determines competitive success."

In our country, the need for the theory of human capital began to be felt only on the eve of the 90s of the last century, that is, in the context of the transition to a market economy. Therefore, during the creation of the market economy, the issue of human capital attracted many of our scientists. In this situation, there were widespread discussions among our scientists about whether a person is also capital. After all, such a concept did not exist in the scientific environment of the socialist era. Finally, after much discussion, it was realized that the functioning of human capital is a component of market relations (as in capitalism). Thus, in the Independent Commonwealth of Nations, as well as in Uzbekistan, comprehensive study of this problem has become an urgent issue.

As it became known in the study of the topic, it can be said that there is no single approach to human capital, its components and activation criteria in the scientific environment. Let's look at them.

V. Yu. Druk said: "In a broad sense, human capital is a productive intensive factor in the development of society and family, which includes knowledge, intellectual and managerial labor of labor resources, and economic development" [5.292].

O.E. Otto based on the theory of the American economist S. Kuznets, Otto mentions based on the sources that among all the necessary and sufficient factors of economic growth, the accumulated national human capital is the first quality factor. Analyzing the factors of formation of human capital, he came to the conclusion that the most important of the factors underlying any type of economic system is human capital, which is the main productivity resource of the economy [6.388].

P.Yu. Malekhina, A.G. Dmitriev: "Human capital is a person's health, knowledge, experience and motivations, which, as a result of investment and accumulation, are used appropriately in one or another area of social production, to increase labor productivity and income", who interpreted [8.357].

L.P. Kleevea says: "By human capital, we mean everything that a person contributes to the socio-economic development of the country, depends on the productivity and quality of his work: his



intellect, health, knowledge, abilities, qualities of life" [9.1].

According to A. Yarov, "Human capital is the total sum of knowledge, experience, skills and abilities that exist in a particular person, and its rational use is considered an important factor in the development of the state and society" [10.43].

Unlike the above, A. Artamonova and S. Simonenko (partially following L.P. Kleeva) associated the increase of human capital with the increase in the population of the regions and their mental and physical health, socially useful skills and personal potential, i.e. the ability to expand their competence are interpreted as consisting of [11.1].

As it can be seen from the above, there are different approaches to determining human capital. But they have a commonality - in the conditions of the market economy, it can be felt that the creative and productive forces of a person appear as human capital.

Therefore, in the market conditions, the final product of the innovation process, the innovative product is the result of human capital-based innovative activity, production, service and application (use) of new or improved products. As a result of this, the innovator-entrepreneur or his company, with his actions, i.e., his determination, gets a competitive advantage in the market, that is, he creates a situation and an opportunity in the market that provides extra, extra profit to the innovator-entrepreneur.

This is an entrepreneurial activity aimed at using the results of scientific research and development to improve the quality of manufactured products or services, to improve the technology of their preparation, and to commercialize them to expand and update their nomenclature. More precisely, it is called innovative entrepreneurial activity or innovative entrepreneurship. In other words, innovative entrepreneurship is a special form of entrepreneurial activity, a specific form of scientific enterprise engaged in research and sale of original scientific innovations.

This happens as a process - in the form of applying new techniques and technologies, labor organization and management to production, not only in a separate enterprise for commercial purposes, but on the scale of the entire national economy.

In the form of an innovative environment, it is characterized by a special diversity of business-related activities, organizational relationships, the development and flexibility of the functional structure, wide adaptability and the use of venture (risk) capital. Thus, in the sense of the innovation environment, it is a combination of internal and external conditions and opportunities that apply to the participants of the innovation process. The driving force behind all these activities is human capital. So, it can be seen that, in the process of entering into entrepreneurship, the innovator should first embody human capital.

Therefore, to clarify, we think it is logical to say that human capital is a motivated activity consisting of the total sum of knowledge, experience, skills and abilities of a particular person. Because these abilities in a person become capital only due to certain motivation. Otherwise, it will not be capital.

Therefore, the sum of intellectual abilities of any person does not become capital. However, just as money becomes capital when it is spent only for the purpose of obtaining additional value, this sum of intellectual abilities in a person can become capital only when it is directed towards a commercial goal (in the process of creating innovations), that is, when it is spent for the purpose of obtaining profit, that is, it takes the form of human capital.

But all scientists, knowledgeable and experienced people, possessing intellectual abilities, are considered sources of human capital (except for fake scientists).

Yes, it's still in stock. In this place, V. Shetinin emphasizes that human capital is a reserve of knowledge, abilities and motivations that exist in every person [14]. However, such a definition does not mean the process of capitalization of existing intellects in man. This view is not human capital.

Some of these can become human capital due to motivation. On the contrary, in most cases, most of them do not use their intellectual abilities, but because of the lack of motivation, they are engaged in fulfilling everyday simple obligations without showing any desire and remain on the

sidelines.

Yes, it is normal not to be able to use the available opportunities for various reasons. Therefore, only in the conditions of the market economy, the creative and productive forces of a person can appear as human capital.

However, the innovator-entrepreneur is not born ready, but he is formed by his own will, by studying, searching, acting and constantly gaining experience from practice. At the same time, due to motivation, he acquires trade secrets one after another, and only then can he achieve his goal.

Effective use of human capital is an important factor in the economic development of the state and the development of society. Therefore, research of human capital as the main factor of economic growth and development and its relevance in the current period ensures the stability of the development of the state and society as well as economic, intellectual and social development. It is also expressed in the restoration and promotion of national and universal values, ensuring the harmony of education and upbringing.

Currently, both traditional education-oriented universities and classical education universities, which are transforming their functions, focus on entrepreneurship and start-up projects, commercialization of scientific activity results, educational consulting services and other types of services, business and investment activities. The process of globalization in university activity is being studied as the main development requirement of commercialization of scientific developments in foreign universities, obtaining additional income through science and education.

Accordingly, the scientific and technical development of the present period is advancing the following features as a priority. This is information and classification of information technology, intellectual property, organization, scientific personnel of innovative entrepreneurship. Therefore, innovative entrepreneurship depends on the real state of innovative society and requires strategic management of innovative processes.

In this regard, it should be said that at the present time, in the advanced and developed countries of the world, the share of human capital in the national wealth is 80-90 percent [6.388]. In Russia, this indicator is noted to be at a much lower level.

Because in developed countries, the ratio of human capital, natural resources and physical capital is 43:20:6, while in Russia this indicator is only 5:4:1 [9.1]. In Uzbekistan, these indicators are expected to be even lower. This indicates that it is not for nothing that the problem of activating the development of human capital is reflected in the country's socio-economic development strategy [2]. Therefore, according to the importance of human capital, in the scientific views of A.E. Suleymankadieva, M.A. Petrov, I.N. Aleksandrov and O.A. Papazova, the factors of economic growth and development of the current society (land, labor, capital, entrepreneurial ability) We believe that adding intellectual capital as the fifth is logically appropriate. They also rightly stated that: "Countries that actively reproduce new knowledge, i.e., countries whose economies are growing intellectually, will become developed countries in 2030-2050 due to their ability to maintain a leadership position in the world economy [7.1558].

Therefore, in the conditions of the current market economy, special attention is paid to innovative activities in order to further develop the economy of our country. On the basis of this, human capital is embodied, and the issue of activating its development in the following years has become an urgent problem.

Development of human capital was defined as the main goal of the innovative development strategy of the Republic of Uzbekistan in 2019-2021. Based on this, the Youth Academy was established under the Ministry of Innovative Development in order to support the initiatives of talented young people and develop their scientific potential.

In April 2021, based on the needs of the real sector of the economy and the social sphere, in order to increase the effectiveness of the commercialization of the results of scientific activity, as well as to facilitate the transfer and localization of foreign technologies, a national office of the introduction of innovations and technology transfer was established under the Ministry of Innovative

## Development.

In order to further accelerate innovative activities in the regions, to form proposals for scientific and technical solutions to existing socio-economic problems, to ensure the commercialization of regional scientific and research projects, to fully organize a system of supporting ideas and initiatives of the population, especially young people, in a "local" way. Innovative development departments of the Republic of Karakalpakstan and regions were established.

In October 2019, the concept of developing the higher education system of the Republic of Uzbekistan until 2030 was adopted in our country. This document was based on tasks such as the development of integration of science, education and production in order to accelerate intellectual development, train competitive personnel, effectively organize scientific and innovative activities, and strengthen international cooperation.

The content of the concept defines the priority directions of reforming the higher education system of our country. According to it, expansion of the level of coverage and improvement of the quality of education in higher educational institutions, introduction of digital technologies and educational platforms, involvement of young people in scientific activities, formation of innovative structures, commercialization of scientific research results, achievement of international recognition and many other specific directions are defined. Therefore, the main goal is to create the foundations of a new Renaissance, that is, the third Renaissance, in Uzbekistan through educational reforms initiated by the President.

According to the concept of innovative development of the economy of the Republic of Uzbekistan, one of the measures for its implementation is the protection of intellectual property. It is also planned to increase the entrepreneurial culture among the population, scientists and researchers through:

- to support the implementation of business initiatives of innovators;
- ensuring the employment of scientists and researchers with entrepreneurship.

These motivations, in turn, require the gradual introduction of free market mechanisms in this area.

Based on these tasks, we will tell you what positive results have been achieved in our country in the following years.

The current state of innovative development in our country is defined in the strategy: - the amount of annual funds allocated from the State budget to the fields of innovation and science has been increased by 3 times compared to 2018 and reached 1.5 trillion soums; - there were 6.5 thousand young scientists in 2018, and in 2022 their number will be 10.8 thousand, which means that it has increased by one and a half times; - in the next 4 years, the number of special institutions for financing innovative activities - innovative funds, venture organizations, etc. has increased to 28; - the platform of innovative technologies is being developed [2].

Also, one of the most important aspects of the reforms in the system was the integration of the relationship between higher education and production. After all, it is impossible to train highly qualified, up-to-date personnel without cooperation. As a result of the breakdown of large industrial enterprises in our country, cooperation ties were broken, education was operating in its own way, and production was operating in its own way. Today, large and medium-sized production enterprises have risen in our country, the integration of cooperation between higher education and production has been established.

Innovative development for 2022-2026 The main goal of the strategy is to develop a continuous ecosystem of "network-territory-scientific/higher education organization" from creating new jobs to creating economic value (capital) in the formation of the creative economy in the country.

One of the main directions of the strategy is: "to support start-up initiatives by forming a network of innovative infrastructure entities: innovative technological park, technology transfer center, innovative cluster, venture organization, innovation center, startup accelerator, incubator network and organizing large-scale production (capital creation) achievement" is defined [2].

According to the above, there is talk of creating a new strategic innovative environment that will be highly effective based on the existing conditions and scientific potential of Higher Education Institutions and research institutes. It is also envisaged to ensure rapid socio-economic growth of the regions by increasing the innovative activity of small businesses.

In our opinion, this new strategy requires the creation of innovative micro-enterprises within existing institutions. Unfortunately, such innovative entrepreneurial micro-firms are still in the stage of formation in our country.

Global experience shows that the share of small innovative firms in the development of the market economy is very large, because micro-firms have many advantages. For example, quick adaptation to new conditions, low number of employees, convenience in financing and location, specific justification of risk, etc.

Consequently, socio-economic development in our country is being realized thanks to the existing innovative business structures. Also, innovative business is the business of the future, according to which innovative research provides an opportunity to protect the environment, reduce energy and live labor consumption, save raw materials, create new advanced technologies, as well as information technologies. In other words, consumer goods of some new quality, that is, original products, are created. In turn, the digital economy will thrive.

Most of the world's leading research universities have a high quality of human resources, that is: constantly improving the qualifications of professors and teachers; dissemination of knowledge and advanced innovations in cooperation with employers and users of scientific developments; it is distinguished by indicators such as the institution having its own modern scientific-research and experimental infrastructure.

### RESEARCH METHODOLOGY

In the article, we considered the process of human capital activation and its management using historical, economic, logical principles, deterministic approach and discourse analysis method. Also, methods of scientific abstraction and systematic analysis were used in the implementation of research.

### RESEARCH RESULTS

The value of the theory of human capital is that this theory puts the education, health, culture and science sectors, which were previously considered "cost sectors", on a par with the sectors of material production. At the same time, the competitiveness of economic entities directly depends on material, technological, innovative and other similar factors. Among them, human potential and the level of its use are of particular importance. It has been determined that there is no single approach to human capital and its components in the scientific environment [12].

Therefore, human potential is a part of the national wealth of the society. In the conditions of the market economy, human creative and productive forces appear as human capital. Therefore, the source of innovative entrepreneurial activity is intellectual capital. In turn, the so-called intellectual capital or human capital is the source of creation of innovative products and services in this process.

Here, the final product of the innovation process, the innovative product is the result of the innovative activity, production, service and application (use) of new or improved products. As a result of this, the innovator-entrepreneur or his company, with his actions, i.e., his determination, gets a competitive advantage in the market, that is, he creates a situation and an opportunity in the market that provides extra, substantial profit to the innovator-entrepreneur.

This is an entrepreneurial activity aimed at using the results of scientific research and development to improve the quality of manufactured products or services, to improve the technology of their preparation, and to commercialize them to expand and update their nomenclature. More precisely, it is called innovative entrepreneurial activity or innovative entrepreneurship. In other words, innovative entrepreneurship is a special form of entrepreneurial activity, a specific form of a scientific enterprise engaged in research and sale of original scientific innovations.

This happens as a process - in the form of applying new techniques and technologies, labor organization and management to production, not only in a separate enterprise for commercial purposes, but on the scale of the entire national economy.

In the form of an innovative environment, it is characterized by a special diversity of business-related activities, organizational relationships, the development and flexibility of the functional structure, wide adaptability and the use of venture (risk) capital. Thus, in the sense of the innovation environment, it is a combination of internal and external conditions and opportunities that apply to the participants of the innovation process. The driving force behind all these activities is human capital.

Human capital is the total sum of knowledge, experience, skills and abilities of a particular person. Effective use of it is an important factor in the development of the state and society.

At the same time, it should be mentioned that the sum of intellectual abilities of any person does not turn into capital. However, just as money becomes capital only when it is spent for the purpose of obtaining additional value, this sum of intellectual abilities in a person can become capital only when it is directed towards a commercial goal (in the process of creating innovations), that is, when it is spent for the purpose of obtaining profit. But all scientists, knowledgeable and experienced people, possessing intellectual abilities, are considered sources of human capital (except fake scientists). Among them, only the initiators can experience entrepreneurial activity and become human capital. On the contrary, the vast majority of them, without using their intellectual abilities, but because of the lack of motivation, are engaged in fulfilling everyday simple obligations without showing any desire and remain on the sidelines. Yes, it is normal not to be able to use the available opportunities for various reasons. Therefore, only in the conditions of the market economy, the creative and productive forces of a person can appear as human capital.

However, the innovator-entrepreneur is not born ready, but he is formed by his own will, by studying, searching, acting and constantly gaining experience from practice. At the same time, he acquires the secrets of becoming rich one after another and reaches his goal.

Research of human capital as the main factor of economic growth and development and its relevance in the current period ensures the stability of the development of the state and society as well as economic, intellectual and social development. It is also expressed in the restoration and promotion of national and universal values, ensuring the harmony of education and upbringing.

"Both universities focused on traditional education and universities of classical education, which are transforming their functions, are focusing on entrepreneurship and start-up projects, commercialization of the results of scientific activity, educational consulting services and other types of services, business and investment activities. The process of globalization in university activities is studied as the main development requirement of commercialization of scientific developments in foreign universities, additional income through science and education" [5.107].

Accordingly, the scientific and technical development of the present period is advancing the following features as a priority. This is information and classification of information technology, intellectual property, organization, scientific personnel of innovative entrepreneurship. Therefore, innovative entrepreneurship depends on the real state of innovative society and requires strategic management of innovative processes.

Therefore, in the conditions of the current market economy, special attention is paid to innovative activities in order to further develop the economy of our country.

In accordance with the decree of the President of the Republic of Uzbekistan "On the Strategy of Actions for the Further Development of the Republic of Uzbekistan for 2017-2021", the priority directions of the development of the field of education and science have been identified: "Stimulation of research and innovation activities, creation of effective mechanisms for the implementation of scientific and innovation achievements, establishment of specialized scientific-experimental laboratories, high-tech centers and technoparks at universities and scientific research institutes" was indicated.



Development of human capital was defined as the main goal of the innovative development strategy of the Republic of Uzbekistan in 2019-2021. Based on this, the Youth Academy was established under the Ministry of Innovative Development in order to support the initiatives of talented young people and develop their scientific potential.

In April 2021, based on the needs of the real sector of the economy and the social sphere, in order to increase the effectiveness of the commercialization of the results of scientific activity, as well as to support the implementation and localization of foreign technology transfer, the National Office of Innovation Introduction and Technology Transfer was established under the Ministry of Innovative Development. Innovative development departments of the Republic of Karakalpakstan and regions were established in order to further accelerate innovative activities in the regions, to form proposals for scientific and technical solutions to existing socio-economic problems, to ensure the commercialization of regional scientific and research projects, to fully organize a system of supporting ideas and initiatives of the population, especially young people, in a "local" way.

In October 2019, the concept of developing the higher education system of the Republic of Uzbekistan until 2030 was adopted in our country. This document was based on tasks such as the development of integration of science, education and production in order to accelerate intellectual development, train competitive personnel, effectively organize scientific and innovative activities, and strengthen international cooperation.

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Based on these tasks, we will tell you what positive results have been achieved in our country in the following years. The current state of innovative development in our country is defined in the strategy:

- the amount of annual funds allocated from the State budget to the fields of innovation and science has increased 3 times compared to 2018 and reached 1.5 trillion sums;
- there were 6.5 thousand young scientists in 2018, and in 2022 their number will be 10.8 thousand, which means that it has increased by one and a half times;
- in the next 4 years, the number of special institutions for financing innovative activities - innovative funds, venture organizations, etc. has increased to 28;
- the platform of innovative technologies is being developed [2].

One of the most important aspects of the reforms in the system was the integration of the relationship between higher education and production. After all, it is impossible to train highly qualified, up-to-date personnel without cooperation. As a result of the breakdown of large industrial enterprises in our country, cooperation ties were broken, education was operating in its own way, and production was operating in its own way.

Today, large and medium-sized production enterprises have risen in our country, the integration of cooperation between higher education and production has been established.



Innovative development for 2022-2026 The main goal of the strategy is to develop a continuous ecosystem of "network-territory-scientific/higher education organization" from creating new jobs to creating economic value (capital) in the formation of the creative economy in the country.

One of the main directions of the strategy is: "to support startup initiatives by forming a network of innovative infrastructure entities (innovative technological park, technology transfer center, innovative cluster, venture organization, innovation center, startup accelerator, incubator) and large-scale production (capital creation) establishment" [2].

According to the above, there is talk of creating a new strategic innovative environment that will be highly effective based on the existing conditions and scientific potential of Higher Education Institutions and research institutes.

It is also envisaged to ensure rapid socio-economic growth of the regions by increasing the innovative activity of small businesses.

In our opinion, this new strategy requires the creation of innovative micro-enterprises within existing institutions. Unfortunately, such innovative entrepreneurial micro-firms are still in the stage of formation in our country.

Global experience shows that the share of small innovative firms in the development of the market economy is very large, because micro-firms have many advantages. For example, quick adaptation to new conditions, a small number of employees, ease of financing, specific justification of risk, etc.

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Also, as N. Zufarova fairly assessed: "In the global environment, the advantage of universities in mutual competition is their high-quality personnel training, the importance of the results of scientific research, the number of talented students, academic independence, commercialization of scientific developments through state and private enterprises" [12.109].

Based on the above, the main basis for the development of innovative entrepreneurship is the activation of human scientific creativity. Without it, there can be no innovation in any field.

Innovative development According to the strategy: - "further development of human capital in the management of innovative activities through the development of creativity, innovative entrepreneurship and rationalization skills at all stages of education" [2].

Well, what is the situation in this matter in Uzbekistan? How is the process of human capital activation going?

If we look at the data, by 2023, the number of higher education institutions in Uzbekistan will exceed 200, of which about 70 are private. Also, significant positive changes are being made in the field of higher education in Uzbekistan in recent years. About 50 higher education institutions were granted financial and academic independence. The material and technical base of educational institutions is being improved, financing of scientific developments and social support are being strengthened, and the income of professors and teachers is also increasing. Separate state structures in the direction of innovation are being established, and new divisions are being opened in higher educational institutions.

In this process, the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers can be shown as an example to all higher educational institutions in Uzbekistan. In recent years, a

whole system of innovative infrastructure has been created at this institute: these are modern technoparks, technopolises, scientific-innovative clusters and laboratories, business incubators, and new modern departments, which are currently operating. A continuous ecosystem of "network-territory-scientific/higher education organization" has been formed at the institute. Today, the total scientific potential of the institute is 69 percent [15].

Despite this, if we evaluate the real state of the innovative society (according to the strategy), in the real sector of the economy, as well as in the higher education system, the level of commercialization of scientific and innovative developments, cooperation between science, education and industry remains low compared to the world's leading universities.

In this matter, we all know that the innovation environment in most of the higher education institutions is weak, we cannot deny it. The current situation is clear. More specifically: - despite the high salary in higher education, there are many pedagogues who are busy with additional work in order to improve their financial situation; - most of those engaged in innovation do not go beyond the performance of small business contracts; - in most cases, it has become a tradition for employees to transfer funds to the accounts of the higher education institution through an "artificial economic contract" in order to increase their rating points; - promoting the opening of innovative commercial units and their formation is too slow; - in some educational institutions, there are cases of non-support of the initiators in this matter; - despite the efforts of universities and institutes to raise their ratings, there are still many pedagogues who do not have scientific potential (low education); - from this year, in the matter of learning a foreign language, that is, the requirement of a special foreign language certificate to confirm the dissertation topics for independent researchers, disappointed many of the older pedagogues, and today they are left between two grasses; - the shares of foreign representatives as human capital for this university are very low, almost non-existent; - the lack of pedagogues teaching foreign languages, as well as Russian, has become chronic; - most higher education institutions have not yet established marketing centers that research strategies that provide priority in market competition, etc.

From this we understand that some people still do not understand that "innovative business activity is a real, honest source of income". Consequently, even those who do understand seem to be overwhelmed by all kinds of overloads of studies (more than one rate), community service, activities, all kinds of inspections, and still ongoing red tape. For example, with the introduction of an electronic journal in some institutes, in parallel, groups continue to run journals for each subject. This clearly shows that pedagogues are not using their time effectively.

Consequently, this current situation in higher education institutions has put many of our professors and teachers in a difficult situation. We think that these and similar problems that have accumulated today are an obstacle to turning the intellectual abilities of our scientific-pedagogical personnel into capital. Also, in addition to this, up to now, it can be observed in the trend of changes that the shortage of personnel has started in the state educational institutions, that is, it is being observed that modern young personnel with knowledge, skills and scientific potential are moving to private educational institutions. Consequently, a competitive struggle has begun and is about to escalate. We believe that this is a serious issue that is causing the leaders of higher education to think.

It can be seen that similar problems are hindering the activation of human capital in higher education institutions. Therefore, the need to understand this situation has already arrived. However, we have to look for solutions to these problems in different options.

So, what else can prevent our scientists from engaging in innovative entrepreneurship? However, since intellectual capital is the initiator of the innovative entrepreneurial process in various forms, we think that almost every professor and teacher has such an opportunity. Therefore, the challenge facing them today is to overcome the obstacles of their internal experiences and become enterprising human capital by using the available opportunities.

In this matter, it is appropriate to mention that this activity is fully supported by our state. In the strategy: - "increasing the share of innovative active organizations by improving the institutional mechanisms of state support for innovative activities; - stimulating the demand for innovations by providing a complex system of creating new types of products and innovative technologies from the idea to the final consumer" - forming a system of redirecting the created capital to "radically renewing" innovations [2];

- it is envisaged to encourage research and innovation activities of enterprises through tax incentives, which are carried out at the expense of their own funds [1.151].

Of course, we need to know how to use them. However, it is necessary to understand the opportunities created by the leadership of higher education institutions for the activation of human capital in the country for scientists and students. In the current situation, professors and teachers who are engaged in innovative entrepreneurship in higher education institutions of the Republic are a minority compared to the general mass. Because the interests are not coordinated.

Therefore, it is possible to determine the general situation - most of our pedagogic scientists have almost no sense of entrepreneurship, it seems that most of them have not realized it yet. We believe that such a situation indicates that the market motivation in the field of education and science is still insufficient, and that a real innovative business environment has not been formed. However, we should not forget that the recently formed competition between higher education institutions requires a serious approach to these problems. "Market conditions and competition make it necessary to care about the quality of the workforce at the level of any enterprise.

### CONCLUSIONS AND RECOMMENDATIONS

Based on the above considerations, we recommend the following to activate human capital in HEIs:

- It is necessary to fully take into account the existing scientific potential (potential) in HEIs. After all, these institutions are the core of innovative infrastructures, and this is a huge, leading source of opportunity for the harmonious development of individual regions of our Republic;
- In order to develop innovative entrepreneurship in higher education institutions, today's necessity requires the development of a market mechanism for effective use of the potential of existing scientists, that is, in the near future, it is necessary to create "Market motivation" that encourages pedagogical staff in higher education institutions to engage in innovative entrepreneurship;
- In terms of organization, it is necessary to speed up promotion work for scientists to open new private micro-firms and state-partnered enterprises, technological parks, and scientific centers within the framework of advanced departments according to the legal basis of the market economy in the field of science;
- According to the concept of innovation, it is necessary to support professors and teachers of HEIs in all aspects (place, financing, subsidy) in their activities with innovative entrepreneurship;
- It is necessary to introduce a new and appropriate incentive for innovators-entrepreneurs according to the results of innovative processes in HEIs;
- Based on the experience of developed Western countries, it is appropriate to establish a Fund aimed at stimulating human capital in our Republic.

In conclusion: "In order to take a few steps forward, towards renewal, it is necessary to take into account and use the invaluable experience our people have accumulated over the centuries, that is, the achievements in personnel training and in the scientific and educational sphere, methodological, structural, material, and finally, innovative development experience. necessary" [15].

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# ECONOMETRIC MODELING OF THE BUILDING MATERIALS INDUSTRY

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## ABSTRACT

*In this article, it is proved to determine the volume of construction production as the main influencing factor in modeling the production volume of the building materials industry. In this context, it is proposed to construct a model in the form of  $ARIMAx$  by inserting  $x$  into the standard  $ARIMA$  model. As a result, it has been found that different orders of  $ARIMAx(p, d, q, k)$  model provide better quality models than usual model orders.*

**Keywords:** *ARIMA, model, regression, factor,  $ARIMAx$ , Surkhandarya region, building materials industry, construction industry, Granger test, Dickey-Fuller test, ACF, PACF, autoregression, moving average, MAPE.*

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## INTRODUCTION

In econometric modeling, a special place is occupied by the study of the influence of individual factors on the volume of production. As a rule, the volume of production is modeled through capital and labor factors. In some cases, the influence of a single factor affecting the production process may be large, and this factor may include the influence of others on the result. Such cases have been studied by scientists, and modified models have been created by including this factor as an addition to the usual model.

### Literature review.

The improvement of the Cobb-Douglas production function by including technological factor, time factor, information factor and other factors has been extensively researched by many scholars. Yu.A.Golikov [3] proposed a modified model by adding an information factor to the Cobb-Douglas production model, while R.R. Gafitulina [2] assessed the need to include a technical development factor in the modeling of economic growth processes. Also, in the researches of A.A.Kasimov [6], due to the high share of transportation costs in the structure of production costs, based on the geographical location of some regions, it was proposed to include the transport factor in the trend equation, and on this basis, an exponentially modified model was developed in the form  $y = ae^{btcx}$ .

### Analysis.

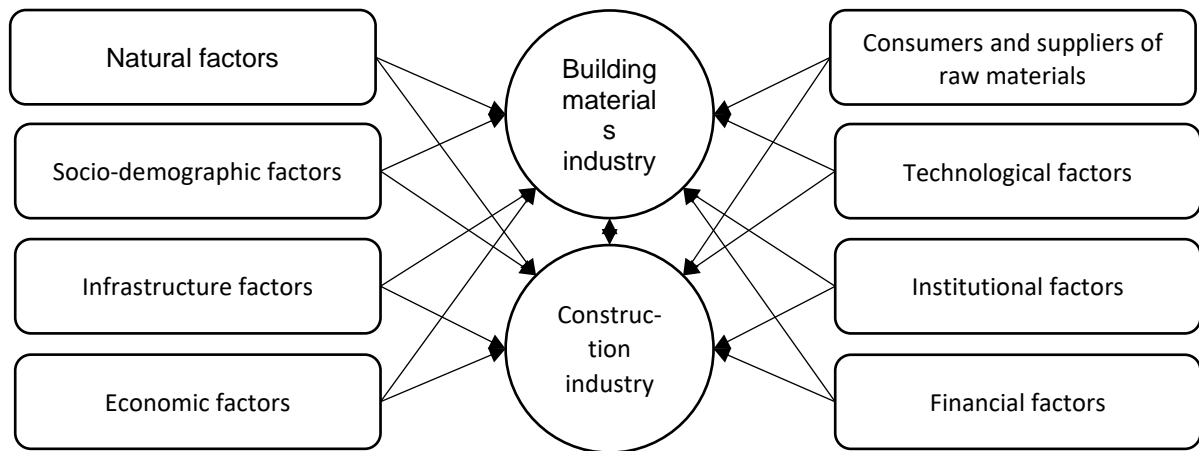
As a result of our research, we found out that various factors affect the production volume of the building materials industry, and at the same time, the influence of the production volume of the construction industry is extremely high in several respects:

Firstly, the building materials industry and the construction industry form a single construction complex [11]. In this respect, the production volumes of these two industries are related to each other.

Secondly, the building materials industry has the characteristics of the entire industry on the one hand, and on the other hand, it reflects the specific characteristics of the construction industry [8]. This feature is also reflected in influencing factors. If the construction complex is considered to consist of the construction industry and the building materials industry, the factors affecting the total



complex will have almost the same effect on both industries at the same time. For example, the mechanism of regulation through different types of levers aimed at the development of construction works, in turn, creates a demand for building materials. Such factors can be represented as in Figure 1.



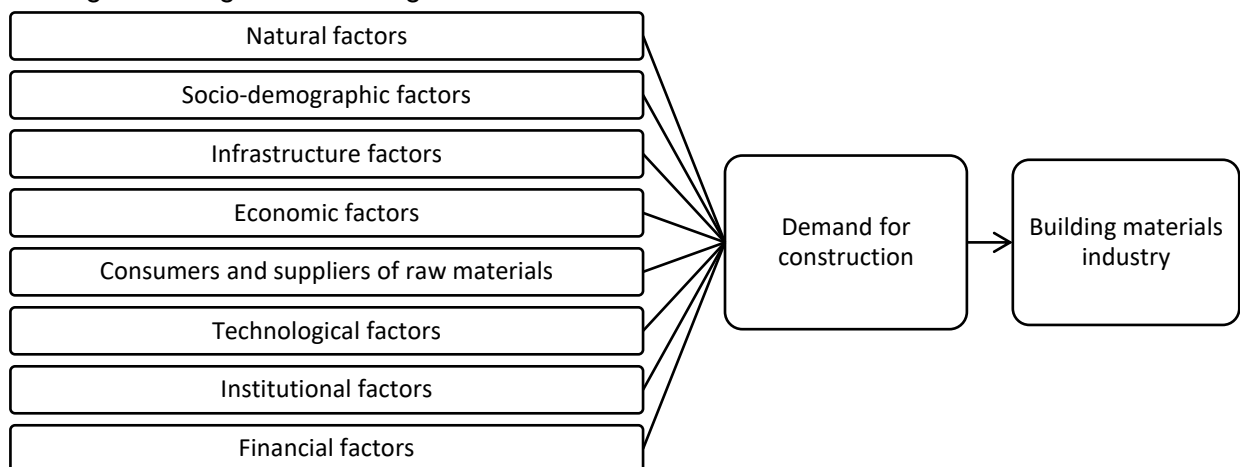
**Figure 1.** Factors influencing the building materials and construction industry.

Thirdly, the results of the activity of the building materials industry affect the results of the construction industry, and through it, the efficiency of other sectors of the national economy [10].

Fourthly, the building materials industry is considered a sector of the economy, which provides the construction complex with resources [1]. This means that the construction industry, which is part of the construction complex, is the main consumer - buyer for the building materials industry. The share of building materials in the volume of production of this industry is more than 60 percent [9]. This indicator may be even higher depending on the type of object being built.

Fifthly, the construction industry consumes 90 percent [7] of the products produced in the building materials industry. In other words, building materials serve to create a supply in the market, while the construction industry creates a demand.

Sixthly, the demand for building materials has a derivative (secondary) nature. The reason is that it does not appear directly, but is caused by the growth of construction volumes [8]. The production of building materials is closely related to the pace of development of the construction complex, and the demand for construction is the main factor in the development of the production of all types of building materials [10]. Therefore, it is appropriate to change the chain of influence of factors given in Figure 1 as in Figure 2.



**Figure 2.** Factors affecting the building materials industry.

Based on the above, in our opinion, it is necessary to consider the production indicator of the construction industry as a factor that has a special influence on the modeling of the indicators of the building materials industry. Due to the characteristics of the building materials industry, that is, the



sector is the main supplier of raw materials for the construction industry, the factors affecting both sectors are the same, and in terms of demand generation, all influencing factors can be considered to affect the building materials industry through the construction industry.

In order to further support our opinion, when the issue was approached on the example of Surkhandarya region, the following was determined:

Firstly, the correlation analysis between the production volume of the regional building materials industry and the production volume of the construction industry showed a very high correlation density:  $r = 0,99$ . It should also be noted that the value of 0.99 is the highest on the scale of the correlation coefficient. Experiments have also shown that the production volume of most basic types of building materials has a close correlation with the production volume of the construction industry.

Secondly, we evaluated the causal relationships between the building materials industry and the construction industry by Granger's causality test [4]. It is known that the Granger causality test determines that the change in the independent variable occurs before the change in the dependent variable and at the same time it makes a significant contribution to the future values of the dependent variable.

The results of the Granger's causality test are presented in Table 1.

Table 1

The results of the Granger's test.			
The null hypothesis	F value	p value	Other parameters
ConstuctionPV does not Granger cause Construction_materials_industry	6.20874	0.0177	$m = 2, n = 15, \alpha = 0.05$
ConstuctionPV does not Granger cause Non-metallic_mineral_products	14.1822	0.0087	$m = 2, n = 10, \alpha = 0.01$
ConstuctionPV does not Granger cause Wood	17.4615	0.0056	$m = 2, n = 10, \alpha = 0.01$
ConstuctionPV does not Granger cause Construction_mix	17.3253	0.0032	$m = 1, n = 11, \alpha = 0.05$
ConstuctionPV does not Granger cause Asbestos_cement_products	8.48273	0.0247	$m = 2, n = 10, \alpha = 0.05$
ConstuctionPV does not Granger cause Rubble	7.10870	0.0345	$m = 2, n = 10, \alpha = 0.05$
ConstuctionPV does not Granger cause Roof_tiles	7.46060	0.0316	$m = 2, n = 10, \alpha = 0.05$
ConstuctionPV does not Granger cause Gypsum	15.8767	0.0040	$m = 1, n = 11, \alpha = 0.01$
ConstuctionPV does not Granger Cause Brick_ceramic	14.2326	0.0664	$m = 3, n = 9, \alpha = 0.10$
ConstuctionPV does not Granger cause Sand	41.3398	0.0002	$m = 1, n = 11, \alpha = 0.01$
ConstuctionPV does not Granger Cause Gravel	10.7934	0.0153	$m = 2, n = 10, \alpha = 0.05$
ConstuctionPV does not Granger cause Cement_brick	7.47231	0.0257	$m = 1, n = 11, \alpha = 0.05$
ConstuctionPV does not Granger cause Reinforced_concrete_structures	49.2538	0.0005	$m = 2, n = 10, \alpha = 0.01$

According to Table 1, the volume of construction works of Surkhandarya region is a Granger cause of building materials industry and it's sub-sectors. The null hypothesis was not accepted for any building material production indicator.

Thus, the idea of taking into account the construction industry production volume factor in the modeling of the building materials industry was supported by experiments.

Based on the above, the model that reflects the impact of the volume of production of the

construction industry on the volume of production of the building materials industry, in general terms, is as follows:

$$y = f(x) \quad (1)$$

where  $x$  is the production volume of the construction industry.

And in cases where there is a trend:

$$y = f(t, x) \quad (2)$$

Also, by including this factor into autoregressive and moving average models, it can be written as:  $ARIMAX(p, d, q, k)$

### Results.

The analysis of the main types of factors affecting the building materials industry shows that several factors, including the price expectations of the consumer (construction industry) factor and the factor of modernization of techniques and technologies, lead to the preservation of the influence of the levels of the previous period on the next period. In addition, psychological, technological, institutional reasons create the effect of lag variables [12]. Therefore, it can be concluded that it is necessary to use autoregression models ( $ARIMA$ ) in the econometric modeling of the building materials industry, and at the same time, taking into account the effect of the main factor ( $x$ ), it is necessary to create a model in the form of  $ARIMA + x$ .

It is possible to include the factor  $x$  in a typical  $ARIMA$  model, where the dynamic series is affected by its previous period levels and the values of the independent variable:

$$\Delta^d y_t = a + \sum_{i=1}^p \varphi_i \Delta^d y_{t-i} + \varepsilon_t + \sum_{j=1}^q \theta_j \varepsilon_{t-j} + \sum_{g=0}^k \omega_g x_{t-g} \quad (3)$$

where  $\Delta$  is the difference operator.

(4) model can also be written as follows:

$$(1 - L)^d y_t = a + \left( \sum_{i=1}^p \varphi_i L^i (1 - L)^d y_t + \left( 1 + \sum_{j=1}^q \theta_j L^j \right) \varepsilon_t + \left( \sum_{g=0}^k \omega_g L^g \right) x_{t+1} \right) \quad (4)$$

Using the model (4), we modeled the production volume of building materials industry of Surkhandarya region:

First, we tested stationarity of time series using the augmented Dickey–Fuller test. As a result, it was found that the levels and 1-differences of the series are not stationary (Table 2).

Table 2

### Augmented Dickey-Fuller test results

Augmented Dickey-Fuller test for Building\_materials\_industry

testing down from 4 lags, criterion AIC

sample size 7

unit-root null hypothesis:  $a = 1$

test without constant

including 4 lags of  $(1-L)\text{Building\_materials\_industry}$

model:  $(1-L)y = (a-1)y(-1) + \dots + e$

estimated value of  $(a - 1)$ : 1.74426

test statistic:  $\tau_{nc}(1) = 6.82254$

asymptotic p-value 1

1st-order autocorrelation coeff. for  $e$ : -0.263

lagged differences:  $F(4, 2) = 8.841$  [0.1042]

test with constant

including 4 lags of (1-L)Building\_materials\_industry

model:  $(1-L)y = b_0 + (a-1)y(-1) + \dots + e$

estimated value of  $(a - 1)$ : 1.87815

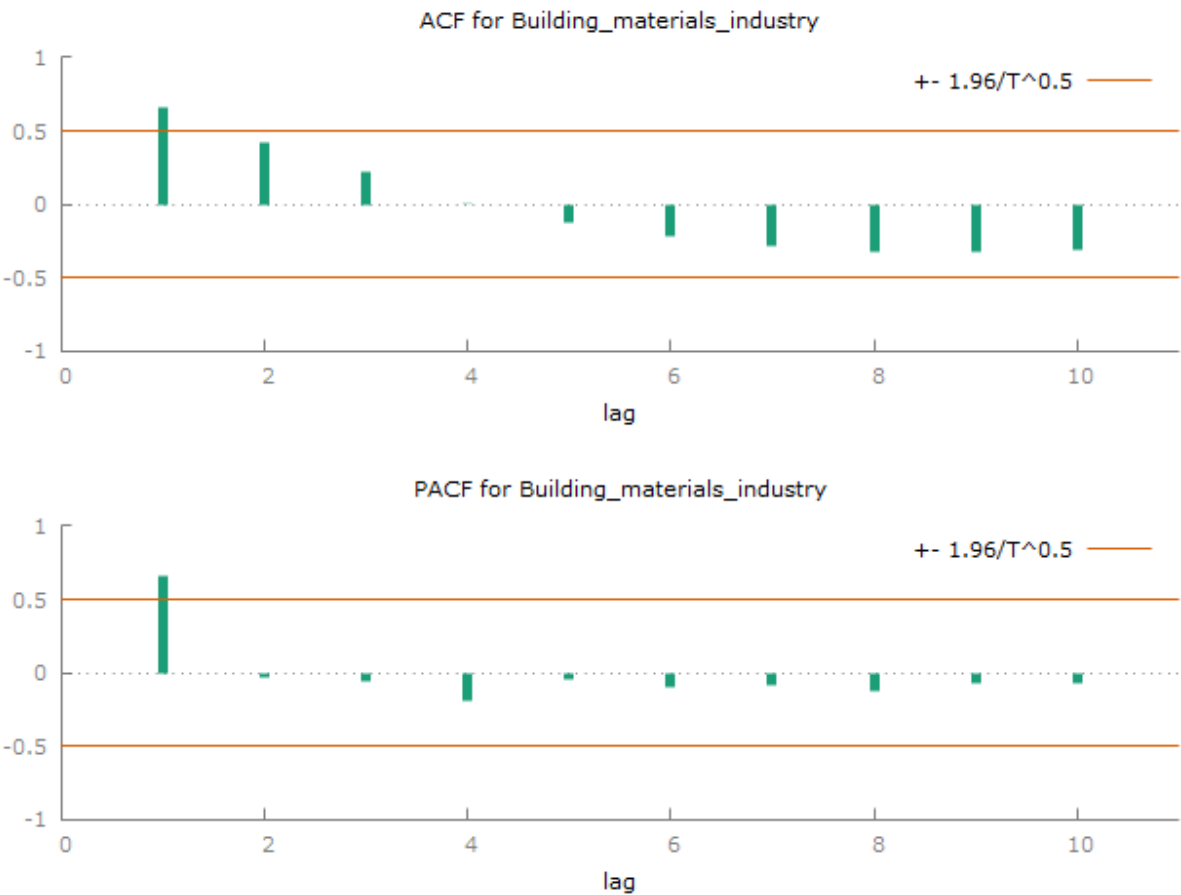
test statistic:  $\tau_c(1) = 6.49029$

asymptotic p-value 1

1st-order autocorrelation coeff. for  $e$ : -0.601

lagged differences:  $F(4, 1) = 9.038$  [0.2439]

Also, we tested the presence of autocorrelation in the time series of production volume of building materials industry of Surkhandarya region. The results can be seen from the correlogram in Figure 3.



**Figure 3.** Correlogram of the time series of production volume of building materials industry of Surkhandarya region.

It is known that the process is autoregressive if ACF decreases and PACF stops after  $p$  period [5]. This is exactly the case in Figure 3.

Thus, we tested several models in the form of  $ARIMAx(p, d, 0, k)$  in experiments. From the experiments, several advantages of the modified  $ARIMAx(p, d, q, k)$  on the example of production volume of building materials industry of Surkhandarya region were revealed (6).

Table 3

Mean absolute percentage error of $ARIMAx(p, d, 0, k)$						
No.	Model type	MAPE	Parameters	Model type	MAPE	Parameters
with constant						
1	$ARIMAx(1, 2, 0, 1)$	13,697	not significant	$ARIMA(1, 2, 0)$	14,494	not significant
2	$ARIMAx(2, 2, 0, 1)$	12,625	not significant	$ARIMA(2, 2, 0)$	14,203	not significant

3	$ARIMAx(3, 2, 0, 1)$	9,3846	not significant <sup>1</sup>	$ARIMA(3, 2, 0)$	14,497	not significant
4	$ARIMAx(4, 2, 0, 1)$	8,1226	not significant <sup>2</sup>	$ARIMA(4, 2, 0)$	14,114	not significant
5	$ARIMAx(5, 2, 0, 1)$	6,0999	not significant <sup>3</sup>	$ARIMA(5, 2, 0)$	$n < p$	n/a.
<b>without constant</b>						
1	$ARIMAx(1, 2, 0, 1)$	13,066	not significant	$ARIMA(1, 2, 0)$	13,284	not significant
2	<b><math>ARIMAx(2, 2, 0, 1)</math></b>	<b>12,302</b>	<b>significant<sup>4</sup></b>	$ARIMA(2, 2, 0)$	12,749	not significant
3	<b><math>ARIMAx(3, 2, 0, 1)</math></b>	<b>9,3943</b>	<b>significant</b>	$ARIMA(3, 2, 0)$	12,902	not significant
4	<b><math>ARIMAx(4, 2, 0, 1)</math></b>	<b>8,0282</b>	<b>significant</b>	$ARIMA(4, 2, 0)$	12,901	not significant
5	<b><math>ARIMAx(5, 2, 0, 1)</math></b>	<b>6,0517</b>	<b>significant<sup>5</sup></b>	$ARIMA(5, 2, 0)$	12,199	not significant

As the process according to Figure 2 is characteristic of autoregression, in Table 6 we tested the autoregression procedure in the interval  $1 \leq p \leq 5$ , comparing  $ARIMAx(p, d, q, k)$  and  $ARIMA(p, d, q)$ . That is why we took the order of the moving average as  $q = 0$ .

The comparison results showed that as we increased the autoregression order  $p$ , the mean absolute percentage error of the  $ARIMA(p, d, q)$  model took different values: around 14% in models with constant, around 13%-12% in models without constant. However, none of the model parameters were statistically significant.

Alternatively, in  $ARIMAx(p, d, q, k)$  models, we can see that as we increase the order of the autoregression model, the mean absolute percentage error value improves from 13.066 to 6.0517 percent. At the same time, all model (without constant) parameters in the interval  $2 \leq p \leq 5$  were statistically significant.

In addition, the  $ARIMA(5, 2, 0)$  model has a mean absolute percentage error of 12.199 percent, while the  $ARIMAx(5, 2, 0, 1)$  model has mean absolute percentage error of 6.0517 percent, and the difference between them was 6.1473 units. This means that by including the variable  $x$  into the ARIMA model, the mean absolute percentage error of the model is improved by a factor of 2.

The results of estimation of  $ARIMAx(4, 2, 0, 1)$  model are presented in Table 5.

Table 4

#### The results of estimation of $ARIMAx(4, 2, 0, 1)$ model

Model 1: ARMAX, using observations 2012-2021 (T = 10)					
Dependent variable: (1-L) <sup>2</sup> Building_materials_industry					
Standard errors based on Hessian					
	<i>Coefficient</i>	<i>Std. Error</i>	<i>z</i>	<i>p-value</i>	
phi_1	-1.10908	0.248089	-4.470	<0.0001	***
phi_2	-1.29254	0.307881	-4.198	<0.0001	***
phi_3	-1.08172	0.247653	-4.368	<0.0001	***
phi_4	-0.659105	0.273156	-2.413	0.0158	**
Constuction_industry	0.0964673	0.0134591	7.167	<0.0001	***
Mean dependent var	12.94129	S.D. dependent var		48.29091	
Mean of innovations	-2.020100	S.D. of innovations		21.94450	
R-squared	0.983140	Adjusted R-squared		0.969651	
Log-likelihood	-47.34523	Akaike criterion		106.6905	
Schwarz criterion	108.5060	Hannan-Quinn		104.6988	

<sup>1</sup> The constant is not significant.

<sup>2</sup> The constant is not significant.

<sup>3</sup> The constant is not significant.

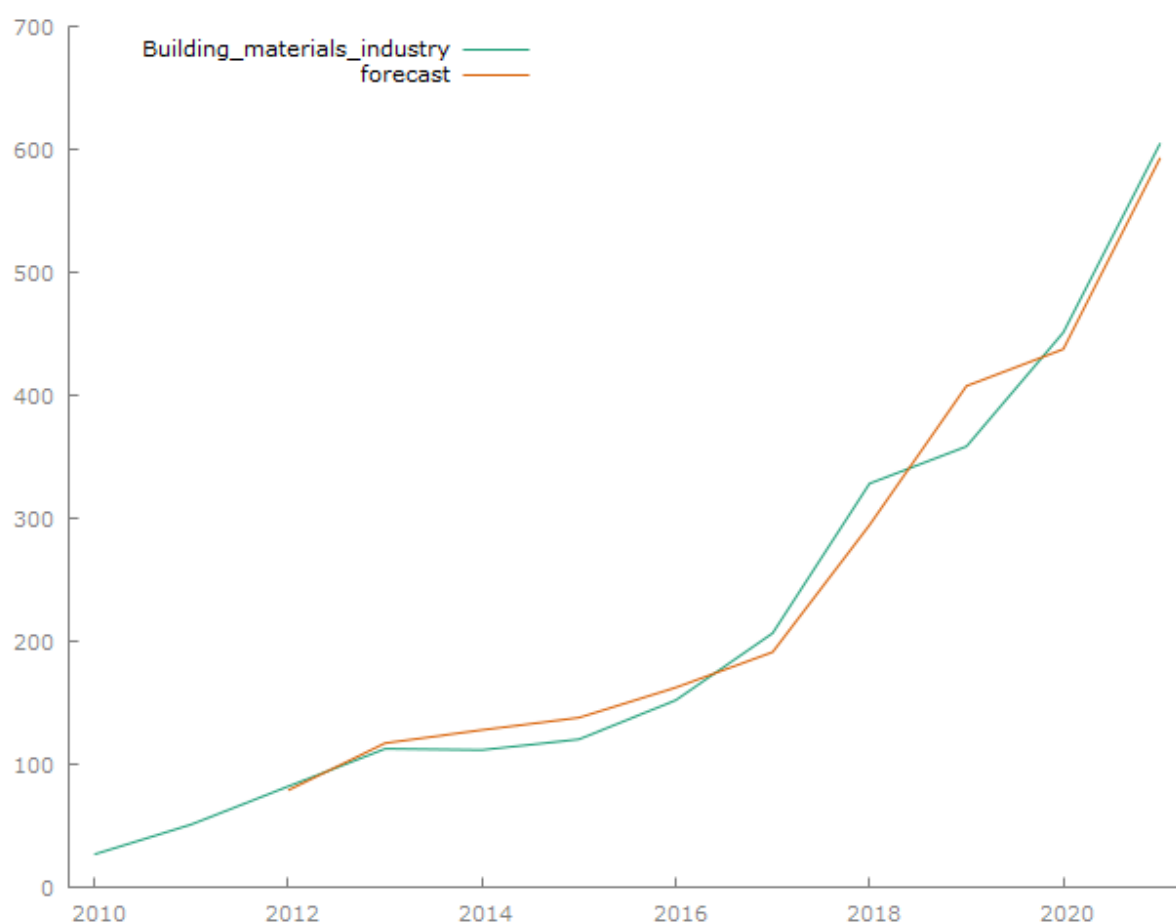
<sup>4</sup> Parameters are statistically significant at  $\alpha = 0,10$ .

<sup>5</sup> The residuals do not obey the normal distribution law.

AR	Real	Imaginary	Modulus	Frequency
Root 1	-0.9574	-0.6991	1.1855	-0.3996
Root 2	-0.9574	0.6991	1.1855	0.3996
Root 3	0.1368	-1.0300	1.0390	-0.2290
Root 4	0.1368	1.0300	1.0390	0.2290

Thus, the  $ARIMA + x$  model took the following form:

$$(1 - L)^2 y_t = -1,10908L(1 - L)^2 y_t - 1,29254L^2(1 - L)^2 y_t - 1,08172L^3(1 - L)^2 y_t - 0,659105L^4(1 - L)^2 + 0,0964673x_t \quad (5)$$



**Figure 4.** Actual and theoretical values of the production volume of building materials industry of Surkhandarya region.

### Conclusion.

Thus, in the example of Surkhandarya region, it is appropriate to include the influence of the construction industry production indicator on the volume of building materials production in the form of  $ARIMAx(p, d, q, k)$ . As a result, the mean absolute percentage error of the modified  $ARIMAx(p, d, q, k)$  model was found to be twice as good as the standard  $ARIMA(p, d, q)$ .

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# THEORETICAL FOUNDATIONS OF STRATEGIC DEVELOPMENT OF TOURISM IN THE REGIONS

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## ABSTRACT

The tourism development process provides an opportunity for destinations to showcase their cultural, industrial and other achievements. Tourism has a strong influence on the process of urbanization, in particular, it plays an important role in the formation of the image of cities and the improvement of the quality of life. In planning the development of tourism, it is important to reduce or completely avoid the negative impact of various factors that negatively affect the flow of tourists.

**Keywords:** Theoretical foundations, strategic development, tourism, regions, Uzbekistan

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## INTRODUCTION

A long-term plan for the development of tourism is called a tourism strategy. The word strategy is a Greek word meaning "commander of soldiers". A strategy aims to achieve certain goals. According to Markiewicz, strategy is a series of long-term actions and situations designed to implement the plan of the organization's chief executive. Razerford et al define strategy as a plan that integrates the organization's main goals, policies, and action sequences. According to Hucks and Mayloun, strategy is a response to external factors affecting the organization: opportunities, threats, internal opportunities and weaknesses. In their research, strategy is implemented as follows: mutual, logical decisions are made; long-term goals of the organization are determined, resource allocation and action plan are drawn up; the organization selects the fields in which it operates; includes ensuring the participation of all departments of the organization in the strategy.

In the studies of Pierce and Robinson, strategic management is defined as a plan for making and executing decisions and actions to achieve the company's goals. However, according to Grant, strategy is, simply put, the way a business responds to opportunities and obstacles.

### Theoretical background

Strategy has been used in the military since prehistoric times. In this, it was mainly manifested by the first leader as the art of managing various situations. Strategy consists of three main parts, that is, the existence of goals, the way of action, and the deployment of resources to achieve the set goals.<sup>1</sup>

Hatten et al describe tourism strategy as a way of appealing to a destination. They liken different ways of implementing a strategy to different paths to a destination. According to Fombrun, strategy includes the process of adapting to the environment in addition to setting goals, planning actions, and allocating resources. In his opinion, the business environment plays the most important role in the formation of economic results.

In general, the strategic development of the tourism sector can contribute significantly to the sustainable development of the country. For example, it has been found that the visit of one tourist

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<sup>1</sup> Kaplan, R. S., & Norton, D. P. (2005). Creating the office of strategy management. Boston, MA: Division of Research, Harvard Business School.

in host countries provides employment to 4-7 people. Today, more than 370 travel agents and tour operators operate in the republic, and more than 90% of them are private. Modern airports operate in the cities of our country, such as Tashkent, Samarkand, Bukhara, Urganch and Nukus. The rich history and ancient monuments of our country make it possible to attract tourists in cities such as Samarkand, Bukhara, Khiva, Termiz. At the same time, many decisions and decrees are being signed in the legislation to promote tourism infrastructure and tourist flow.

The number of tourists in our country is increasing year by year, for example, in 2017, it is planned to receive 2520 thousand tourists, 5 million in 2018, 6.2 million in 2019, and 7 million by 2023.

### **Main part**

Strategic planning is very important in the development of our country. In particular, the third direction 35 of the Presidential Decree No. PF-60 "Development Strategy of New Uzbekistan for 2022-2026" aims to increase the number of domestic tourists from 12 million and the number of incoming tourists to 9 million in the next five years. To achieve these goals, it is important to develop infrastructure and implement projects such as "Travel around Uzbekistan".

In the Strategy of Tourism Development in the Republic of Uzbekistan until 2030, the following obstacles to the development of the sector are highlighted:

- high prices for flights, insufficient risk coverage by local and foreign airlines;
- visa policy and registration system;
- weak development of transport, social, engineering infrastructure;
- lack of qualified personnel in the field, incompatibility of training programs with the requirements of the labor market;
- insufficient legal regulation of the sector (lack of standards, lack of tax incentives)
- bureaucratic obstacles;
- the absence of a multi-purpose PR strategy of the country, etc.

The following goals and objectives are defined in this strategy:

- Creating a comfortable tourist environment for everyone;
- increasing the competitiveness and quality of tourist products;
- strengthening and development of the social role of tourism, including development of medical recreation, children's and youth tourism;
- improvement of the management system and statistical calculation system in the field;
- stimulating economic growth and improving the quality of life of the population through the development of tourism;
- providing comprehensive security in the field of tourism and sustainable development of tourist services, etc.

When planning tourism activities, it is important to take into account roads, location of buildings, places of interest, location of historical sites and many other factors. In managing a large flow of tourists, it is important to take into account indicators such as location, street capacity, and service capacity. Ignoring this situation can be cited as the reason why more than 20 young people died in South Korea after the pandemic.

Today, various public holidays can be cited as an important means of attraction to tourist destinations. Holidays give people an opportunity to show their national customs and culture and attract people with various interesting shows. Therefore, increasing seasonal holidays in the development of tourism in our republic can give an important strategic advantage to the development of tourism.

According to Christie and Crompton, the tourism sector is one of the important means of development that creates economic growth and is one of the sectors capable of diversifying the economy, reducing poverty and increasing the volume of services and production. According to Farazmand, the tourism sector is a means of synergy for the nation, and it implies local, regional and global dependence. In general, the tourism sector is of particular importance in global development.

Strategic development of this sector provides long-term income for any country.

Strategic planning, according to Inskip, is a process based on existing feedback, in which the main aspect is to identify existing shortcomings in time and take them into account for future periods. The term strategy in economics was first defined by Chandler in 1962. According to him, strategy is the process of clarifying long-term goals in an enterprise, in which certain actions and resources are allocated to achieve these goals. Chandler emphasized that strategy primarily serves to determine the company's long-term goals.

A famous American economist, Michael Porter, defines strategy as a means of protection against competitive forces and a means for companies to position themselves in markets. In Porter's opinion, the strategy allows the company to properly assess its capabilities, refrain from areas with strong competition, and operate in industries at the level of its capabilities. But the strategy should not only evaluate the current capabilities of the enterprise, but also take into account the formation and control of the resource reserve in the future. Considering Chandler and Porter's definition of strategy, Minsberg gives five different definitions of strategy. According to him, strategy can be defined as a plan, stratagem, position and vision. As a plan, strategy means a series of premeditated targeted actions of an enterprise. From the point of view of deception, the strategy is seen as a means of misleading and sending a false signal to competitors. As a position, the strategy is defined as finding its place in the business environment of the enterprise, and finally, according to the approach of looking into the future, the strategy reflects the future change in the attitude of all market participants towards the enterprise.

As can be seen from the above, a general definition of strategy has not yet been developed. According to Hucks and Maslouf, the reason why there is no single definition of strategy is that it is a multifaceted concept and covers many aspects of the company's activities. Nevertheless, many researchers recognize that strategy is a sequence of actions and decisions that serve the balanced development of the enterprise.

Johnson and Scholes define strategy as an enterprise's long-term plan for allocating resources and adapting to changes in the market and business environment. According to them, strategy helps the company to achieve a competitive advantage and also ensures coordination within the company's organizations. Pearce and Robinson also define strategy as the long-term course of action of an enterprise or organization. According to them, the strategy consists of scenarios that reflect the long-term results of the company's current actions.

Strategy helps businesses implement change. Businesses need a strategy to respond to the constant changes in the business environment. The strategy helps clarify the response of enterprises to changes in the environment and allows to direct the enterprise's forces and resources. Strategy development helps managers to define the main tasks of the organization. At the same time, the strategy helps the organization to gain a competitive advantage in the market. In this way, the organization will be able to surpass its competitors and successfully fight against them. Porter also supports this approach and believes that the goal of strategy is to gain competitive advantage over competitors. In addition, strategy motivates enterprises to perform better and serves to improve communication and coordination within enterprises.

Many researchers believe that the effectiveness of strategic planning is the most important aspect when defining strategic planning. In recent decades, strategic planning has been widely used in tourism and other service industries to forecast the future. The fast-changing, complex, competitive business environment has made long-term planning a necessity for enterprise management. Despite the widespread use of strategic planning, a complete definition of this term has not yet been developed. According to Armstrong, strategic planning is a process of determining the long-term goals of the enterprise and a system of monitoring the implementation of plans. According to Origan and Gobadian, strategic planning is the most effective and efficient way to increase the company's power over its competitors. Strategic planning usually focuses on planning aspects of the organization that need to change. Taking into account the above, Armandi defines

strategic planning as a multifaceted planning process that includes the analysis of the internal and external environment of an enterprise or organization, an action plan based on its resources and opportunities of the business environment, reduction of shortcomings and mitigation of external risks.

Strategic planning itself consists of several planning processes, all of which serve to improve the company's operations. Observing several processes that occur between the organization and the environment, Ansof considers strategic planning to be the process of searching for the most appropriate market for a company's product or technology.

He based his theoretical views on the hypothesis that when a product or technology moves from a familiar environment to an unfamiliar environment, its real utility for society becomes clear. According to Griffin, strategic planning is a process of resource allocation, priorities, and actions to achieve goals.

Strategic planning, according to Bryson, is a means of long-term and short-term development of resources in the organization in accordance with the goals. Strategic planning by Peter Drucker is a systematic process of business decision-making and hypotheses based on scientific prediction of the future, and a feedback system is widely used in making relevant decisions in its implementation.

Explaining the concept of strategic planning, Evans describes strategic planning as a direct function of top management. According to him, the adoption of the strategic plan implies that the current plans of the lower managers are adapted to the strategic plan. In general, in his opinion, the following questions must be asked in strategic planning:

- What is the purpose of existence of the enterprise?
- What are the main goals of the organization?
- What resources do we need for a successful future?
- Who will be our customers?

It is by asking and getting answers to these questions that strategic planning can be done.

According to Matt Evans, strategic planning provides management with a better understanding of the current period and thus a more reliable forecast for the future. In a rapidly changing world, strategic thinking for management is becoming a necessary tool like water and air.

Strategic planning usually forces people to think about the future. In fact, this process is very important and ensures the constant correction of the short-term thinking of the enterprise. In other words, in strategic planning, the company's long-term survival and development processes are considered. In practice, many companies that use strategic planning develop faster than companies that make short-term plans. Therefore, one of the important aspects of strategic planning is that it provides an opportunity to optimize long-term operations. In addition, during the execution of the long-term plan, communication between the departments of the enterprise usually improves.

The effectiveness of enterprises is directly related to the fulfillment of goals and results, and is usually measured by the level of achievement of a goal. The results and effectiveness of the enterprise are manifested through its organizational activities. Based on this, the effectiveness of strategic planning is related to the level of achievement of predetermined goals, better performance, or improvement of the organizational performance of the organization based on the strategic planning process. According to Barney, a special definition should be developed for the concept of organizational activity, and the following approaches can be used to measure it:

- Measurement of the enterprise's activity by stakeholders;
- survival of the enterprise in competition as a measure of its activity;
- simple accounting measures of activity;
- adjusted accounting measures of activity.

According to Drucker, the following measures of activity are the most important for the manager: market position, innovative activity, productivity, liquidity and cash flow, profitability.

Digman, in his research, provides several useful approaches that are considered useful for

strategic managers. These approaches include performance management, value-based management, benchmarking, customer service management, and other useful approaches. Although there are many different approaches and theories in measuring enterprise performance, most studies show that there are limits to the applicability of each approach, so it is recommended to use one or more of the many approaches in measuring enterprise performance.

Four major theories of planning are highlighted in the literature. These include theories of philosophical synthesis, rationalism, organizational development, and empiricism (Adams, 1991). Below are definitions of each:

1. The theory of philosophical synthesis includes information about the broad scope of planning, that is, the social, economic, ethical and environmental relationship of the enterprise and organization.
2. According to the theory of rationalism, relations between people are a means of implementing plans. Rational planning involves setting goals, planning, executing the plan, and analyzing results, with sequential and traceable periods.
3. The theory of organizational development focuses mainly on the implementation of changes in the organization. Organizational development approach includes evaluation of people's response to innovation, management change, employee job satisfaction, decision-making processes, and the overall state of the organization.
4. The theory of empiricism greatly appreciates the importance of systematic research in planning and recommends making decisions only through it. This approach ignores social change and favors a more positivist approach to planning.

Another important theory in explaining the link between strategic planning and the company's performance is the resource-based theory of the company. This theory combines organizational economics and strategic management (Barney, 1991).

According to this theory, the competitive advantage of the enterprise is manifested in the difference in the production capacity of other organizations. Financial, natural resources, technology and economies of scale, the traditional sources of competitive advantage, can be used to create value. But in this approach it is assumed that the use of resources will be very easy and cheap. This theory, according to some critics, is based on a false hypothesis, that is, the strategic possession of resources, because having resources does not lead to competitive advantage without effective management. (Sanchez, 2008).

Criticizing this approach, Kraienberg et al state that:

"In the resource-based approach, management plays very little role, and in fact theories must take into account the influence of management. At the same time, the use of this approach is suitable mainly for small firms, in large enterprises there are fewer problems with the provision of resources. In addition, a firm's valuable and non-existent resources do not always provide a long-term competitive advantage. The resource-based approach completely ignores the importance of managers' assessment of the situation and various strategic decisions.

Research by Robert and Peter examined strategic planning and enterprise performance with a focus on strategic stages. During the research, the connection between strategic planning and the company's activity was investigated using correlation analysis. It is determined that these strategic stages have a positive effect on the general goals of the organization, study of the business environment, identification of strategic problems of the enterprise, strategic decision-making, evaluation and control systems of the enterprise.

Ajagbe et al researched the link between marketing operations effectiveness and strategic planning. In this case, the data collected through the questionnaire was studied by means of dispersion and correlation analysis methods. The results of this study proved that strategic planning has a high impact on marketing effectiveness. At the end of the article, the researchers say that for any private or public enterprise to succeed in the current business environment, the top management



should engage in strategic planning in a continuous process and thereby be able to prepare well against future demand fluctuations.

### Discussions

Empirical studies of strategic planning of private enterprises and organizations were carried out by Gafar on the example of Sudan. The research examines four variables of strategic planning, namely, the enterprise's main goal, goal achievement, internal and external analysis, and control and evaluation systems. Here too, data was collected through a questionnaire and the research hypothesis was tested through Spearman's rank correlation. The results of the study confirmed that private enterprises in Sudan are indeed strongly linked to the above four variables.

According to Kaplan and Norton, in order for an organization to achieve positive results through effective planning, it must:

1. The strategic plan should be based on the main goal of the enterprise, its strengths and weaknesses, and the competitive environment;
2. Divide strategic plans into operational plans and connect them with enterprise activity measurement metrics;
3. Implementation of strategic plans and control of their effectiveness;
4. Verification of the strategic plan by cost analysis, profitability and correlation assessment of strategy and enterprise activity

### Conclusion

If the above is fulfilled, it can be said that the overall efficiency of the enterprise or organization will be high.

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## DEVELOPMENT ANALYSIS OF FRUIT AND VEGETABLE CLUSTERS IN UZBEKISTAN

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### ABSTRACT

The article explores the benefits of cluster approaches in agricultural sectors. Foreign experiences on the creation and development of fruit and vegetable clusters are analyzed.

**Key words:** competitiveness, manufacturers, consumers, market, cluster, agrarian sector, agriculture, products, competition, region.

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### INTRODUCTION

Currently, in the world practice, one of the priority directions is to analyze the processes of growing fruit and vegetable products using statistical methods, econometric evaluation of the factors influencing it, and development of forecasts. Application of advanced technologies of product cultivation, introduction of modern methods of storage and processing of products serves to prevent shortage of food products along with sustainable development of the fruit and vegetable industry.

The structural and structural changes in the field of agriculture implemented in Uzbekistan in recent years have a significant impact on the development of the national economy, the solution to the problems of providing the population with fruit and vegetable products and exporting them to the world market, and strengthening social stability. Decree No. PF-60 of the President of the Republic of Uzbekistan dated January 28, 2022 "On the development strategy of the new Uzbekistan for 2022-2026" [5], No. PQ-225 dated April 4, 2022 "To increase the efficiency of the export of fruit and vegetable products to foreign markets" on additional measures" [6], on December 15, 2021 No. 52 "On measures to support the fruit and vegetable industry by the state, further development of the cluster and cooperation system in the network" [7] and this serves to a certain extent the implementation of tasks defined in other regulatory legal documents related to the activity.

#### **Analysis of the literature on the subject**

First of all, we will dwell on some theoretical, methodological and practical approaches to the development and improvement of the efficiency of agriculture based on the innovative cluster approach. One of the most important issues in the development of the modern economy is the problem of creating clusters. The development of clusters occurs in Western Europe, the United States and England in the middle of the 20th century. The cluster approach became the basis of the economies of countries such as Finland, South Korea and Brazil in the 1990s.

In economic sciences, the term "cluster" is also used together with the term "clustering". Clustering (cluster analysis) means dividing a set of objects into groups called clusters. Here, it is assumed that each group contains "similar" objects, and that the objects of different groups are as different as possible. According to E.M. Tereshin, V.M. Volodinlar, who studied the principles of cluster formation in the market economy [4], depending on the structure, size and type of activity, three main principles of cluster formation are widespread, they are: common interests of potential participants, concentration (regular contacts identification of convenient places for) and interactions that ensure the connection of participants.

According to Michael Porter, a leading specialist in the study of economic competitiveness, who introduced the term "cluster" (chain, connection) into the science [1]: "A cluster is a group of geographically related companies and related organizations operating in a certain industry, it is characterized by common activities and mutually complementary characteristics" According to the classification of the economist A.S. Khukhrin[10], a cluster is a geographically concentrated network - a system of various networks of market subjects that have unique competitive advantages based on their location, apply scientific achievements, innovative technologies, and complement each other.

In the studies of the economist Sh. Mustafakulov[2]: clustering took a mass form in the last 25 years of the 20th century. Since then, it is noted that the interest of not only state managers, but also those engaged in research and development in this field has increased.

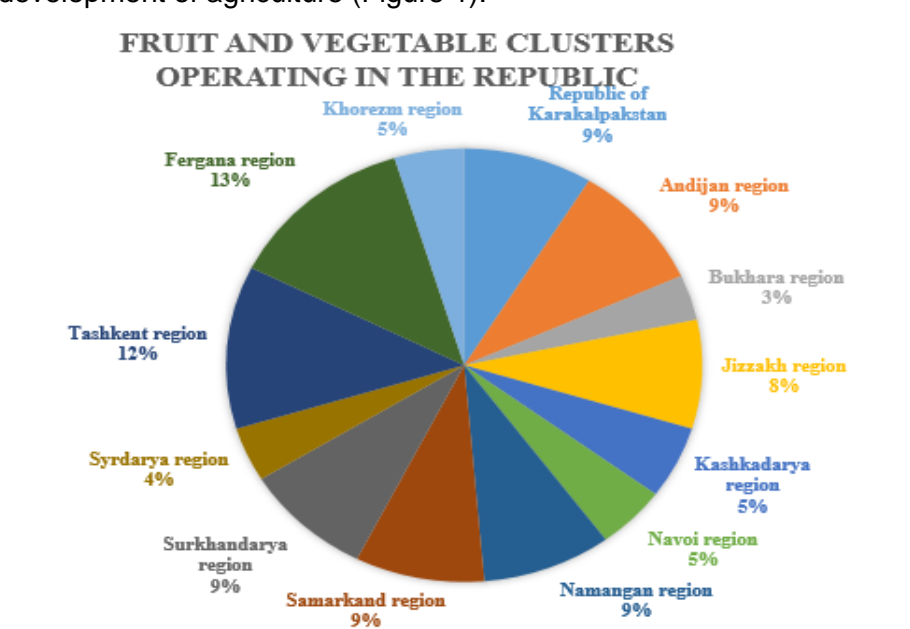
Skvortsov E. In his scientific work on the concept of agro-industrial cluster, he distinguishes three main criteria [3]. First, the cluster, especially in its stable state of development, is a system, or rather a closed system. The more integrated this system is, the more effective it is, the higher the synergistic effect of its application. It is possible and desirable to strengthen these interactions in practically any agricultural area.

Secondly, such structures should be called clusters, which should be based on innovative technologies, multi-level technological interactions, and should not consist of traditional interaction based on the division of labor.

Thirdly, a cluster can be considered only a self-managing and organizationally integrated structure controlled by small resonance effects. The behavior of subjects in clusters is determined not by the administrative apparatus of cluster management, but by their economic interests.

Clusters are designed to solve these problems. Joining clusters creates convenience and benefits both for the cluster entities and for the regional and national economy.

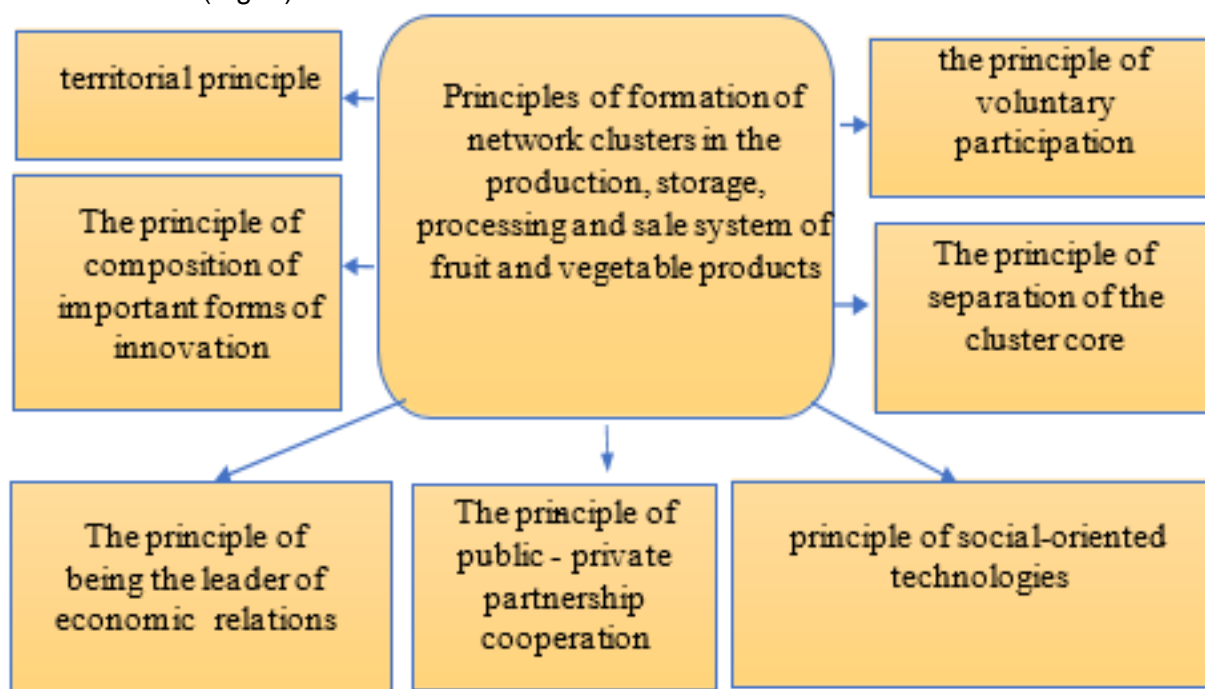
**Analysis and results** In the current period, Uzbekistan has also adopted a cluster approach to the economic development of agriculture (Figure 1).



**Figure 1. The number of fruit and vegetable clusters operating in the Republic of Uzbekistan[8]**

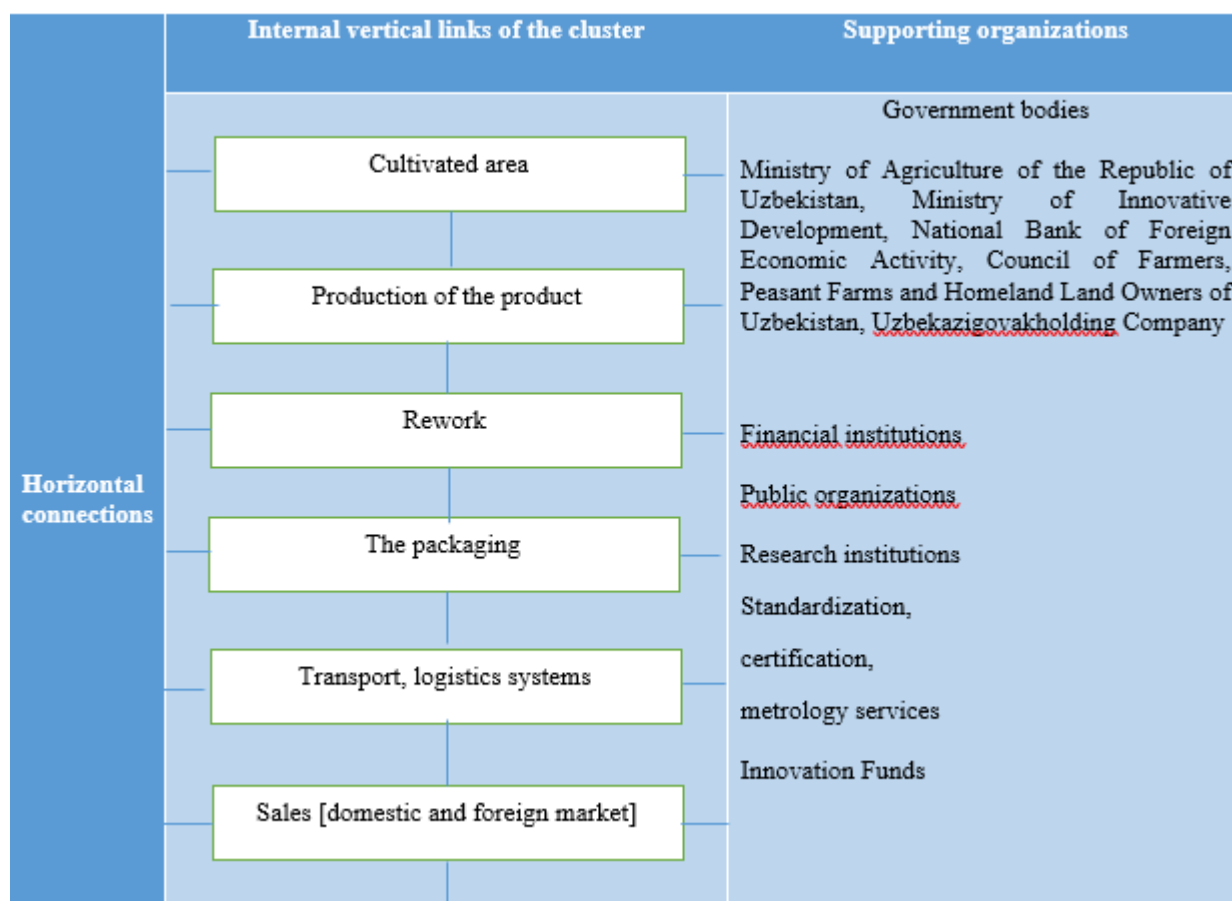
Therefore, the agro-industry network cluster consists of relatively complex interactions of enterprises of the same network integrated into a single technological chain, and the result of the efforts of all participants is the final product, which - based on scientific and practical achievements,

application of high technologies - from product production to customers, covers the processes up to delivery, taking into account the economic interests of producers, storage, processors, service providers, the state, financial systems and enterprises of agro-industry. In the conditions of the integration of our country into the world market and the globalization of the economy, the main task of the agro-industrial complex of any country is the reliable supply of food and agricultural raw materials of its products. For this purpose, it is envisaged to ensure unified management, planning and financing, proportional and balanced development of the agro-industrial complex, significant strengthening of its material and technical base, and improvement of inter-sectoral economic relations. The principles of the formation of network clusters in the system of production, storage, processing and sale of fruit and vegetable products were developed by the author based on the research below (Fig. 2).



**Figure 2. Principles of forming network clusters in the system of production, storage, processing and sale of fruit and vegetable products [11].**

The fruit-vegetable cluster is a geographically concentrated network of market entities that complement each other (agricultural enterprises, farmers, farmers and landowners, processing enterprises, scientific research and educational institutions, enterprises, banks, state authorities etc.), it focuses its activities on the production, processing and sale of food and other products, solving the issues of socio-economic development of rural areas, environmental protection, local issues of global problems, and has unique competitive advantages due to its location forms a system of various branches of market subjects that will be, that use scientific achievements, innovative technologies, and complement each other. The internal economic vertical and horizontal interactions of the fruit-vegetable cluster were developed by the author on the basis of research below (Fig. 3).



**Figure 3. Internal economic vertical and horizontal interactions of fruit and vegetable cluster**

The fruit-vegetable cluster is a geographically concentrated network of market entities that complement each other (agricultural enterprises, farmers, farmers and landowners, processing enterprises, scientific research and educational institutions, enterprises, banks, state authorities etc.), it focuses its activities on the production, processing and sale of food and other products, solving the issues of socio-economic development of rural areas, environmental protection, local issues of global problems, and has unique competitive advantages due to its location forming a system of various branches of market entities that use scientific achievements, innovative technologies, and complement each other (pictures 1-2). To study the experiences of developed foreign countries and the regulatory framework[5-7] adopted for the development of fruit and vegetable industries in our republic, fruit and vegetable cluster: diversification of agriculture, varieties of fruit and vegetable crops suitable for natural and climatic conditions of the regions, fertile and exportable placement, introduction of new technologies in the processes of cultivation, storage, processing and sale of consumer and competitive products for export, creation of new jobs, ensuring the financial interests of participants in the process of fruit and vegetable cultivation and processing shows the feasibility of forming the processes as a fully inclusive system. The cluster includes the following functions:

in-depth specialization in the cultivation, storage, processing and sale of fruit and vegetable products;

introduction of new innovative technologies in the cultivation, reception, cleaning, sorting, drying and processing of fruit and vegetable products;

study of advanced foreign experiences in growing fruits and vegetables, their wide use in regional and territorial conditions, attracting foreign experts to the field of fruit and vegetables;

cultivation of export-oriented agricultural products, assimilation and development of their

selection and seed production in cluster regions, establishing cooperation with scientific research institutions;

formation of a system that fully covers the process of planting, growing, storing, processing and selling of fruitful fruit, grape and vegetable crops, as well as introducing modern innovative, resource-saving technologies into the processes of growing fruit and vegetables;

creation of new skilled jobs;

The forecast parameters of investment projects implemented by the fruit and vegetable cluster can be formed from the following investment projects;

improvement and reconstruction of existing orchards and vineyards;

establishment of modern greenhouse complexes;

creation of new intensive horticulture and viticulture farms;

### **Conclusions and recommendations**

The organization and development of clusters in the regional areas of Uzbekistan in the adoption of modern management decisions is considered the optimal and innovative form of agricultural production organization. In forming a fruit and vegetable cluster and scientifically justifying its composition, it will not be enough to be limited by the traditional cultivated area, average productivity, gross yield, profitability and economic indicators. Here, providing the domestic and foreign market with competitive, high-quality and affordable wet and processed products, in addition to social and environmental benefits, increasing the number of qualified jobs, increasing the educational and cultural level of the population, ensuring the increase in the period of working capacity, reducing the number of unemployed, it will be necessary to take into account such processes as the preservation of natural resources.

1. In our republic, fruit and vegetable clusters are formed within the framework of single and interdependent groups that independently carry out the process from production to sale, based on guaranteed contracts, on the principle of "growing seeds and seedlings - preparation - storage - processing - transportation - delivery to the market." In this process, production of fruit and vegetable products is organized in the cluster method according to the chain of additional values at the expense of personal and involved financial resources of the cluster participants.

2. The use of economic-mathematical models and methods in the processes of determining the optimal parameters of the processes of "production"- "processing"- "sale" of agricultural clusters is highly effective. It is necessary to take into account the stochastic nature of the reproduction processes of the agrarian sector, as well as the changeable nature, economic and social conditions.

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# DEVELOPMENT TRENDS OF THE MARKET OF HIGHER EDUCATION SERVICES IN UZBEKISTAN AND DIRECTIONS FOR IMPROVING THE MANAGEMENT PRACTICES OF HIGHER EDUCATION INSTITUTIONS

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## ABSTRACT

The article analyzes the development trends of the market of higher education services in Uzbekistan and identifies the specific features of the management of higher education institutions. In particular, scientific proposals and practical recommendations on improving the management of local higher education institutions have been developed.

**Key words:** education, higher education, higher education institutions, foreign higher education institutions, higher education coverage level, management of higher education institutions.

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## INTRODUCTION

In the context of the globalization of the world economy, management models based on science and innovation began to develop as a result of the transformation of the classical methods of organizing the activities of higher education institutions and their management processes. In this case, the global development of the higher education services market, together with the acceleration of processes such as labor migration between countries, brain drain, and the deepening of the integration of universities into international rating indicators have led to the transformation of the practice of managing the activities of higher education institutions.

### **Relevance of the research topic.**

In Uzbekistan, priority is being given to the fundamental reform of the higher education system, including reforms aimed at improving the activities of higher education institutions. In the Development Strategy of New Uzbekistan for 2022-2026, the goal of "gradual introduction of the concept of "University 3.0", which provides for the interdependence of the activities of commercialization of the results of education, science, innovation and scientific research in higher educational institutions, is defined as a measure that is being implemented in this regard in the following years. - indicates that the activities will be continued consistently.<sup>1</sup>

**The purpose of the study** is to develop a scientific proposal and practical recommendations aimed at improving the practice of management of higher education institutions based on the analysis of the development trends of the market of higher education services in Uzbekistan.

**Methods.** Systematic analysis, typology and logic, induction and deduction, analysis and synthesis, comparative and selective research, statistical observation, monographic analysis and grouping were used in the research.

### **Analysis of the relevant literature.**

G.N. from Uzbekistan Akhunova, Sh.Sh. Zakhidova, N.R. Rakhmanov, Kh.Kh. Rejapov, A.O.

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<sup>1</sup> Decree of the President of the Republic of Uzbekistan "On the Development Strategy of New Uzbekistan for 2022-2026" No. PF-60, 28.01.2022. <https://lex.uz/docs/5841063>

Ergashev, A.Kh. Eshboev, N.A. Economists such as Kasimova<sup>2</sup> carried out scientific studies aimed at managing the activities of higher education institutions, improving the quality of higher education services, improving the economic mechanism of higher education institutions, and strengthening the interaction between higher education services and the labor market. Also, the theoretical and practical aspects dedicated to the development of the management of higher educational institutions of the republic have not been systematized and comprehensively researched as a necessary research object.

### Main results.

In recent years, large-scale reforms have been implemented in our country to increase the level of coverage of the population with higher education services, and to improve the quality indicators of the educational services provided to the population. In particular, our President Sh.M. Mirziyoev has defined the task of "developing public-private partnership in the field of higher education, increasing the level of coverage with higher education from 50 percent based on the organization of activities of state and non-state higher education institutions in the regions, and creating a healthy competitive environment in the field".<sup>3</sup> indicates that the follower will continue in the following years.

**Tabel 1.**

**Number of higher education institutions in Uzbekistan, in units <sup>4</sup>**

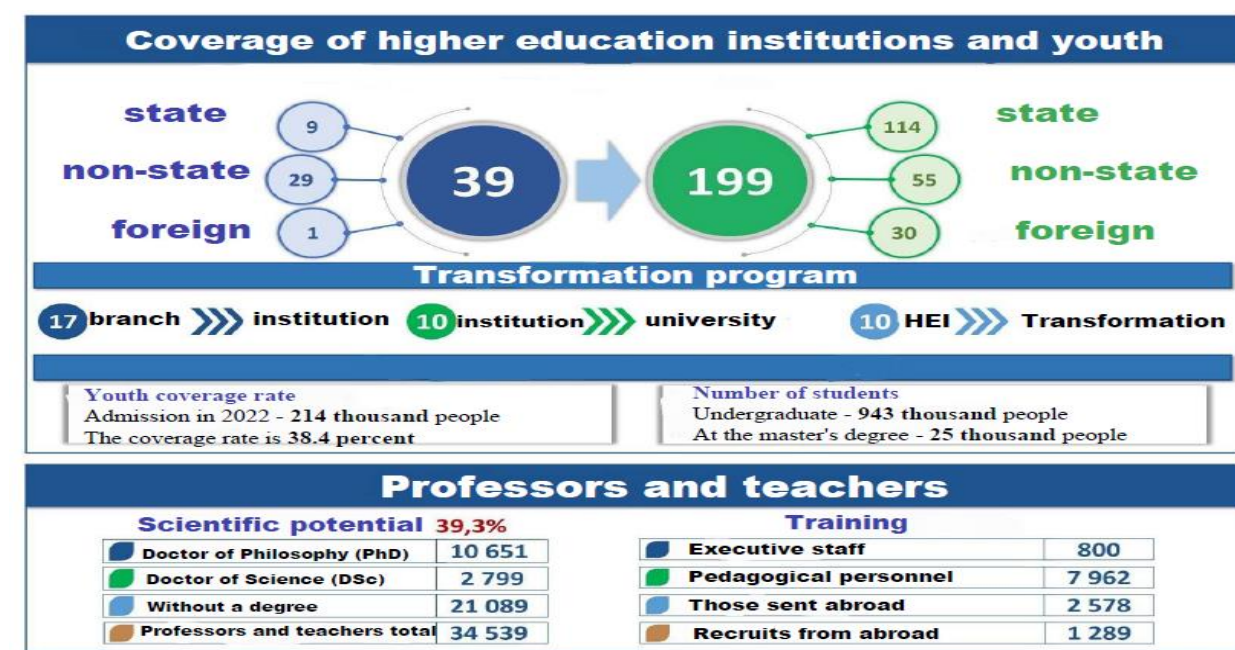
	School year					
	2000/2001	2005/2006	2010/2011	2015/2016	2020/2021	2021/2022
Institution of higher education	61	63	65	69	127	154
Including						

In 2022, their number reached 25, and the number of local higher education institutions increased by 2.1 times, correspondingly from 61 to 129 (see Table 1).

<sup>2</sup> Akhunova G.N. Marketing activity in the market of educational services and its improvement: dissertation written for the degree of PhD - T., 2004. - B. 45.; Zakhidova Sh.Sh. Improving the effectiveness of the mechanism of implementation of the market of higher education services (in the case of materials of Uzbekistan). i.f.n. ... diss. abstract. - Tashkent, 2012. - 23 p.; Rakhmanov N.R. Improving the quality of personnel training in the higher education system based on regional socio-economic development. i.f.d. (DSc) thesis abstract - Tashkent - 2019. 42 p.; Rejapov Kh.Kh. Improving the relationship between higher education services and the labor market. i.f.f.d. (PhD) ... diss. Abstract. - Tashkent - 2020. 26 p.; Ergashev A.O. Improving the foundations of economic management of the educational system. (on the example of the secondary - special, vocational system of the Republic of Uzbekistan): - i.f.n...dis. Characteristic. - Tashkent: TDTU, 2006. - 24 p.; Eshboev A.Kh. The impact of the education system on the development of the national economy during the transition to market relations. i.f.n. science narrow abstract of the diss. - Tashkent., 2008. - B.8.; Kasymova N.A. Covid-19 i novyy etap razvitiya vysshego obrazovaniya. Prospects for the development of higher education. Scientific and methodical magazine of higher education experts of the Republic of Uzbekistan. No. 8. 2020. p. 15-24

<sup>3</sup> Decree No. PF-5847 of the President of the Republic of Uzbekistan "On approval of the concept of development of the higher education system of the Republic of Uzbekistan until 2030", 08.10.2019. <https://lex.uz/docs/4545884>

<sup>4</sup> [www.Stata.uz](http://www.Stata.uz)



**Figure 1. Structural indicators of higher education institutions in Uzbekistan, 2023.**

According to the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, in 2022, a total of 39, including 9 state, 29 non-state, and 1 foreign higher education institutions were established in our country. At the same time, as a result of the transformation processes carried out in order to improve the management practices of higher education institutions, 17 branches of higher education institutions were transformed into institutes, and 10 institutes into universities. As a result of the implemented reforms, as of 2023, the number of higher education institutions in our country will reach 199, of which 114 are state, 55 are non-state, and 30 are foreign higher education institutions.

(See Figure 1).

**Table 2**

**Indicators of population coverage with higher education services, per thousand people<sup>5</sup>**

Indicators	School year					
	2000/2001	2005/2006	2010/2011	2015/2016	2020/2021	2021/2022
Number of students admitted to HEI	44,7	59,6	64,1	63,0	174,9	235,9
The number of specialists who graduated from HEI	31,6	57,8	76,4	66,3	83,9	103,9
The number of students studying in HEI	183,5	278,7	274,5	264,3	571,5	808,4
Including						

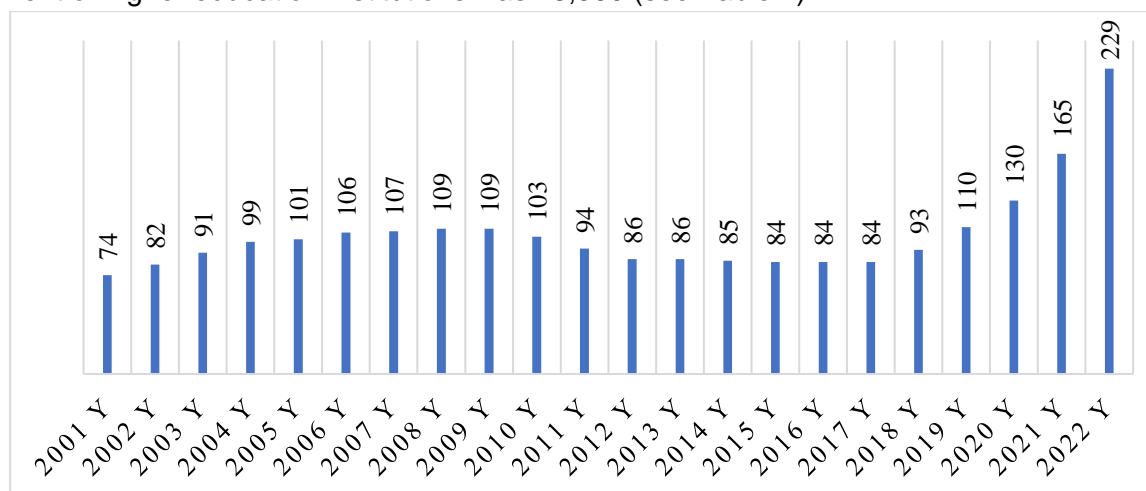
<sup>5</sup> It was compiled based on the information of the Statistical Agency under the President of the Republic of Uzbekistan

In the afternoon	141,9	204,8	268,7	263,9	441,9	553,9
In the external department	41,6	73,9	5,8	0,4	118,1	228,0
In the evening part	-	-	-	-	11,5	26,5

The increase in the number of institutions of higher education services in the market of local education services provided an opportunity to increase the level of coverage of the population with higher education services. In particular, the admission quota of higher education institutions increased almost 5.3 times in 2000-2022, from 44.7 thousand to 235.9 thousand people, while the number of students studying in them increased by 4.4 times, from 183.5 thousand to 808.4 reached a thousand people. In 2000, 77.3% of the students studying in higher education institutions were full-time students, and 22.7% were part-time students, by 2022, 68.5% of the total students were full-time students, 28.2% were part-time students, and 3.3% were part-time students. was contributed by students of the evening department. During the analyzed period, the number of graduates of higher education institutions increased by 3.3 times, from 31.6 thousand people to 103.9 thousand people

(See Table 2).

It should be noted here that in the years 2000-2017, educational services were not provided to students in the higher education institutions of our country. Since the 2018-2019 academic year, taking into account the high demand for highly educated personnel in the labor market of our country, education has been started in the form of evening education. In this academic year, a total of 1,200 applicants became students of the evening education department of higher education institutions. By the 2021-2022 academic year, the number of students studying in the evening education department of higher education institutions was 26,500 (see Table 2).



**Figure 2. Number of students per 10,000 people in Uzbekistan <sup>6</sup>**

The effectiveness of higher education institutions in terms of the level of coverage of the population with higher education services is evaluated by the number of students per 1,000 or per 10,000 people in international studies. According to official statistics, in 2001-2022, the indicator of the number of students per 10,000 thousand people in our country had a dynamic development trend and increased by 3.1 times during the analyzed period, from 74 to 229. In particular, in 2001-2008,

<sup>6</sup> It was compiled based on the information of the Statistical Agency under the President of the Republic of Uzbekistan

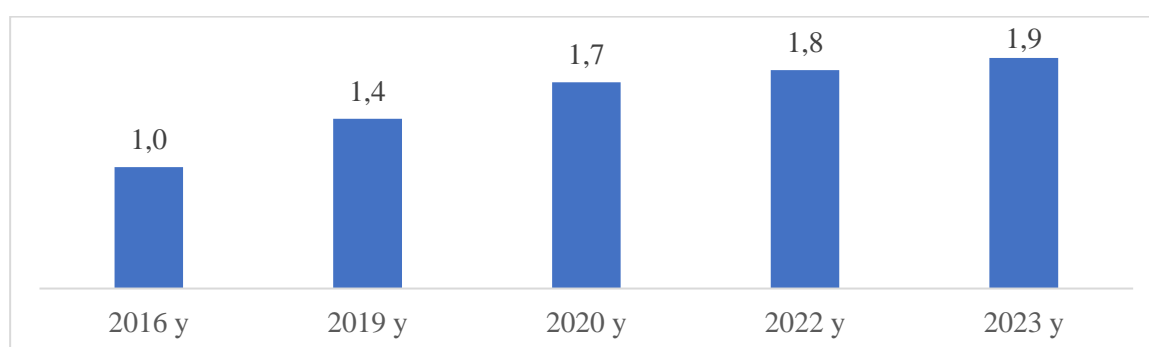
this indicator had an increasing trend, while in 2009-2016, a decreasing trend was observed. In the period after 2017, as a result of reforms aimed at increasing the level of coverage of the population with higher education services in our country, the number of students per 10,000 thousand people in our country has a tendency to increase rapidly, and in the analyzed period, this indicator has increased by 2.7 times (see Figure 2).

**Table 3.**

**State of the infrastructure of higher education institutions in Uzbekistan, as of January 1, 2023<sup>7</sup>**

Types of buildings and structures	Number	Power
Educational buildings	578	395 433
Student residences	285	108 604
Sports hall	276	—
Sports field	336	—

In our country, the increase in the level of coverage of the population with higher education services was carried out in harmony with the improvement of the quality of educational services in the management of the activities of higher education institutions. First of all, targeted measures were taken to improve the state of the infrastructure of higher education institutions, including educational buildings, student residences, the number of sports halls and fields at the disposal of higher education institutions, and to increase their capacity. According to the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, today the total number of educational buildings at the disposal of higher education institutions in our country is 578, and their capacity is to accommodate 395,433 students, there are 285 student residences for 108,604 people (3- see table).



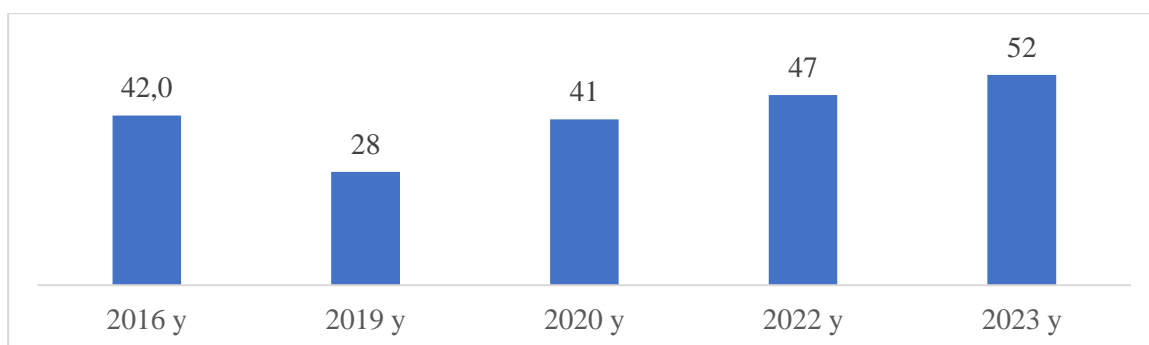
**Figure 3. Shift coefficient of educational buildings of higher education institutions in Uzbekistan<sup>8</sup>**

It should be noted here that in 2016, the turnover ratio of educational institutions of higher education institutions was equal to 1.0, while today this indicator has reached 1.9 (see Figure 3). This situation indicates that higher education institutions are moving step by step to the practice of effective use of educational facilities in managing the processes of teaching students.

<sup>7</sup> Compiled based on the information of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan <https://edu.uz/uz/pages/sss>

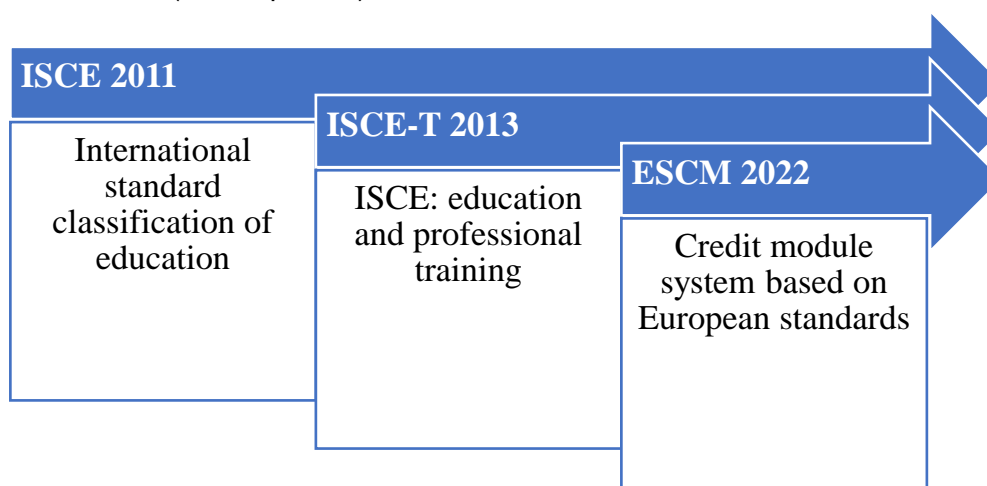
<sup>8</sup>Compiled based on the information of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan <https://edu.uz/uz/pages/sss>





**Figure 4. The level of accommodation for students who have expressed a desire to live in a student residence<sup>9</sup>**

Also, positive trends were achieved in the indicators of providing students with dormitory in the management of the activities of higher education institutions. According to the analysis, in 2016, 42% of students who expressed a desire to live in a student residence were provided with a dormitory, and in 2023, despite the increase in the admission quota in higher education institutions, despite the increase in the number of students studying in them, the level of providing students with a dormitory reached 52% (4 -see picture).



**Figure 5. Stages of improving the quality of student education based on international standards in the management of higher education institutions of Uzbekistan<sup>10</sup>**

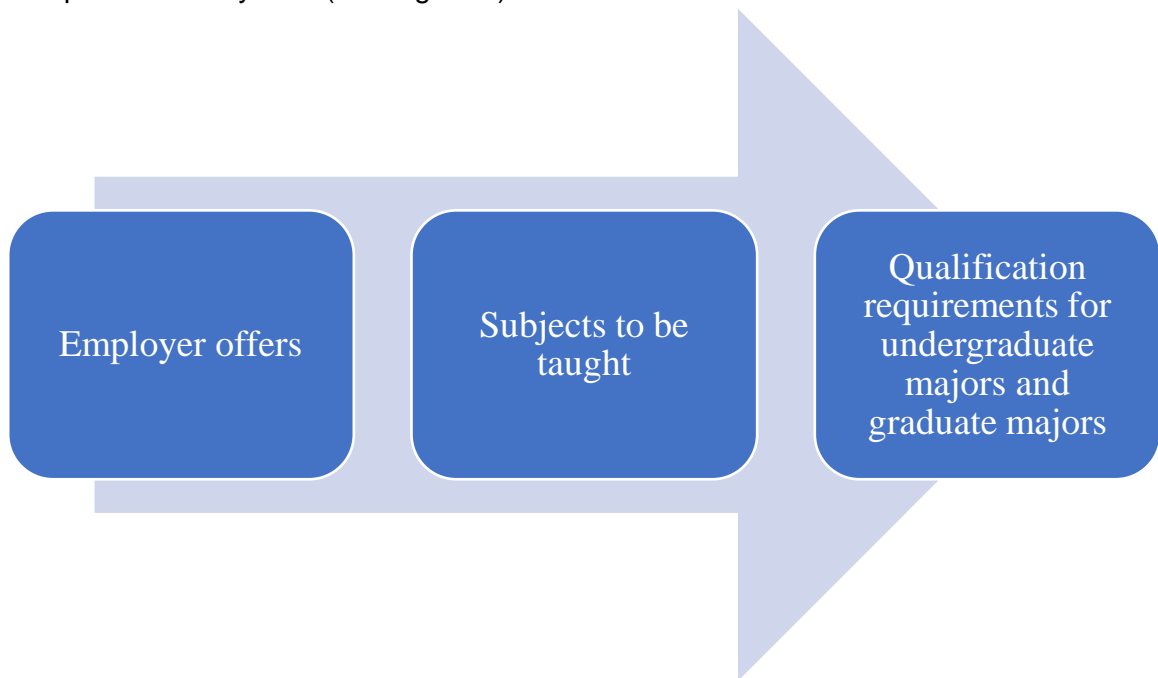
Also, in the management of higher education institutions of our country, the issue of improving the quality of education is one of the priority tasks that has been constantly in the center of attention. In this regard, in the management of educational processes in higher education institutions, the integration of the international standards of the market of higher education services is carried out step by step. In this case, on the basis of the recommendations given by UNESCO on the development of the qualification requirements developed in the process of training students in higher education institutions based on the employer's proposals, the practice of providing higher education services is being carried out.

According to the information provided by the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, improving the quality of student education in the management of higher education institutions in our country was adapted to the classification of international standards of education in 2011, and by 2013, it was integrated into the fields of

<sup>9</sup> Compiled based on the information of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan <https://edu.uz/uz/pages/sss>

<sup>10</sup>Compiled based on the information of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan <https://edu.uz/uz/pages/sss>

education and professional training of this classification. Starting from 2022, student training processes in all higher education institutions were transferred to a full credit-module system based on the European ECTS system (see Figure 5).



**Figure 6. Stages of development of qualification requirements in management of student training processes in higher education institutions<sup>11</sup>**

As a result of the integration of international educational standards in the management of student training processes in higher education institutions, qualification requirements for 625 bachelor's courses and 634 master's specialties have been developed based on the employer's requirements (see Figure 6). According to the information of the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, 943,000 undergraduate and 25,000 graduate students are currently enrolled in higher education institutions, and the coverage level of the population with higher education services has reached 38.4%.

At this point, it should be noted that digitization of higher education processes has been carried out in recent years in our country, as in other branches and sectors of the national economy. In particular, administrative management, educational process, scientific activity and financial management in higher education institutions were integrated into the HEMIS system. At the same time, the "Electronic Library" platform, consisting of more than 3.97 million books, was launched. The following opportunities have been created for students and their parents by switching to the "online" mode of payment of fees for the use of higher education services:

- sending a request to receive a payment contract by submitting an online application;
- receiving an electronic contract remotely - a payment contract with a QR code is issued;
- reports - it will be possible to analyze the payments made by higher education institutions and students together with full control;
- Integration of the State Test Center with the online admission system "my.dtm.uz" - remote submission of documents to higher education institutions.

<sup>11</sup> Created by the author.

**Table 4.****The number of professors and teachers of higher education institutions and their structural indicators <sup>12</sup>**

	2016 y		2019 y		2022 y	
	per unit	in percent	per unit	in percent	per unit	in percent
Total	24368	100,0	26837	100,0	34539	100,0
including						
Doctor of Science (DSc)	1415	5,8	2201	8,2	2799	8,1
Doctors of Philosophy (PhD)	6351	26,1	7769	28,9	10651	30,8
Without a degree	16602	68,1	16867	62,8	21089	61,1
Scientific potential	31,9		37,1		38,9	

Also, in 2016-2022, priority was given to measures aimed at increasing the scientific potential of professors and teachers in the management of higher education institutions. During the analyzed period, the total number of professors and teachers directly participating in the process of teaching students in higher education institutions increased by 1.4 times, from 24.4 thousand to 34.5 thousand, respectively. percent to 8.1 percent, and the share of doctors of philosophy (PhD) increased from 26.1 percent to 30.8 percent. Also, during the analyzed period, the indicator of the scientific potential of higher education institutions increased by 7.0 percent and reached 38.9 percent in 2022 (see Table 4).

**Conclusions**

The following conclusions were drawn based on the analysis of the development of the market of higher education services in our country and the practice of managing the activities of higher education institutions:

- measures to increase the level of coverage and quality of services provided in the management of higher education institutions in our country are organized in a mutual relationship;
- to achieve the following results through digitalization of higher education services:
- In 1991-2022, a database of diplomas of graduates of higher education institutions was created;
- administrative management, educational process, scientific activity and financial management in higher education institutions were integrated into the HEMIS system;
- a database of students studying in higher education institutions was formed;
- the state interactive service for issuing a certificate from the place of study and issuing a duplicate diploma of documents on higher education was introduced;
- infrastructures of higher education institutions were improved;
- modern information systems such as remote education, QR-code, interactive services and online Olympiad were introduced into management practice;
- educational and methodological support of higher education institutions was improved;
- quality indicators of services provided by higher education institutions were integrated to international standards.

<sup>12</sup> Ўзбекистон Республикаси Олий таълим, фан ва инновациялар вазирлиги маълумотлари асосида тузилган  
<https://edu.uz/uz/pages/sss>

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# PRINCIPLES OF HUMAN CAPITAL MANAGEMENT IN THE DIGITAL ECONOMY

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## ABSTRACT

*This article researches the factors of management support, competence center availability, organizational transformation, evolutionary integration, attraction and promotion of investment in human capital development in the context of the digital economy.*

**Key terms:** human capital management, ability, quality education, operational efficiency, organizational transformation, evolutionary integration.

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## INTRODUCTION

**Preface.** In the context of the digital economy, based on human capital, abilities, knowledge, skills and competences represent its total economic productivity and increase competitive advantage in the labor market. In this case, in the conditions of modern trends that cause gradual changes in human life, the requirements for both the components of human capital and the mechanisms of its reproduction are changing radically. Interrelated technologies are not only the engine of economic development, but also play an important social role in solving the problems facing the society of today and the representatives of the next generation. Today, their ability to influence the quality and duration of life, the education system, and the professional direction of future professionals is becoming clear.

**Analysis of references on the topic.** The principles and methods of human capital management in the digital economy have been studied few in the economic books. In particular, scientists such as A.V.Zelenov, T.S.Kolmykova[1], R.Salokhojaev, K.Kh.Abdurahmonov[2], A.Ulmasov and A.Vahobov[3] have written textbooks, manuals and who wrote other educational and scientific materials. But in these works, the principles of human capital management are not thoroughly studied.

**Research methodology.** Dialectical and systematic approach, comparative and comparative analysis, statistical approach, grouping methods were used in the research process.

**Analysis and results.** Currently, the socio-economic development of the countries of the world differs sharply from the previous stages in terms of its nature and content. A new interpretation of economic growth requires modern, conceptual approaches in world economics. In particular, human capital is being researched somewhat more widely than other activities in the economy, which is primarily explained by the effective use of human capital in the conditions of the digital economy, and the fact that it is aimed at ensuring the standard of living and quality of the population by investing in it.

Until recently, human capital with specialized characteristics is considered the most valuable, while human capital with general skills is given secondary importance. However, modern research on this issue shows that today their role is changing. In this, the first place includes general skills and competencies such as systematic thinking, emotional intelligence, flexibility, creativity, ability to work in uncertain conditions, ability to receive continuous education. Demands for specific human capital are also changing. The implementation of advanced projects in the field of interconnected technologies of the digital economy creates a demand for specialists with special

digital competencies, who have a deep understanding of their field of activity, and who have knowledge and experience in certain areas.

It is important to note that related technologies such as artificial intelligence and robotics components will have different impacts on the labor market. Their active development and popularization, on the one hand, leads to a reduction in jobs and an increase in wage inequality, on the other hand, it provides an opportunity for the emergence of highly paid professions based on modern forms of employment. In 2022, due to the expansion and popularization of modern technologies in the economy, the share of modern jobs in the structure of total new jobs is expected to be 22.0%. Automated systems and robots are used in customer service, financial services, medicine, agriculture, logistics, and the military, often as a cost-effective alternative to human labor. According to the International Federation of Robotics, the introduction of one robot per 1 million hours worked increases labor productivity by 0.04%, while automation can save operating costs by 15% to 90%.[4]

If we pay attention to the macroeconomic, socio-demographic and technological trends of the digital transformation of the socio-economic system in our republic: imbalance in the labor market (rapid growth of the number of freelancers, the emergence of new "digital" professions, the difference in digital knowledge between generations, labor migration); the transnational nature of leadership and competition, the openness of national boundaries for innovative projects (leaders with digital transformation of society and industry will have an advantage); digital transformation of the state and society (use of artificial intelligence in decision-making regarding digital government, digital public services, smart cities, digital transformation of citizens); research on the development of human capital and developments in the management of human biological characteristics; degradation of human natural intelligence: short-term thinking, intellectual dependence on technology, loss of the boundary between reality and illusion, formation of an inadequate perception of the world, cyber threats: cyber terrorism, cyber espionage, cyber wars and cyber crime.

These trends determine the system of external and internal factors that limit the digital transformation of socio-economic systems and ensure the acceleration of digital transformation. In Table 1, we present the classification of the main factors limiting and limiting the digital transformation.

The human factor, lack of knowledge, outdated equipment, technologies and IT systems, customer habits are the main obstacles to digital transformation in the domestic socio-economic system. The effect of negative factors can be compensated by activating and strengthening the effect of factors that contribute to digital transformation and create conditions for accelerating digitization processes.

**Table 1**

**Classification of the main factors limiting the digital transformation of socio-economic systems**

<b>External factors to ban the digital transformation</b>	
State barriers	<ol style="list-style-type: none"> <li>1. Economic uncertainty in the country, volatility of the soum.</li> <li>2. Regulatory restrictions, lack of digital standards.</li> <li>3. Absence of special state support measures for the use of digital technologies in enterprises.</li> </ol>
Barriers to competition	<ol style="list-style-type: none"> <li>1. Implementation of digital technologies requires costs from suppliers and consumers following the "traditional model".</li> <li>2. Consumer loyalty to familiar products (services).</li> <li>3. Lack of information about successful experience or negative experience of using digital technologies in enterprises.</li> </ol>
Technological barriers	<ol style="list-style-type: none"> <li>1. Lack of digital solutions that take into account the unique characteristics of the enterprise.</li> <li>2. Weak protection of digital technologies from criminal attacks.</li> </ol>



	3. Inadequate development of infrastructure (low throughput of communication channels, lack of mobile Internet access, lack of data centers, etc.). 4. Lack of local analogues of software for a number of industrial productions.
<b>Internal factors to ban the digital transformation</b>	
Resource barriers	1. High cost of digital technology projects. 2. There are not enough budgets that the enterprise can allocate for projects using digital technologies. 3. High operating costs of systems using digital technologies. 4. Outdated technical equipment of production enterprises makes it difficult to introduce new technologies.
The human factor	1. Ignorance of the advantages of digital technologies, misunderstanding of the nature of digital transformation and its impact on the management and decision-makers of the enterprise. 2. Reluctance of employees to change their usual work patterns. 3. Low qualification of employees on digital technologies. 4. Lack of skills of employees implementing and supporting digital technologies.
Psychological barriers	1. Lack of sufficient personal experience or negative experience of using digital technologies in other enterprises. 2. The ability to successfully carry out enterprise activities without using digital technologies. 3. Ensuring information security, maintaining confidentiality.
Organizational barriers	1. The need to integrate technologies into the existing IT landscape and the current infrastructure of the enterprise. 2. Rigid organizational structure of enterprises, which makes it difficult to change internal processes, rules, workflow, information acquisition and processing approaches.

Let's take a closer look at the main factors that contribute to the digital transformation of socio-economic systems:

**1. Management support.** Digital transformation should be supported and encouraged by the head of the organization or a group of organizations (in state and municipal administration - "first" officials). This is a necessary condition for the successful implementation of planned changes. The main task of management is to communicate innovation to employees and show how it affects each of them. The new processes may cause some employees to lose their jobs. This fact should not be hidden so that the planned changes are the subject of misunderstanding and do not cause active resistance to the changes.

**2. Existence of competence center.** To implement changes at the operational level, it is necessary to create a cross-functional team consisting of employees from departments responsible for specific aspects of the process. Often, a separate competence center is created for this, consisting of employees of different profiles - designers and designers of customer experience, marketers, IT representatives, etc. It is important that team members are open to new ideas, have the required skills and are not afraid to experiment. Such a center can broadcast best practices within the company and operate regularly. Note that in some cases (this is confirmed by world experience), engaging a specialized service operator to solve the problem of creating a center of competence for a company or a group of companies can be an effective solution.

**3. Organizational transformation.** Traditionally, new business processes are implemented by employees who have been working on existing processes for a long time within the existing organizational structure. There is a high risk in this approach, and it will require more effort from employees to transition to new processes. It is necessary to maintain operational efficiency and move to new work rules in parallel. In fact, employees should "change shoes" on the road without changing the speed of movement. In addition, it can create a negative background and cause hidden sabotage or open discontent[1].

Therefore, in some cases, it is more appropriate to create a new organizational unit or group within an existing division to work on new digital processes. With the transition to updated processes, employees of the "old" organizational units will transfer to the new unit. This approach allows you to make changes faster and with less money and energy. Again, as we noted above, a dedicated service provider working in partnership with a digital transformation company can play an important role in making these processes faster, more efficient, and more efficient.

**4. Evolutionary integration with older systems.** Digital transformation of business processes affects many legacy systems at the same time that cannot be eliminated. Efforts to integrate old systems into new processes are fraught with long projects with uncertain payback periods. After a few years, the work done may no longer be relevant. To reduce such risks, it is important to take digital transformation decisions step by step and try to implement them. Sometimes it makes sense to use simple temporary solutions to create integration interfaces between new services and old systems, or to move to "new rails" when completely replacing the latter.

**5. Attracting and motivating customers.** Customer habits change slowly, which slows down the introduction of new service technologies. This factor is a global factor that stops the development of the entire service industry. Development of new models of consumer behavior is an important element of digital transformation. It is important to identify the main reasons that prevent consumers from starting to use new services and develop activities to attract such customers. Training allows you to achieve results along with showing benefits and motivation. It is important that the first experience of interaction under the new rules is successful and emotionally positive.

**6. A flexible model of business process management.** In the new reality, the classic theory of optimization and reengineering of business processes is complemented by new, flexible approaches. The traditional description of business processes is a thing of the past. Such a description quickly becomes obsolete, and significant labor costs are required to maintain its relevance. The best way to keep your business processes up to date is to use your organization's business process management tools in real time. Another characteristic feature of the new approach is the reduction of the process optimization cycle time. Using A/B testing, control groups, and other tools to evaluate implemented changes allows you to quickly test and implement process changes with minimal risk of negative results.

**7. Formation of technological base.** Before entering the digital transformation process, it is necessary to form the basis of appropriate technological solutions, on the basis of which digitization processes will be built:

- high level of activity automation, infrastructure virtualization, quality and readiness of information technology systems of the organization;
- data synchronization and digitization: all information that can be collected within a particular organization becomes a real basis for decision-making at all levels in the digital space;
- the operating model, organizational structure and internal processes of the socio-economic system are changing based on new principles of interaction, the main characteristics of which are validity (facts, figures, trends) and speed (real-time data processing, course correction as information).

**Conclusions and suggestions.** The principles of human capital management are defined in the conditions of the digital economy. Accordingly, communication of innovations to employees, implementation of changes at the operational level, implementation of new business processes by employees working in existing processes for a long time within the framework of the existing organizational structure, integration of old systems into new processes, development of new models, appropriate technological solutions before entering the digital transformation process. The classification of indicators based on the formation of the basis was developed.

One of the most important conditions for the effective development of the digital economy in our country is the formation of an appropriate institutional environment.

For the same reason, in the digital economy development program of the Republic of

Uzbekistan, the issue of personnel training and organizations of the educational system should be included among the main factors and a separate section should be devoted to it. This program should define the following main directions related to personnel and education:

- to establish personnel training in the directions of decisive technologies indicated above;
- to create an educational system that can train personnel with deep knowledge in these areas;
- to establish the training of highly qualified specialists needed for the digital economy in secondary and higher education institutions;
- creation of modern scientific and practical literature in the Uzbek language, necessary for the comprehensive study of the digital economy;
- development of labor market organization mechanisms that meet the requirements of the modern digital economy;
- training qualified programmers and engineering and technical personnel;
- financing the participation of personnel in the development of the digital economy and creating a system to encourage this work at a high level;
- study foreign experiences in the field of digital economy and apply them to the economy of the republic;
- it is necessary to create national ecosystems in various sectors of the economy using the technologies of electronic platforms.

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## FEATURES AND FACTORS OF IMPLEMENTATION OF INNOVATIVE ACTIVITIES IN SERVICE ENTERPRISES

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### ABSTRACT

In this article, the emergence of new forms of innovations and innovative processes in the service sector is primarily related to the immateriality and interactivity of services, which distinguish them from goods in terms of quality.

**Keywords:** sustainable development of service enterprises, innovative management methods, investments in service enterprises, new forms of services.

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### INTRODUCTION

In today's economy, the development of the service sector through the introduction of innovative management methods and technologies requires a certain level of scientific approach. Both the sustainable development of service enterprises and the evaluation of the socio-economic efficiency of individual sectors of the service sector are carried out through the introduction of specific types of services.

At the current stage of the socio-economic development of our country, the acceleration of transformation processes is increasing the importance of intellectual work, without which it is impossible to master high technology and take a strong position in the services market.

Every country uses all sources of development at the same time. The competitiveness and efficiency of the economy is determined by the composition of resources.

**Analysis of references on the topic.** Innovations used in the service sector consist of innovations in the process of customer service, technological and technical innovations, management and organizational innovations. At the heart of all innovations in the service sector are certain innovative technologies. In particular, in her scientific views, K.V. Barmina considers the interaction of the subjects of institutional innovation and consumers to be important in the study of innovative activity in the service sector.[1] Scientists say that the ongoing innovative activity in the service sector is characterized by its own characteristics. The emergence of new forms of innovations and innovative processes in the service sector, first of all, has given special importance to the immateriality and interactivity of services, which distinguish them from goods in terms of quality[2]. At the same time, scientists such as A.S.Basyuk, Yu.I.Manuylova[3], L.I.Donskova, A.G.Redkin, O.V.Otto, and N.N.Bespalova[4] emphasize that innovations create new needs or develop existing needs, the importance of innovative strategies determined by the organization, customer-oriented developments aimed at specific consumers, service have written textbooks, training manuals and other educational and scientific literature on the fact that the innovative activity in the demonstration enterprises and organizations depends not only on the manager's attitude to innovations, but also on the motivation of the employees of the organization regarding the innovative behavior. But in these works, the features of the implementation of innovative activities in service enterprises have not been studied in detail.

**Research methodology.** Dialectical and systematic approach, comparative and comparative analysis, statistical approach, grouping methods were used in the research process.

**Analysis and results.** One of the main areas of innovative service provision is the development and implementation of new services. In the context of the innovative development of the economy, it is necessary for service enterprises to create mobile, new services that meet consumer demand in a short period of time (Table 1).

**Table 1****Description of services in a new form**

<b>According to the new calculation of services</b>	<b>A new type of service</b>	<b>Explanation</b>
<b>On satisfying new needs</b>	Services offered for the first time that have never been seen before in the market	Tracking human activity through the phone
<b>On the attitude to the new consumer</b>	Services for the new field of implementation	Online doctor (remote consultation)
<b>Regarding treatment of obsolete services</b>	Services that represent a significant improvement over similar services	Online fitness training, online training
	A service with some improvements among its peers	Online city tour, catering
<b>In relation to the new market</b>	New services for the selected market, implemented for other markets	Delivery of products in a certain area

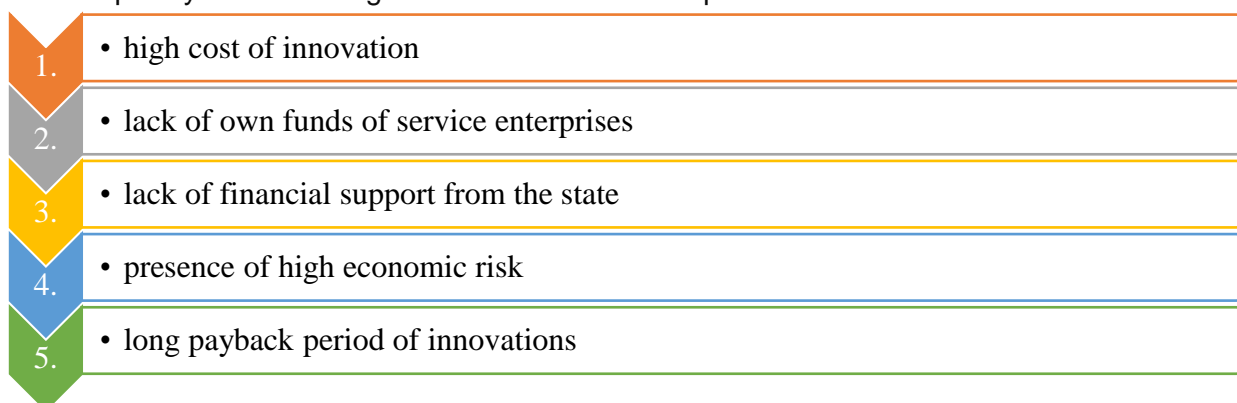
Promotion of new services requires careful consideration of consumer characteristics, expectations, and experiences, i.e. factors influencing behavior. These services require joint production and interaction between service consumers and service providers (organizations). In this case, the quality of service, which plays the main role in interaction with the consumer, is of particular importance. As a result, the requirements of the service enterprise to the employees will increase. The level and nature of consumer participation in the co-production of services varies and depends on many criteria, including the type of service, the form of service, the level of service and the characteristics of the service. Co-production of services in the service sector occurs in the process of designing and providing tourist, animation, excursion, museum, restaurant and other services. It should be noted that innovative service is related to "interactive interaction" between service consumers and service-providing enterprises and organizations. This interaction should be aimed at creating innovations that create new relationships and form new channels of joint activity. As a result, we can conclude that new ideas in the service stimulate the comprehensive development of the industry, its attractiveness and profitability. Innovations in the service sector can be aimed at both expanding and limiting the exchange of experience between service consumers and service enterprises and organizations. Products of the service sector are the result of the interaction of service consumers with service enterprises and organizations and the joint production of services. An important factor determining the success of an enterprise in the field of service is the ability to understand the preferred systems of the consumer and their development trends, and to satisfy the needs in the best way. For the customer, the service process is as important as the result, so it is necessary to use "relationship marketing" in addition to "external" and "internal marketing" in the service industry. This determines the ability of employees to provide competent service to the consumer, taking into account his individual needs, and to establish long-term relationships with him. Another form of small business organization in service activities is franchising. Such a franchise model is needed so that an entrepreneur in the service industry can immediately obtain a ready-made brand, customer communication technology and service delivery technology. Franchising is developing well in the field of general education, catering and cosmetic services in the republic. Prospects for the development of the franchise in the following areas: accounting services and auditing, freight forwarding, indoor gardening, laundry, helping to organize family

holidays, etc.

The use of new information technologies helps to use resources effectively, increase labor productivity and profitability of the enterprise. Today, the Internet coordinates existing communication and business tools and provides a wide range of new tools for the efficient operation of service enterprises.

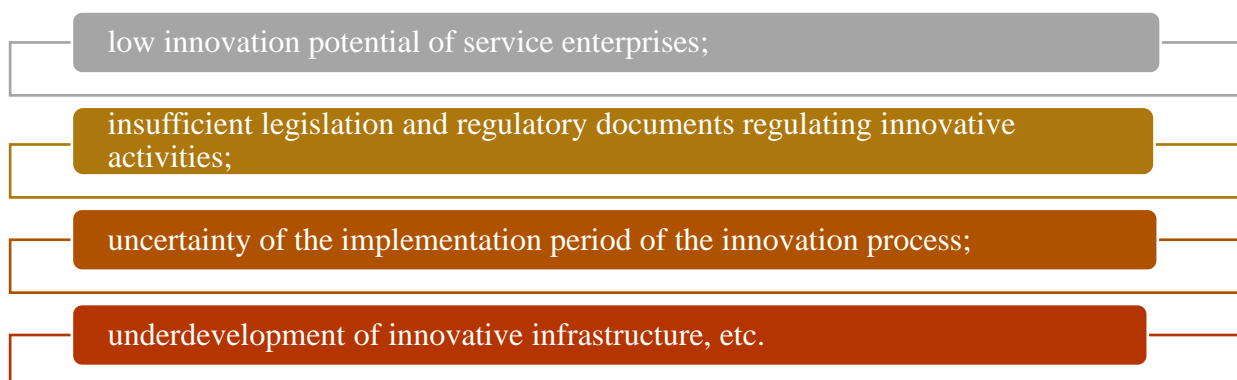
Innovative activity can be carried out within enterprises both by specially created divisions (internal enterprises) and by independent venture firms.

Adoption of innovations in the conditions of the innovative economy, on the one hand, indicates the existence of creative potential in the service sector, on the other hand, they allow us to understand the complexity of introducing innovations into service practice.



**Figure 1. Key economic factors impeding innovation in the service sector**

Moreover, factors that have a negative impact on innovative activity include:



**Figure 2. Factors that have a negative impact on innovative activity**

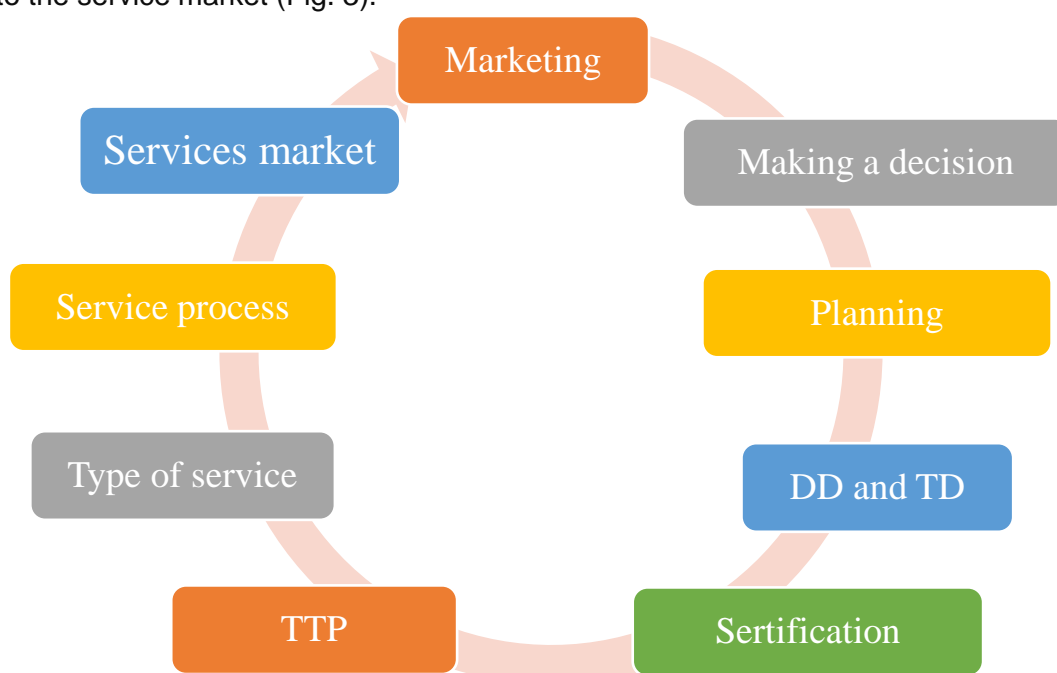
The development of innovative activities gives our country the opportunity to use the achievements of world service practice in various forms and creates fair competition in the global services market. The more consistent integration of our republic into the world economic community will change the direction of development in the management system of the service sector, the quality of services, and the idea of their assortment and bring these concepts as close as possible to world standards. Innovation is the result of the innovation process, which includes all labor processes for its implementation. In turn, innovative activity, by its essence, represents the organization of work at the stages of the innovative process in the implementation of various innovations within a specific enterprise. The technical level and efficiency of production in the future will be determined by the directions and results of the implementation of innovative activities today. Also, the activation of innovative activity is a condition for ensuring the stable situation and dynamics of development of enterprises in the market they occupy, as well as the main factor for increasing their competitiveness. Achieving the set goal cannot be done without a systematic analysis of the innovative activity of the enterprise. It is an important aspect in this process, scientific-based methods that allow to increase innovative activity, capable of creating a highly effective mechanism that ensures the use of scientific and technical achievements in the enterprise's activity and continuous development.



As service enterprises enter the stage of innovation organization with the external environment, in addition to advantages, there are also problems that need attention. First, the main problem of the service enterprise is to preserve its scientific potential. Therefore, it eliminates the need to fully implement the innovative activities of other service enterprises or use the final results. The second problem arises as a result of negative processes that increase the competition in the service market, improve the quality of services and reduce the possibilities of service provision.

In this situation, the relationship between the service enterprise and the external environment, it is appropriate to attract specialists to introduce innovations for the enterprise. In addition, it is important to properly organize information monitoring activities that determine the expected changes in technologies in the external environment of the service enterprise, provide for the maximum use of methods of organizing service processes, perspective their development and apply timely measures. Therefore, the external competitive environment encourages the search for new technologies for the service enterprise and its implementation, because the efficiency of the enterprise depends on the increase in the quality of services and the decrease in its cost. Applying scientific developments to service processes and increasing the professional level of employees ensures the innovative activity of the enterprise.

A non-competitive market is conditioned by the fact that the buyer tries to create a demand for highly competitive services from the producer (service provider) and makes a private order for the service provider, who is the initiator and shaper of a specific type of innovation in it, both for the market and for the seller. The sequence of the process of realization of a new type of service in the modern competitive market includes interrelated stages from the implementation of marketing activities to its entry into the service market (Fig. 3).



DD and TD – design and technological documentation

TTP - technological training of production (service).

**Figure 3. The sequence of the process of realization of a new type of product in a competitive market**

Therefore, creation of legal bases for innovative development of service enterprises and adoption of normative and other legal documents is the main form of support by state authorities. This activity involves the creation and improvement of innovations:

- creating favorable conditions for the development of legislative, scientific-technical and innovative activities and their stimulation in order to implement the unified state innovation policy;

- regulatory and legal provision of copyright and intellectual property protection, its involvement in service processes;
- widely used in the form of public-private partnership in the implementation of innovative activities in service enterprises;
- introducing modern forms and methods of training specialists in the field of service.

The group of internal factors affecting the innovative activity of the service enterprise includes factors that can influence the management of the enterprise. These factors include:

- timely implementation and financing of innovative activities of the service enterprise;
- availability of the material and technical base for the implementation of innovative activities in the service enterprise;
- availability of qualified labor resources in service enterprises for implementation of innovative activities.

In our opinion, the risk (danger) that may arise during the implementation of innovative activities in service enterprises consists of the following:

- risks related to ensuring its optimality when choosing an innovative project;
- risks associated with non-availability of sufficient funding for innovative projects;
- marketing risks associated with the current supply of necessary resources for the implementation of an innovative project;
- marketing risks related to the realization of the results of the innovative project;
- risks related to non-fulfillment of business contracts;
- risks related to the occurrence of unforeseen expenses and the decrease in income;
- risks associated with increased competition in the market;
- risks associated with securing ownership rights to an innovative project.

The above-mentioned risks can be divided into two groups: risks related to increased focus and risks related to low implementation of innovative projects. In order to minimize the risks of this group during the implementation of the process of managing innovative activities in service enterprises, it is necessary to include tools for managing innovative activities. They consist of:

- means of implementing innovative projects, taking into account the internal and external factors of innovative activity;
- tools for selecting promising projects for introducing innovative ideas;
- tools for optimizing the implementation of innovative projects in modern service industries.

**Conclusions and suggestions.** Therefore, the important economic and institutional conditions for increasing the innovative activity of service enterprises through the system of expanding opportunities are the environment of external competition, the system of science and education, and the legal base. In our opinion, in general, innovative activity should be focused on:

- intellectual property objects based on license agreements (patents, know-how, etc.);
- conclusion of contracts with supporting organizations for the implementation of innovative activities;
- organization of joint research (joining of forces of similar enterprises to solve issues relevant to service enterprises);
- service enterprises investing their funds in venture firms that have promising results, but do not have sufficient financial resources.

In addition, the assessment of the service enterprise's high performance in relation to the external environment when carrying out innovative activities, which means:

- optimization of costs related to the development and implementation of innovations in the activity of the service enterprise;
- reducing the time required to adopt innovations;
- optimization of effective use of resource potential of the service enterprise;
- to help reduce the existing risk in the implementation of innovative activities.

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## **MODERN INFORMATION TECHNOLOGIES IN THE TAX SYSTEM OF UZBEKISTAN AND THE USE OF THE EXPERT ASSESSMENT METHOD**

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### **ABSTRACT**

One of the most efficient means of controlling and ensuring the openness of the nation's economic life is the high-quality adoption of contemporary information technology in the area of the state tax system. An integrated approach to managing tax structure objects is necessary to address the issue of the quality of information technology implementation. Additionally, the principles and regulations governing services provided by supervisory agencies and commercial organizations must be fully implemented. The article presents one of the novel and unconventional methods for addressing the actual issue of evaluating the effectiveness of information technology deployment in the tax system related to expert evaluation. This will enable the preservation of taxpayer reports in a more practical and transparent format as well as the provision of a wide array of contemporary and cozy interactive public services. The new strategy discussed in this article is thus pertinent and significant for enhancing the system of allocating tax revenues to the budget and other required payments, as well as for developing a market economic mechanism for evaluating the caliber of interactive services offered by the state tax authorities of the Republic of Uzbekistan.

**Keywords:** tax system, information technology, mandatory payments, reports and calculations of taxpayers, interactive service, digitalization, objects and subjects of tax structures, project management, expert method, expert scores, expert survey, questioning.

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### **INTRODUCTION**

Currently, all economic sectors are impacted by current information technology, which are also driving a significant global economic shift. The impact of public and private institutions on many facets of societal economic life is connected to the process of efficient and high-quality administration of the economy in any nation. Although nations and international organizations have been working together to improve taxation for many years, the use of contemporary information technology has heightened the necessity for interstate cooperation. The most complete automation of tax-related procedures has evolved into not only a pressing requirement but also a prerequisite for the successful implementation of the tax reform in Uzbekistan. The incorporation of contemporary information technology in the tax system is therefore one of the primary instruments and priority areas of governmental control of the economy. The Decree of the Cabinet of Ministers under the President of the Uzbek SSR No.-217 dated 12.08.1991 created the State Tax Inspectorate (STI) of Uzbekistan. One of the earliest groups of people to see the necessity of integrating contemporary

information technology into the tax system was the leadership of the tax authorities. Currently, the tax system has an automated system that has been built and includes both regional and municipal levels of government, making it possible to process an ever-increasing amount of information effectively. A new degree of communication between tax authorities, organizations, and citizens is represented by the digital economy of taxes. The tax system must not only use the most up-to-date information technology in its operations, but also adhere to the standards of contemporary relationships. Additionally, new strategies have already been used by the sharing economy and tax administration. A lot depends on digital platforms since contemporary information technologies are currently defining the future. The organization of the resource consumption computation is made possible by these digital platforms. Because of the development of technology that allow for a single personal account for each taxpayer, it is now possible to manage taxpayers. It is now feasible to pay taxes to millions of residents using the personal account of the taxpayer thanks to the development of a contactless administration technology. Foreign partners are increasingly interested in the technologies that Uzbekistan's tax system established and effectively utilized. As a result, the tax system has undergone modifications aimed at making it easier for people to file their taxes. Taxpayers will now find it easy to submit their own information into the computerized system. It will take a few minutes, but once registered, the system's features and tools will all be accessible. The new tax system's key benefit is that most problems may be fixed without having to go to the tax office, which will save time and effort. The tax system is no longer only a means of raising revenue. It now encourages citizens to pay taxes and fees in good faith and in a comfortable environment. In a new digital environment, relationships between businesses and tax authorities are being developed. This enables all payments to be made online and eliminates the need to undergo tax inspections. The goal of the tax authorities' implementation of innovations is to provide favorable circumstances for both parties and a trustworthy environment for contact with taxpayers. Now, taxpayers have the option of paying their taxes in the most practical manner and receiving the necessary information on taxes and fees. The tax system has boldly moved in the direction of contemporary technology adoption, which will enable it to evolve to a fundamentally new level and offer taxpayers high-quality services. Taxes can now be paid "online" on the website of the tax system by citizens and clients of any business. Both for the tax agency and for taxpayers, the tax system of the past years was ineffective and cumbersome. The previous tax system encouraged corruption, required several reports and reconciliations, and required that taxpayers personally contact the tax authorities to pay their taxes. The Uzbek tax system is the most advanced state institution today, and people find it quite comfortable to undergo tax inspections. Digitalization has made it feasible to streamline the contact between tax authorities and taxpayers as well as to enhance the job of tax authorities. It is now feasible for tax authorities to watch taxpayer tax flows, confirm the accuracy of tax deductions, and spot tax evasion schemes thanks to the integration of information technology into their daily operations. The job of tax authorities is done more effectively and with less trouble to businesses when tax and accounting reports are submitted electronically. A collection of technological, organizational, and software tools used to automate the processing of accounting, control, and reporting information in tax systems at various levels is what is referred to as an automated tax information system, which is an economic information system in the tax system. A resolution titled "On additional measures for the widespread introduction of modern information and communication technologies into tax administration" and dated June 5, 2020, No. 359, was approved by the Uzbek Cabinet of Ministers [2,3,4]. The State Tax Committee's Strategy for the Development of Information and Communication Technologies was authorized in the document, along with a number of implementation-related actions. The enhancement of tax administration, the continuing of the path towards lowering the tax burden, and the simplification of the taxation system are significant goals of the Action Strategy for future growth. The country's economic stability, the promotion of entrepreneurship, and an increase in tax revenue are the key objectives of the tax reform. The following tasks are specified in the Strategy:

- modernization of the data center and telecommunications applications;
- purchase of servers and software;
- transfer of a complex of information systems to a single platform;
- improving the quality of the provision of electronic public services;
- operational processing of big data.

Up to 20 trillion soums in additional state budget funds will be used to fund the project's execution. By implementing new measures, it will be feasible to consolidate electronic services and systems into a single platform, drastically lessen the pressure on servers and massive data bases, and speed up business networks. As a consequence, it is anticipated that data processing and analysis will proceed ten times more quickly, database information will be kept secret, and the size of the information tax base will expand to 1 Petabyte. The implementation of Business Intelligence and Big Data technology is one of the Strategy's primary goals. As a result of their implementation, there will be less "shadow turnover" and more opportunities to study market conditions, expand big data processing systems, analyze data generated by centralized systems, analyze market prices for goods and services, cut labor costs by processing and analyzing data, increase protection against external threats, and store data safely and securely. The State Tax Committee will thereafter be able to automatically audit and monitor database information in real time thanks to the development of case management and case assessment system systems [4,5]. Consequently, the following outcomes will arise from moving information systems to a single platform:

- optimizes systems for data entry, collection, analysis;
- prevent database load;
- Facilitate the process of filing tax returns by taxpayers;
- create a completely new system of tax administration and control;
- application of preventive measures to prevent corruption flows.

A greater number of systems for information sharing between tax authorities and other ministries and agencies is also mentioned in the resolution. Due to the efficiency with which the tax authorities can access and analyze the vast quantity of data submitted electronically by taxpayers, these steps will help to increase the revenue base. Since their usage lessens the complexity of transactions between the taxpayer and the tax agency, contemporary information technologies and computer applications provide for the facilitation of users' labor. The digitalization of tax administration and the tax system would not only boost economic growth but also make it more efficient to monitor the tax burden of business entities at the present stage of development.

*The purpose of this work is:*

- study of issues of high-quality implementation of information technology in tax state systems;
- data processing by specialized software products;
- timely receipt of objective information on tax revenues by providing a wide range of modern and comfortable interactive public services;
- optimization of managerial decisions, through the phased use of the method of expert assessments.

**Research objective** – Examine how other nations have used information technology in the area of taxes, highlight the best digitalization instances, and determine if Uzbek tax officials may benefit from learning from other countries' experiences.

The study's innovation resides in the author's new suggestions for the tax system's simplicity, the addition of new tax control tools, and the enlargement of the set of wise management choices based on the expert evaluations technique. Many taxpayer entities already indicate a wish to have real-time access to the regional tax system's management team and interactive public services. People's dissatisfaction with how managers and leaders of state tax agencies approach their everyday tasks is the cause of this desire. You must correctly register a claim and be knowledgeable of several laws,



regulations, and legal documents in the area of the regulatory framework for tax law in order to safeguard your rights in the tax sector. For regular citizens who pay taxes in the republic, understanding the complete bureaucratic system of autonomous problem-solving is challenging and, in some situations, fruitless. Because of this, the development of contemporary information technologies will enable the development of a qualitatively new system for controlling local executive bodies of tax systems as well as a system of controlled interaction with state executive bodies. The monitoring of engineering and communication networks, control over accumulated tax payments, and information assistance for the managerial decision-making process should all be made possible by modern information technology. As a result, the systematic use of contemporary information technology will improve the quality of taxpayers' lives and enable the provision of real-time information regarding service status in the early stages. Workstations for office system administrators and information security services are two examples of contemporary information technologies used in the tax system. These technologies are linked together by communication devices to establish a single, worldwide information environment. However, the employment of sophisticated programming techniques based on cutting-edge computer technologies like EVDO and 5G LTE is required for the tax system to operate in an efficient and high-quality manner. In order to ensure the collection of taxes and other required budget payments as well as to conduct a thorough operational analysis of calculated data on taxation, the State Tax System of Uzbekistan has currently created the solig.uz websites and the interactive portal my.solig.uz [2,3]. The processing and storage of data on the calculation and payment of various taxes, as well as the creation of operational reporting for tax authorities, an automated interface with banks, customs authorities, and other state structures on the basis of the target software complex "ele" are all significant tasks of integrating modern information technologies into the work of the tax system. For high-quality service to taxpayers, more than 20 different types of contemporary state interactive services have been developed and successfully used. These services include a structured directory of tax benefits for individuals and legal entities that is posted on websites and is updated frequently with the ability to search by various criteria. A method for information transmission between all Uzbek tax department topics has been created, based on satellite communications. The establishment of a corporate data transmission network based on the BRAS fiber optic channel helped to allow the consistent growth in the amount of tax information. This has led to a 35-fold improvement in data transmission speed, enabling the steady operation of current software products like the corporate web site and interactive services. As of right now, the Republic of Uzbekistan is in the process of gradually digitizing all sectors of state tax structures, as well as accruing and accounting tax revenue and other required budget contributions in real time. My.solig.uz, open data (data.gov.uz), the national search system www.uz, the information and legal portal norma.uz and legal acts (lex.uz), a single portal of interactive public services (my.gov.uz), as well as the educational information portal ziyonet, are examples of the state providing mechanisms for openness, transparency, and feedback from the population about its everyday problems [4,5]. The development of a single online information portal first provided information on accumulated tax computations and other required payments available, and in the future will enable the payer to remotely manage his personal account for all sorts of taxes. Any subject or taxpayer with Internet connection who registers on the information center's portal is able to pay the accumulated amounts in real time as well as submit reports and computations on time while also viewing the accumulation of all forms of tax payments made on his personal account. Only my.solig.uz - the "Electronic Tax Services" site presently offers 50 state electronic services. In specifically, 12 sorts of paperwork and 27 types of reporting are transmitted online, and taxes are paid electronically into the taxpayer's personal account. Therefore, the adoption of information technology is pertinent and required to manage the operation of the tax service and establish practical working conditions for handling citizen appeals. The information system strengthens control over the quality of services provided by the tax system, the social security of the populace, and the quality of choices made. In the area of tax economics, information Web portals have been developed

to aid citizens in rapid and pleasant real-time connection with tax administrators. Specifically, to protect their legal rights and exercise quality control over the contemporary information technology services that are offered to them. The chances of information technology improving to the level of global quality requirements in the area of tax structures and, specifically, interactive services, are still dim. Even the various automated systems currently in use in the republic's tax services do not meet modern standards; for instance, they do not implement the role of protecting the rights of taxpayers in situations involving disputed tax charges or the function of the population's social orientation. But the tax economy overhaul includes this as one of its top priorities. The majority of systems in use lack features like transparency and dependability and cannot dynamically adapt to the continuously changing legal and reliability of the process of calculating and paying tax payments. Due to a number of factors, including the fact that the tariff system itself does not encourage the introduction of new technologies and complexes and that the principles of the market mechanism are not taken into account when establishing tariffs, there are difficulties in implementing modern information technologies in the area of taxation at a rapid and high-quality rate. As a result, the current tariffs do not permit raising the prices of modernizing capital assets or completely replacing existing machinery with ones that use top-notch new technology. As a result, raising the quality of tax services is intended to make it easier to bring the state's tax infrastructure up to par with international standards, which will provide comfortable conditions for paying the accrued tax payments of citizens within the specified time frame. However, the current negative situation hinders the introduction of the world's most advanced information systems in the field of tax services. Therefore, this service sector of the economy, according to many experts, is in a state of crisis, historically due to a number of circumstances:

- inefficient management system;
- high material costs;
- underdevelopment of the competitive environment;
- chronic non-payments;
- corrupt state structures;
- local mental relations of the population.

These conditions are primarily due to a lack of technical assistance required in the digital tax environment, a lack of funding prospects for tax policy development, and the introduction of new information technologies in tax administration. In order to address current issues, it is essential to develop a model of taxpayer engagement that allows for both discussion of newly developed information tax technologies and the solicitation of suggestions for enhancing current digital solutions. In this case, it is feasible to develop the logic of the application of information technologies, which is covered in the framework of the global practice of the tax authorities of different countries, by using the best global practices as well as borrowing instances. Only the introduction of controlled engagement with state power's executive bodies and the use of new information technology would allow for the successful solution of this issue. Information support for managerial decision-making should be provided by modern information technologies, which should also provide transparent and unbiased monitoring of the state of the tax economy, engineering networks and communications of buildings, settlements with taxpayers and control of payments for assessed taxes. With the integration of all interactive services into a single information and technology chain, a single information and settlement center serves as a database for the whole tax domain. The previously constructed and well-established technological foundation of the city and the area, namely a communication infrastructure, should serve as the first foundation for the adoption of information technology. It need to be built upon a qualitatively fresh digitalized system that will close the gap between an already largely constructed basis and current law enforcement practice. And this will enable raising the standard of judgments taken, enhancing population social security, and tightening supervision over tax-related company operations. Only with the wise and focused use of financial and material resources, which guarantees the sustainable growth of the economy and raises

population quality of life, is the impact of information technology usage conceivable. [5]. Therefore, lack of financing for technical assistance or funding that is not specifically targeted is the biggest economic barrier to the use of current technology in the system of tax services. It should be emphasized that tax services will use cutting edge techniques and Internet of Things technology to create a single information space for the industry, IT systems for informing customers and processing their data, and introduce mobile and cloud solutions as part of the transition to full-scale automation of business processes. The production discipline of all parties involved in the process of integrative services can only assure full adherence to the laws governing tax services and the designated technical process. However, for some reason, all forms of interactive public services are fundamentally different in quality, durability from international counterparts and standards, while respecting all regulatory norms and technology at the stage of information technology operation in the tax system. As a consequence, either domestic technology and regulatory papers are much out of date, or they do not adequately reflect our unique cultural context, or, more critically, corrupt structures successfully contribute to the project paperwork. Additionally, corruption, to use a metaphor, participates subtly in the system of tax interactive services; it is very challenging to identify it. The ultimate outcomes of the services provided and the job completed must first be thoroughly and objectively analyzed in order to identify any corruption in the tax system. Here, the fundamental issue is the excessive appetites of dishonest officials who profit from the execution of information technology initiatives in the tax area by advocating on behalf of rival businesses. As a result, the project's cost to integrate information technology into the tax code and interactive services rises, and the project's quality and dependability significantly deviate from benchmarks. Consideration of a project's real cost and operational time are its two most crucial components. We provide an ideal and efficient bottom-up methodology based on expert evaluations for the introduction of contemporary information technology methods in the tax system of Uzbekistan based on the aforementioned objective assessments [6,7,8,9,10]. The method's main idea is as follows: The structures of the tax system are progressively introduced to current techniques, programs, and technological means of information technology communication in accordance with the authorized schedule. According to the State Tax Inspection's regulations, a state inspection must be conducted throughout implementation. Additionally, qualified specialists and experts should be included in the final assessment and analysis of the quality of the implementation of current information technology projects in the tax system. At each level of the integration of digital technology initiatives into the tax system, a carefully chosen expert survey is carried out. In the field of taxes, an expert is a source of a significant quantity of unbiased knowledge that is both qualitatively and quantitatively reliable. A working group made up of experts is created when adopting the expert approach. The working group plans the expert interview process, gathers questionnaires, creates, and evaluates expert evaluations. The expert panel then calculates the overall score for all factors and the sum of those scores, after which the weighting coefficients for each factor are assessed. An example of a survey questionnaire for knowledgeable specialists in the city of Samarkand for the reporting period is provided 2021. Leading experts in the field of tax legislation and modern digital technology in the tax system were invited and interviewed as experts. The questionnaire consists of 20 questions and the answers of experts are recorded on a 10-point scale for all expert members participating in the survey (1-min score, 10-max score) [17,18].

The questionnaire included the following questions:

1. How do you assess the quality of the modern methods and programs of information technology introduced into the state tax system?
2. Have you finally accepted the ideas developed by you for improving the services of interactive public services of the tax authorities?
3. How do you feel about the regular survey of experts on the transparency of tax laws?
4. How satisfied are you with the quality of the interactive public services posted on the official websites of the tax authorities.

5. Are you satisfied with the work of the official state site solig.uz and the portal my.solig.uz?
6. Is there a need for continuous distance learning for taxpayers about tax legislation using modern information technologies?
7. How do you assess the level of competence of the heads of tax services?
8. How do you assess the level of knowledge of tax officials in the field of taxation?
9. Are you satisfied with the overall tax burden of the Republic of Uzbekistan (currently the tax burden is 27%)?
10. How do you assess the liberalization and transparency of the taxation system?
11. How do you feel about the rates of tax penalties in case of violation of tax laws?
12. Do you agree to a phased reduction and optimization of the number of taxes (10 types) and other mandatory payments (5 types)?
13. How do you evaluate the activities of the coordinating council for scheduled inspections on taxation of individuals and legal entities in Uzbekistan?
14. Are you satisfied with your monthly salary?
15. Does your family have any other financial income?
16. How do you feel about the transparency of the tax code of Uzbekistan?
17. How do you assess "Increasing the quality and quantity of public electronic services" - will reduce the human factor and drastically reduce corruption?
18. Is there corruption in the tax structures of Uzbekistan?
19. Have you personally encountered corrupt officials of tax structures?
20. Did you personally give bribes to corrupt officials?

Table 1. Expert scoring of factors

Experts	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Factors																		
1	6	5	6	5	6	5	7	6	6	4	5	4	5	6	5	6	6	5
2	6	5	6	6	5	7	5	4	5	6	4	6	7	4	5	6	5	7
3	7	5	6	6	7	5	4	5	6	7	5	4	5	6	6	5	6	5
4	6	6	5	6	6	7	5	6	6	5	6	5	4	7	5	6	5	6
5	5	6	5	4	5	4	5	4	5	6	5	7	5	6	5	6	5	7
6	5	6	4	7	6	5	4	3	5	4	5	7	4	6	5	5	6	5
7	6	5	6	4	5	4	5	6	5	6	6	7	5	6	6	5	5	7
8	6	6	5	4	5	6	5	5	6	5	4	5	6	5	6	5	4	5
9	6	5	6	5	6	5	5	6	5	4	5	6	6	5	4	6	5	6
10	6	6	5	5	4	6	5	6	4	5	6	5	5	6	5	5	6	4
11	5	5	6	7	6	7	5	6	5	4	5	6	5	4	6	5	6	5
12	5	6	7	5	4	6	6	5	5	4	6	4	5	6	7	6	5	5
13	6	5	5	6	6	5	6	5	5	5	6	5	7	6	7	5	5	7
14	7	6	5	6	7	5	7	6	7	6	5	7	6	5	7	6	7	5
15	6	7	6	5	6	6	6	7	5	5	6	5	7	5	6	7	7	6
16	7	6	6	7	5	6	7	6	6	5	6	7	5	6	6	7	6	5
17	6	6	7	5	6	7	5	6	6	6	7	6	5	5	6	7	5	5
18	5	5	5	6	6	6	7	6	5	5	6	7	6	7	5	6	6	5
19	6	5	6	6	5	5	6	7	6	6	7	6	5	7	6	7	6	6
20	6	5	6	7	6	5	6	7	6	5	6	7	6	5	5	5	6	6
<b>TOTAL</b>	<b>118</b>	<b>111</b>	<b>113</b>	<b>112</b>	<b>112</b>	<b>112</b>	<b>111</b>	<b>112</b>	<b>109</b>	<b>103</b>	<b>111</b>	<b>116</b>	<b>109</b>	<b>113</b>	<b>113</b>	<b>116</b>	<b>112</b>	<b>112</b>

Continuation of Table 1.

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	<b>TOTAL</b>
3	6	5	4	4	6	4	7	4	6	4	4	3	4	7	4	5	<b>178</b>
6	5	5	5	6	4	7	6	5	4	4	6	4	7	4	4	6	<b>187</b>

7	5	4	6	6	5	4	7	4	4	5	4	6	4	5	4	6	<b>186</b>
5	6	4	6	6	5	7	7	6	4	6	4	5	4	4	6	5	<b>192</b>
7	5	6	5	4	6	6	5	6	4	6	4	3	4	7	5	6	<b>184</b>
6	5	5	6	5	4	6	6	5	5	4	5	6	7	5	6	5	<b>183</b>
7	6	6	5	6	5	6	4	6	6	7	4	5	6	5	6	5	<b>194</b>
6	7	5	6	5	6	4	5	6	5	6	7	6	5	6	5	6	<b>189</b>
7	5	6	5	6	5	6	5	5	6	6	5	4	5	4	5	6	<b>187</b>
5	6	5	5	6	6	5	4	6	5	6	5	4	6	5	6	5	<b>184</b>
6	7	6	5	5	6	6	5	6	6	5	6	5	6	5	5	6	<b>194</b>
6	7	5	6	5	6	5	6	5	4	6	5	6	5	5	6	5	<b>190</b>
7	6	6	7	6	7	6	7	5	6	7	6	6	5	6	7	5	<b>207</b>
6	5	7	6	6	7	6	5	6	7	5	7	6	6	5	6	6	<b>212</b>
6	5	6	7	6	5	6	6	5	6	6	6	5	7	7	5	6	<b>208</b>
5	6	6	7	6	6	7	7	6	7	6	5	6	6	5	6	6	<b>212</b>
6	5	6	6	7	6	6	5	7	6	5	6	7	6	5	6	5	<b>206</b>
5	6	7	6	6	7	6	5	6	5	6	6	5	7	6	5	6	<b>204</b>
6	5	6	7	5	6	5	6	7	6	6	7	6	6	5	6	5	<b>208</b>
5	6	7	6	6	7	6	6	7	6	5	6	6	5	6	6	7	<b>208</b>
<b>117</b>	<b>114</b>	<b>113</b>	<b>116</b>	<b>112</b>	<b>115</b>	<b>114</b>	<b>114</b>	<b>113</b>	<b>108</b>	<b>111</b>	<b>108</b>	<b>104</b>	<b>111</b>	<b>107</b>	<b>109</b>	<b>112</b>	<b>3913</b>

Table 1 shows the results of the final quantitative assessment of factors determined using the simple ranking method. Using the method of mathematical statistics, we obtain a generalized opinion of experts. The average rank of each factor is determined, the average statistical value of the Sj-th factor.

$$S_j = \frac{\sum_{i=1}^{35} a_{ij}}{m_j}$$

here,  $S_j$  – mean of factors,  $a_{ij}$  – assessment of the factor by an expert.

$m_j$  - number of experts estimating the j-th factor,  $i$  - expert number,

$j$  - factor number. After processing the data in Table 1, the average rank of factors was:

$S_1=5,1$ ;  $S_2=5,3$ ;  $S_3=5,3$ ;  $S_4=5,5$ ;  $S_5=5,3$ ;  $S_6=5,2$ ;  $S_7=5,5$ ;

$S_8=5,4$ ;  $S_9=5,3$ ;  $S_{10}=5,3$ ;  $S_{11}=5,5$ ;  $S_{12}=5,4$ ;  $S_{13}=5,9$ ;  $S_{14}=6,1$ ;

$S_{15}=5,9$ ;  $S_{16}=6,1$ ;  $S_{17}=5,9$ ;  $S_{18}=5,8$ ;  $S_{19}=5,9$ ;  $S_{20}=5,9$ ;

Based on the findings of the expert scoring, it can be said that the overall view of experts is slightly above the average standard level, or at a satisfactory level, with regard to the effective deployment of information technologies in the tax service in the city of Samarkand. The expert method is the most ideal and efficient tool for managing the quality of interactive services for tax services, according to statistical processing of the final results on the state of the implementation of information technologies and engineering communications, obtained from experts by scoring. It can be advised that standards and regulations in the areas of the tax system and interactive public services, as well as the rules for their implementation based on the expert method, should be updated at the legislative level in Uzbekistan [12,15,16] as a result of the analysis of the final data of expert assessments. The following pertinent requirements and suggestions should be incorporated at all phases of the adoption of information technologies in the tax service and interactive services, as well as in national regulatory guides and international standards:

- introduction of modern technical means and information technologies based on the recommendations of competent specialists;
- optimization of information flows, centralized storage of information on taxation and increasing the cybersecurity of information systems;
- creation of transparent and high-quality interactive public services for taxpayers;
- introduction of qualitatively new principles and rules for organizing the introduction of information technologies and services based on foreign analogues;



- providing taxpayers with a wide range of interactive services, providing them with access to information, accrued and paid taxes in real time;
- control of the level of efficiency and quality of the introduction of information technologies into the tax system, in accordance with national and international standards;
- improving the efficiency and quality of capital investments of information technology projects in the tax system;
- support for the development of national innovative enterprises developing digital infrastructure, platforms and technologies into the tax system;
- potential integration with various solutions, including those with national specifics, using modern IT products;
- development of market methodological recommendations for evaluating the effectiveness and monitoring the organization's introduction of information technology into the tax system, taking into account the available resource support;
- introduction of the world's most advanced information systems and calculation methods in the field of tax services.

Therefore, it may be claimed that contemporary approaches to integrating information technology into the tax system offer a lot of promise. One of the most crucial areas where the digital transformation of Uzbekistan's economy should start, according to experts, is the degree of complexity of integrating a digital economy into a tax framework. The extremely evident societal significance of the industry, as well as a variety of other economic and political considerations, all support this viewpoint. By inputting PINFL in payment systems like Payme, Apelsin, and Click, users of interactive tax services will be able to obtain trustworthy information on the state of personal accounts. This will shorten the amount of time needed to pay accumulated tax payments and will remove any distortion in the reporting to the tax authorities [2,4,5]. Therefore, the current global digital economy is profoundly altering how we think about everyday concepts. The greatest ways to describe the continuing processes are through new terminology and approaches. According to the Tax Code, there are now 10 different categories of taxes and 5 different types of additional required payments in Uzbekistan. There are also streamlined taxing systems for farms and a flat tax for specific sorts of operations. In the framework of the shift to market relations, the economic changes implemented in Uzbekistan have had a significant influence on the growth and operation of the tax system. Experience from throughout the world demonstrates that, thanks to information technology, the tax system keeps becoming better every year. A further reduction in the number of taxes, the burden on business entities, and the optimization of the number of tax benefits in order to increase their efficiency are all associated with improving the tax policy of the state at the current stage in the context of the liberalization of the country's economy. The primary objectives and priorities for growth in this sector have evolved, and now include encouraging the adoption of new technologies, supporting the structural reform of the tax service, and moving interactive services and tax payments gradually online. The consolidated budget states that as a result of the change, the economy's tax burden dropped from 26.5% of GDP in 2018 to 26.1% of GDP in 2019. In addition, throughout this time period, the tax burden on the economy—excluding insurance funds—rose from 19.4% to 21.4% of GDP. As a result, the burden on large enterprises was lessened while it increased for small and medium-sized businesses as a result of the tax change. The present Uzbekistani tax system has a strong chance of becoming digitalized, based on the above. For economic reasons, a gradual shift to digital is long needed. Despite many difficult circumstances, many of the most progressive tax state structures are incorporating new technology into their operations due to their great potential and effectiveness. Additionally, the nation is home to software developers that are capable of producing products of the highest caliber, with great implementation effects. As a result, there is a good likelihood that the "legalization" of information modeling technologies, which has now started at the state level, will be successful. And based on the government's intentions, the Uzbek tax system



will ultimately transition to the "digital era" in the following few years. Thus, it can be said with certainty that the expert approach is the best and most efficient instrument for controlling the standard of interactive services provided by tax systems. Taxation experts must understand network connections, operate with databases, utilize legal reference systems, and deal with information security and information protection concerns. To solve the real issue of the effectiveness of the tax authority, which will result in qualitative improvements in the lives of taxpayers, the expert method should be adopted as one of the novel and unconventional techniques. Therefore, only a thorough bottom-up strategy based on expert assessment methods and the methodical application of contemporary information technologies will improve the quality and transparency of monitoring tax structure objects in Uzbekistan and become a determining factor for their efficacy.

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## ANALYSIS OF FACTORS AFFECTING THE MARKET OF GRAIN AND CULTURAL PRODUCTS IN SAMARKAND REGION

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### ABSTRACT

Today, every industry is raising its development processes to new levels. This aims to implement promising work by evaluating and analyzing market opportunities in enterprises operating in each field. In our research, the analysis of the state of grain products market in Samarkand region and the economic parameters of the influence of factors were studied. In the article, the research of grain and grain products market in Samarkand region, the analysis of changes in agriculture, their trends, the state of wheat cultivation from grain products and its prospects, the analysis of the factors affecting the grain products market, and the results are calculated by the author. edited by In addition, scientific proposals and recommendations were developed based on the results of the analysis of factors affecting the market of grain products.

**Key words:** Cereal products, market research, factors affecting the cereal market, correlation, regression, linear equations, trend of cereal production.

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### INTRODUCTION

Development trends in all aspects of the world are changing every year due to the efforts of mankind to meet their needs. In particular, the demand for raw materials is increasing every year. It is also associated with population growth. After all, according to the results of the 1st quarter of 2023, the world's population is 8,028,298 people [1]. The annual growth of this trend shows that the demand for the basic needs of mankind must increase, and the corresponding supply must level off. According to the UN, projections show that by 2030 the world will strive to achieve the global nutrition goals of the Sustainable Development Goals. According to The State of Food Security and Nutrition in the World 2021 report [2], the food security and nutrition situation of the most vulnerable segments of the population may worsen due to the medical and socio-economic consequences of COVID-19 pandemic.

**Literature analysis.** It is possible that in the coming years the demand for food and essential goods will increase two to three times. This means that enterprises and organizations operating in these areas are responsible for the best performance of the tasks. In particular, the correct assessment of trends in the development of the grain and grain products market, the development of promising forecast parameters for the demand for grain products, the use of innovative methods in the production of grain products, the further strengthening of conditions for the development of trading processes with grain products based on market principles, the elimination of various obstacles in pricing on conditions free market, the development of opportunities for evaluating and improving the effectiveness of marketing services based on the full use of the capabilities of marketing services for researching the market of grain products, based on the effective use of modern information technologies, software, evaluation methods in evaluating the effectiveness of marketing services, increasing the efficiency of enterprises processing grain and grain products

remains relevant.

As a result of the development of time and the maturation of people's consciousness, great changes are taking place in society. Research is needed to make changes. Every enterprise and organization strives to develop marketing, like all industries, to open up new directions and opportunities for its development. Marketing research is a system of conducting research according to a specific plan and program in order to determine the current state and prospective opportunities of an enterprise [2].

**Analysis and results.** As a result of marketing research, it is possible to determine the exact consumers of an enterprise or market or determine their wishes. This indicates that the company's products are focused on a specific consumer market.

Especially today, an increase in the population of the country increases the need for food by 2-3 times. After all, our people appreciate grain and bakery products and apply them to their eyes. Grain is the staple food of our people. Grain was considered our livelihood. During the years of independence in our country, the cultivation, storage and processing of grain have reached an industrial level. You can get acquainted with the grain products grown in Uzbekistan today, based on the information presented in the following table:

**Table 1**

**About grain and leguminous products grown in all categories of farms of the Samarkand region for 2013-2022 (tons)**

№	Type of product	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	Cereals and legumes total	838643	848597	851784	875610	744044	632760	756040	855179	828686	842923
1.2	wheat	805578	806566	808174	808270	658377	541119	644921	677054	659104	682633
1.3	barley	10206	11172	11103	11408	11706	15274	19148	18307	x	x
1.4	rye	0,0	0,0	0,0	0,0	0,0	8,0	105,0	0,0	x	x
1.5	for corn grain	13080	20952	22341	37732	23331	22782	24192	37626	45244	57470
1.6	white corn	0,0	0,0	0,0	0,0	0,0	0,0	22,0	x	x	x
1.7	millet	0,0	0,0	0,0	0,0	0,0	3,0	281,0	x	x	x
1.8	oatmeal	0,0	0,0	0,0	0,0	0,0	2,0	63,0	x	x	x
1.9	marginak	0,0	0,0	0,0	0,0	0,0	0,0	69,0	x	x	x
1.10	rice	230	863	984	1456	578	239	223	349	402	72
1.11	legumes	9391	9040	9182	16744	49739	41464	66833	112563	116399	86483
1.12	peas	0,0	0,0	0,0	0,0	0,0	5042	6507	x	x	x
1.13	beans	0,0	0,0	0,0	0,0	0,0	15553	24226	x	x	x
1.14	lentils	0,0	0,0	0,0	0,0	0,0	0,0	406	5363	x	x

Source. Information of the Samarkand regional department, Agency on statistics under the President of the Republic of Uzbekistan. <https://samstat.uz/uz/rasmiy-statistika/agriculture-2>

Based on the data in the table above, we can say that the growth of the grain products market is increasing from year to year. This explains the population growth and the increase in the number of people entering our country. The growth of these factors means an increase in demand for grain products. It sets the task for the representatives of the industry to fill the markets with better raw materials and goods and ensure their consumption.

In particular, the role of the marketing service department, the marketer working in the department, and the role of employees conducting marketing analysis are incommensurable in

predicting market trends.

In the course of market research, we try to identify and study future market trends by analyzing the data in the table above.

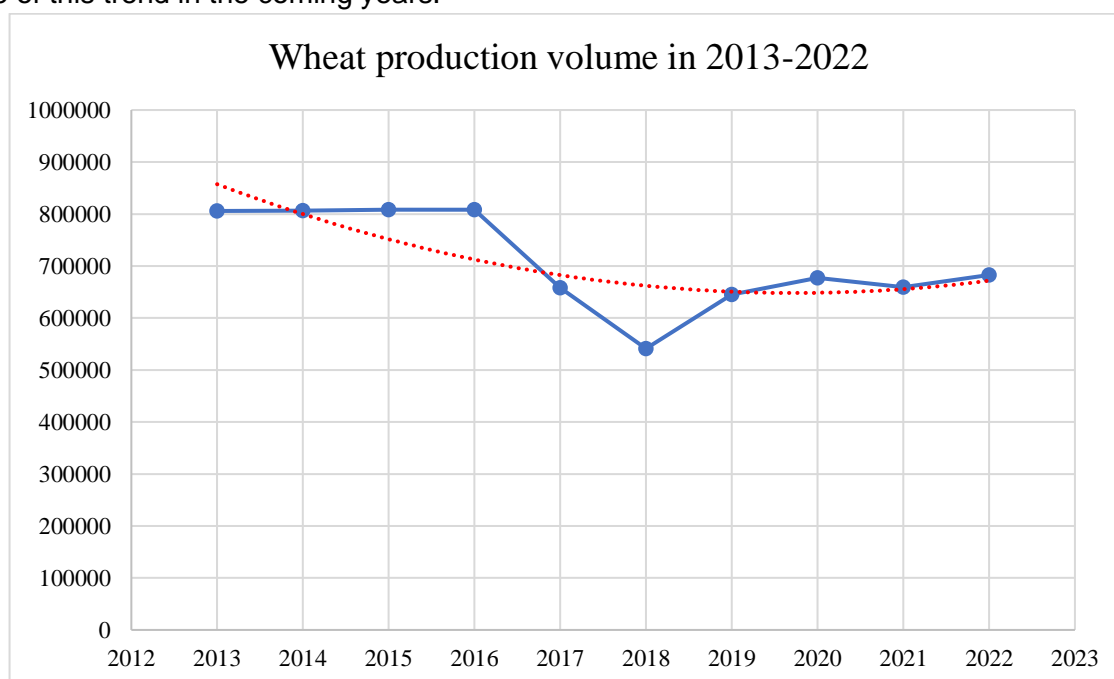
At the moment, we will develop forecast parameters for future years through the MS EXCEL program, trends in wheat, which is part of grain products, in the coming years.

**Table 2**

**The volume of wheat grown in the Samarkand region in 2012-2022 (tons) [3]**

Years	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Wheat	805578	806566	808174	808270	658377	541119	644921	677054	659104	682633

In 2013-2022, the amount of wheat grown in the Samarkand region at the beginning of 2013 was 805,578 tons, and by 2018 it decreased to 541,119 tons. By the end of 2022, we see that it has entered the growth trend of 682,633 tons. If we consider the forecast parameters for the growth or decline of this trend in the coming years.



**Diagram 1. Dynamic state of wheat production in Samarkand region in 2013-2022**

Based on the above diagram, it became known that the volumes of wheat cultivation in 2023-2025 are forecast parameters. This prediction is made by the following function [3]:

$$y = 4613x^2 - 71359x + 924053$$

This function was used to develop forecast parameters for subsequent years. By the end of 2022, 682,633 tons of wheat were grown, and by the end of 2023 this figure was projected at 697,277 tons. This imposes on enterprises operating in this area such tasks as increasing production capacity, properly distributing production volumes, capturing target markets with the proper use of marketing opportunities, and entering foreign markets with goods and products.

Above, we analyzed the dynamics of wheat cultivation in the Samarkand region in 2013-2022. In addition, we have developed a function of forecast parameters for 2023-2025. Thanks to this, we were able to see the state of the market in the coming years, albeit partially.

In the course of our study, we are interested in many other problems, which increases the amount of work that needs to be done and considered within this topic. First of all, it is advisable to determine the impact of an increase or decrease in the population size on the growth of wheat production in the coming years and the level of dependence using a correlation-regression analysis.

**Table 3****The volume of wheat grown in the region and the dynamics of livestock for 2013-2022**

<b>№</b>	<b>Years</b>	<b>Volume of wheat (tons)</b>	<b>Population (people)</b>
1	2013	805 578	3 380 900
2	2014	806 566	3 445 600
3	2015	808 174	3 514 800
4	2016	808 270	3 583 900
5	2017	658 377	3 651 700
6	2018	541 119	3 720 100
7	2019	644 921	3 798 900
8	2020	677 054	3 877 400
9	2021	659 104	4 031 300
10	2022	682 633	4 118 200

In the case of analyzing the degree of influence of these two factors on each other using the data in the table, the following correlation appears:

	<b>X</b>	<b>Y</b>
<b>X</b>	1	
<b>Y</b>	-0,614	1

We can see that the correlation coefficient of the relationship between the above two factors is -0.614. Based on the correlation analysis, the correlation between the two factors is negative, but the correlation between them is very important. After all, an increase in the population will always increase the demand of the population of our country for wheat. If we determine wheat production of 697,277 tons based on the above forecast for 2023 using the linear equation  $y = -0,1624x + 486,43$  then 697,277 tons of wheat raw materials for 2023 will be enough for 4,118,000 residents of the region.

Having performed the correlation analysis, we will now perform a regression analysis. When finding a non-linear regression equation, we consider several types of regression equations (linear, hyperbolic, exponential, and graded) and select the regression equation with the highest coefficient of determination and the most accurate representation of the trend. He set a goal to determine whether the increase in the population of the region depends on the production of wheat. Y - volume of wheat production (thousand tons), X - population (million people). The data obtained as a result of observation are shown in the following table:

**Table 4****Statistical parameters of X and Y factors for regression equations**

X	3380,9	3445,6	3514,8	3583,9	3651,7	3720,1	3798,9	3877,9	4031,3	4118,2
Y	805578	806566	808174	808270	658377	541119	644921	677054	659104	682633

During our research using the MS EXCEL program, we tracked the related aspects of Y and X using 4 types of regression equations.

**1. We can see that the data calculated in the linear regression equation is expressed as follows:**

**Table 5****Linear Regression Equation Results**

coefficient $a$	-232,7471144	coefficient $b$	1573213,695
standard error $m_a$	105,5298083	standard error $m_b$	392530,545
Determination coefficient $R_{xy}$	0,378122851	standard deviation $y$	77664,46012
$F$ — Statistics	4,864277157	Degree of freedom $n-2$	8



Sum of Squares Regression $S_b^2$	29340193079	Residual sum of squares $S_a^2$	48254146928
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Thus, the coefficient of determination of linear regression  $R_{lr}=0,378122851$ . The criterion characterizing the adequacy of the model is equal to  $F_{lr}=4,864277157$ . The regression equation will look like this:

$$y = -232,7471144x + 1593213,695.$$

2. We can see that the data calculated in the hyperbolic regression equation is expressed as follows:

Table 6

Results of the hyperbolic regression equation

coefficient $a$	-7,169E-08	coefficient $b$	0,000536555
standard error $m_a$	1,46338E-09	standard error $m_b$	5,44321E-06
Determination coefficient $R_{xy}$	0,996677678	standard deviation $y$	1,07697E-06
$F$ — Statistics	2399,954198	Degree of freedom $n-2$	8
Sum of Squares Regression $S_b^2$	2,78363E-09	Residual sum of squares $S_a^2$	9,27894E-12

Thus, the coefficient of determination of hyperbolic regression  $R_{hr}=0,996677678$ . The model adequacy criterion is equal to  $F_{hr}=2399,954198$ . The regression equation will look like this:

$$y = -\frac{-7,169E-08}{x} + 0,000536555$$

3. We can see that the data calculated in the exponential regression equation is expressed as follows:

Table 7

Exponential regression equation results

coefficient $a$	-0,000316654	coefficient $b$	14,63939365
standard error $m_a$	0,000158389	standard error $m_b$	0,58914705
Determination coefficient $R_{xy}$	0,333158521	standard deviation $y$	0,116566184
$F$ — Statistics	3,99685421	Degree of freedom $n-2$	8
Sum of Squares Regression $S_b^2$	0,054307957	Residual sum of squares $S_a^2$	0,108701401

Thus, the coefficient of determination of exponential regression  $R_{er}=0,333158521$ . The model adequacy criterion is equal to  $F_{er}=3,99685421$ . The regression equation will look like this:

$$y = -0,000316654 \cdot e^{14,63939365x}$$

4. We can see that the data calculated in the regression equation is expressed as follows:

Table 8

Regression equation results

coefficient $a$	0,000267426	coefficient $b$	7,224693093
standard error $m_a$	2,72567E-06	standard error $m_b$	0,010138455
Determination coefficient $R_{xy}$	0,999169638	standard deviation $y$	0,002005953
$F$ — Statistics	9626,347844	Degree of freedom $n-2$	8
Sum of Squares Regression $S_b^2$	0,038734937	Residual sum of squares $S_a^2$	3,21908E-05

Thus, the coefficient of determination in the regression equation  $R_{re}=0,999169638$ . The model adequacy criterion is equal to  $F_{re}=9626,347844$ . The regression equation will look like this:

$$y = 0,000267426 \cdot x^{7,224693093}$$

Among the four considered models, the level model has the highest coefficient of determination ( $R_{re}=0,999169638$ )  $y = 0,000267426 \cdot x^{7,224693093}$  model is the most accurate. The use of this model in forecasting is recommended for enterprises processing grain and grain products.

**Conclusions.** In conclusion, we can say that increasing the share of industrial goods in the country's economy, carrying out work related to the targeted and optimal supply and provision of industrial goods with raw materials, improving the structural structure of manufacturing enterprises, systematizing and automating the activities of structural divisions, assessing the activities of divisions of the structural structure and increasing their efficiency, improving the skills and qualifications of the department's employees is a topical and important issue today.

Having studied and analyzed the above information, the uniqueness of the information being processed, the following proposals and recommendations were developed:

- ✓ further improvement of the activities of enterprises for the processing of grain and grain products, building up their capabilities;
- ✓ conducting a technical and technological survey of the production capacities of enterprises in accordance with the forecasts of wheat grown;
- ✓ increase in the scale of cultivation of grain and grain products, especially wheat, with population growth;
- ✓ conduct marketing research on wheat cultivation based on the study of the needs of the population and the volume of imports;
- ✓ orderly implementation of population growth during wheat cultivation using the results of correlation and regression analysis;
- ✓ improving the quality of marketing services, automating their prospects, programming the work of marketers or using software to improve the activities of the marketing service department;
- ✓ for employees of the marketing service, when determining the prospects, use the results of correlation and regression analysis as an important criterion for systematizing their future work and developing an action plan;
- ✓ By the end of 2023, develop measures to grow 697,277 tons of wheat for 4,118,000 residents of the region and establish purchase and sale through open market mechanisms, etc.

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## ECONOMIC-STATISTICAL ANALYSIS OF ACTIVE CONSTRUCTION ENTERPRISES IN SURKHANDARYA REGION

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### ABSTRACT

In this article, the economic and statistical indicators of active construction enterprises in Surkhandarya region for 2014-2022 are years analyzed.

**Key words:** absolute growth, growth rate and growth rate, 1% increment value, absolute acceleration or decay rate (units).

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### INTRODUCTION

It is known that in recent years our country has been granted a number of indulgences and privileges for doing business. New mechanisms are being introduced to remove a number of bureaucratic barriers and work with entrepreneurs [1]. In the regions, active changes are taking place in the construction industry, as well as in other industries and sectors of the economy. This can be observed in the activities of existing construction enterprises in the Surkhandarya region. It is known that construction enterprises are divided into 3 groups depending on the type of activity (general construction and social facilities, melioration and irrigation, roads, bridges) [2]. In our country, there is a practice of dividing enterprises into groups in order to regulate their economic activities. In turn, enterprises are divided into groups depending on their economic activity [3].

#### Literature review

Q. Ibragimov made a statistical analysis of newly built houses in Surkhandarya region in his article [4]. Also Shodiyev.X showed the economic-statistical analysis in the book "What Statistics Teach" [5]. In this article, unlike the above, the statistical analysis of active construction enterprises is openly analyzed and recommendations are made.

#### Research Methodology

Methods such as economic, statistical and structural analysis were used in this study. The article also analyzes the articles of several economists as a basis.

#### Analysis and discussion of results

In this article, an economic-statistical analysis of active construction enterprises in Surkhandarya region is made. As we know, statistical observation is analyzed in two forms - statistical report and specially organized (checked) form [6]

If the absolute value of arbitrary network data for certain years is known, its change compared to a period taken for comparison can be determined by the absolute change of time series (chained and basic), growth rate (chained and basic), the value of 1% additional increase (or decrease), rate of increase (chain and basic), absolute acceleration or decay rate is performed using statistical analysis [7].

For this purpose, active construction enterprises in the Surkhandarya region in 2014-2022 were taken as the studied object. Statistical values of active construction enterprises in the region during the selected period are presented in the table below.

Economic and statistical analysis of existing construction enterprises in the Surkhandarya region in 2014-2022. shown in the following table [8]

Years	Number of operating construction companies	Absolute growth		Growth rate		Growth rate	
		In a chain method	In a basic method	In a chain method	In a basic method	In a chain method	In a basic method
	Units	Units	Units	%	%	%	%
2014	1231	-	-	-	-	-	-
2015	1102	-129	-29	89 %	89 %	-11 %	-11 %
2016	1171	69	-60	106 %	95 %	6 %	-5 %
2017	1301	230	70	111 %	105 %	11 %	5 %
2018	1470	169	239	113 %	119 %	13 %	19 %
2019	1747	277	516	119 %	142 %	19 %	42 %
2020	2268	521	1037	120 %	182 %	20 %	82 %
2021	2486	218	1255	109 %	201 %	9 %	101 %
2022	2737	251	1506	110 %	222 %	10 %	122 %
<b>Average value</b>	<b>1723,6</b>	<b>200,75</b>	<b>566,75</b>	<b>109,625</b>	<b>144,375</b>	<b>9,625</b>	<b>44,375</b>

As can be seen from the table, the average value of the absolute increase by the chain method was 200.75, and by the base method - 566.75. Taking the lowest value in 2015, it is -129. That is, it can be seen that in 2015 there was a decrease by 129 compared to 2014. The negative value of absolute growth in 2015 and 2016 means that the number of active construction companies in the region has decreased compared to 2014. A significant increase can be noted in 2017-2022. In 2022, it received 2737, the highest value for the periods in question.

The growth rate was 109.625% under the chain method and 144.375% under the main method. In 2015, the growth rate was below 100%, which was accepted for this indicator. represents a reduction. It can also be determined that it has only increased since 2017. Similarly, it has been seen to rise from 105% to 222% from 2017 to 2022 based on the base method. In 2020, the growth rate under the chain method amounted to 120% of the highest value. This is the largest growth rate for the period under review. In 2022, compared to 2014, it more than doubled and amounted to 222%.

The average growth rate was 9.625% for the chain method and 44.375% for the base method. In 2019, it was 19% under the chain method and 42% under the base method. This is the maximum value for this parameter. In 2022, the largest value compared to the base was 122%. It reached its minimum value in 2015 and amounted to -11% according to the chain method. In the same year, according to the basic method, it received a value of -11%. Also in 2016, it was -5% under the base method. This means that the growth rate decreased during this period (the number of operating enterprises decreased compared to the base period). In 2020, 2021, 2022, it can be observed that the growth rate has increased dramatically, that is, up to 82%, 101% and 122%.

It is known that in statistical analysis, one of the main tasks is to analyze the value of 1% additional growth, absolute acceleration or decay rate (units), indicators. Statistical analysis of active construction enterprises in Surkhandarya region in 2014-2022 by 1% additional growth value, absolute acceleration or decay rate (units), indicators [9].

Years	Number of active construction enterprises	1 % additional growth value (units)	Absolute acceleration or deceleration rate (units)
2014	1231	12,31	-
2015	1102	11,02	-12020
2016	1171	11,71	1288
2017	1301	13,01	-30
2018	1470	14,7	547
2019	1747	17,47	-101
2020	2268	22,68	27214
2021	2486	24,86	-18200
2022	2737	12,31	1347
<b>Average value</b>	<b>1723,6</b>	<b>15,6</b>	<b>5,625</b>

The average value of 1% additional growth was 15,6. It also varied from 11,02 to 24,86. It can be seen that the change in the value of this increase is more than 2 times. The largest value was observed in 2021 and is equal to 24,86. The minimum value was reached by 2015 and it is equal to 11,02.

The absolute rate of acceleration or decay (grain) was constantly changing sharply during the analyzed period. At the same time, he accepted the average value of 5,625. In 2018, the minimum value was -18,200, while a year ago, in 2020, it was 27,214.

**Conclusion:** The construction industry has a great place in the socio-economic development of the region. This is a direct source of income in the trade of construction and industrial objects during economic growth. The construction industry contributes to the development of construction, urban transport, building materials industry, facilities infrastructures, trade enterprises, road construction and the living standards of the population, as well as the development of social and economic sectors. Therefore, it can be considered that the construction department will further develop in the Surkhandarya region in the coming years.

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# MONITORING THE ACTIVITY OF SMALL INDUSTRIAL ZONES AS A MECHANISM FOR INCREASING THE COMPETITIVENESS OF REGIONAL PRODUCTION COMPLEXES

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## ABSTRACT

Small industrial zones established in accordance with the Decision of the President of the Republic of Uzbekistan "On additional measures for the sale of state-owned objects to small businesses and private enterprises" serve to increase the industrial potential of the regions along with comprehensive support and further development of the activities of business entities is also very important.

**Key words:** KZS, small industrial zones, market, industry

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## INTRODUCTION

It is known that the establishment of specialized small industrial zones plays an important role in the creation of modern competitive products and services, creation of new jobs and growth of the population's income, increase of the gross domestic product of the country and socio-economic development of the regions. One of the remarkable aspects of the established small industrial zones is that the construction of necessary engineering communications and infrastructures is carried out at the expense of official organizations in accordance with the projects developed for the placement of business entities in small industrial zones, and they undertake the continuous supply of electricity and gas as needed. One of the main tasks of economic analysis is to evaluate and predict the competitiveness of products of enterprises, trade sectors, small industrial zones. The seriousness of competition in the changing market environment makes every enterprise or economic entity feel the need for constant monitoring of its economic situation in analogous organizations or institutions. In Uzbekistan, as in many foreign countries with a developed market economy, there is increasing attention to the creation, improvement and certification of the product quality management system, and a new management mindset is being formed in relation to quality. Therefore, conducting more in-depth research on increasing the competitiveness of regional production complexes is considered an important issue of the present day and acquires not only scientific, but also practical importance.

KSZs are actually a new directive form of spatial organization of the industry, which can become growth poles of appropriate program-targeted regional and municipal planning and management.

## ANALYSIS REVIEW

Problems of organization and development of industrial parks in the regions A.A. Prachenko, O. L. Simchenko, T. Yu. Smolyaninova, N. V. Malinina, D.S. Mironov, T. V. Konovalova, , M. D. Izyumov's scientific works, management issues of industrial parks T. I. Slepko, Ya. V. In the works of Sychev, the issues of ensuring and evaluating the competitiveness of industrial park enterprises E. A. In the case of Tikhonov, issues of improvement of small industrial enterprises S. V. Studied in Pavlovsky's work. Small industrial zones (KSZ) are one of the ways to ensure stable economic growth in Uzbekistan, to increase the volume of investments in the implementation of new projects,



and to develop small businesses. Small industrial zones are areas containing a certain area of land or a production area, with an engineering communication system, which creates great opportunities for the development of local areas and increasing the employment of the population. It serves to provide the population with quality goods and services and increase competitiveness.

In the charter adopted on December 31, 2014, KSZ is defined as follows: a separate area with the necessary infrastructure, which is not used by economically weak and low-profit organizations, which has been operating at a loss. The regulation on small industrial zones dated March 9, 2020 defines small industrial zones as follows: "**small industrial zone** (here in after referred to as KSZ) - intended for the implementation of production activities, given a certain status by the legislation of the settlement area or inter-settlement area, and within the territory of which the production areas with service infrastructure are located and the boundaries are clearly defined"<sup>1</sup>

Economists B. T. Salimov and B.B. Salimovs improved the organizational and economic foundations of the establishment and development of small industrial zones in their scientific work, and improved directions for increasing investment activity in small industrial zones Sh. E. In the case of **Mannapova**, M.M. In his scientific work, Ashurov considered the issues of organizing small industrial zones and improving the efficiency of small industrial zones.

## RESEARCH METHODOLOGY

The activity of KSZ not only affects the significant growth of the regional economy, but also plays an important role in the socio-economic development of the regions. It is difficult to assess the efficiency of KSZ activities and the level of their impact on the economy of the region, because KSZ are not an object of independent statistical observation. This situation ensures the urgency of studying and improving the monitoring system of the activity of KSZs.

Factors that determine the need for a comprehensive assessment of the effectiveness of KSZ activities include:

1. The increasing popularity and diversity of KSZs led to the assessment of their effectiveness, as well as the determination of the degree of influence on the economic development of the regions where they are located.
2. The growth of investments directed to the creation of KSZs and necessary infrastructures in the context of limited budget funds requires an in-depth feasibility study and confirmation of the appropriateness of capital investments in relevant industrial facilities;
3. Due to the diversity of KSZ fields and the lack of necessary information about their working conditions and results, the choice of investors is very difficult. The existence of the "success" indicator of the activity of such KSZs makes it easier for business entities to place their projects (production) and significantly reduces production transaction costs.

The level of efficiency of KSZ activity is a holistic quantitative characteristic that is evaluated using the final results achieved by this KSZ within a certain period. A large number of dynamic factors that form the evaluation category affect the final indicator change. Thus, the increase in the level of efficiency of KSZ activities is a vector that determines economic growth, in which the process of analyzing the level of efficiency should have a systematic character.

Today, in practice, several methods of assessing the competitiveness of enterprises or organizations have been developed and are being used in practice. In most cases, these methods use the same type of data that characterizes a specific aspect of the enterprise's activity. Analysis based on such indicators cannot provide a complete description of the company's position in the market. In this case, there is a need to use a method that describes the system of indicators that reflect the main aspects of the enterprise's activity. One of the solutions to this problem is the use of multivariate analysis methods of comparison in economic research. The main problem in performing this type of calculations is the diversity of the set of analyzed factors. A taxonomic index can be used

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<sup>1</sup> Resolution of the Cabinet of Ministers of the Republic of Uzbekistan, No. 134 dated 09.03.2020

to unify a large number of different, i.e., indicators with different measurement units. It represents an artificial quantity in which different symbols are used. It is known that this artificial size characterizing the level of development of the enterprise is a taxonomic indicator used by Z. Helvig, and it consists of all the indicators characterizing the studied economic process. The level of development of the economic process is determined based on the proximity of the amount of real taxa to the conditional maximum value. Currently, taxonomy is widely used in biology, philosophy, economics and other sciences. All established KSZs have different sets of indicators.

## ANALYSIS AND RESULTS

When applying the taxonomic analysis method to assess the level of development of KSZ activities, a matrix of observations is created to evaluate KSZs that are being evaluated. It consists of numerical values that determine the quality indicators of the KSZ being evaluated. A matrix of observations is created, with indicators of the same name in the columns and unit indicators identifying the KSZs being evaluated in the rows, and its appearance is as follows:

$$X = \begin{pmatrix} x_{11} & x_{12} & \dots & x_{1k} & x_{1n} \\ x_{21} & x_{22} & \dots & x_{2k} & x_{2n} \\ \dots & \dots & \dots & \dots & \dots \\ x_{i1} & x_{i2} & \dots & x_{ik} & x_{in} \\ \dots & \dots & \dots & \dots & \dots \\ x_{w1} & x_{w2} & \dots & x_{wk} & x_{wn} \end{pmatrix}$$

W - the number of small industrial zones,

n - the number of indicators characterizing small industrial zones,

$x_{ik}$  - the value of k-indicator of the i-th small industrial zone.

Constructed matrices are not homogeneous, they represent different characteristics of the level of efficiency of KSZ activities and, accordingly, have different content and measurement units, which need to be standardized. According to the taxonomy method, the indicator value is replaced by a coefficient describing the standard deviation of the average value of each characteristic for all objects. It consists of numerical values that determine the indicators of KSZs being evaluated. In addition, their units of measurement are also different, which makes it difficult to perform some arithmetic calculations, so it is necessary to standardize these units. For this, the average arithmetic value  $\bar{x}_k$  for k indicator is calculated based on the formula  $\bar{x}_k = \frac{1}{\omega} \sum_{i=1}^{\omega} x_{ik}$  (1). Then the standard deviation of the indicator k

$$S_k = \left[ \frac{1}{\omega} \sum_{i=1}^{\omega} (x_{ik} - \bar{x}_k)^2 \right]^{\frac{1}{2}} \text{ is calculated based on formula (2).}$$

We use the following formulas for standardization:

$$Z_{ik} = \frac{x_{ik} - \bar{x}_k}{S_k} \quad (3)$$

Here  $k = 1, 2, \dots, n$ ;

$x_{ik}$  - i - indicator value for unit k;  $\bar{x}_k$  - k - the average arithmetic value of the k index;  $S_k$  is the standard deviation of k indicators;  $Z_{ik}$  - i - the standardized value of the k indicator for the unit:

A matrix of observations is created based on the calculated values of standardized indicators. The indicators of the matrix are distinguished, that is, positive and negative factors affecting the level of development of KSZs are determined. The development level of each KSZ is a benchmark for development

$$h_0 = \bar{c}_0 + 2F_0 \quad (4) \text{ is calculated based on the formula, where}$$

$$\bar{c}_0 = \frac{1}{w} \sum_{i=1}^w c_{i0}; \quad (5)$$

$$F_0 = \left[ \frac{1}{w} \sum_{i=1}^w (c_{i0} - \bar{c}_0)^2 \right]^{\frac{1}{2}} \quad (6)$$

Now each KSZ has an indicator of the level of development  $d_i$

$$d_i = \frac{c_{i0}}{h_0} \quad (7) \text{ is calculated separately based on the formula.}$$

According to the theory of taxonomic analysis, the closer the  $d_i$  indicator is to 0, the higher the level of development of KSZs.

In practice, the taxonomic development factor is used in the following form:

$$K_i = 1 - \frac{c_{i0}}{h_0} = 1 - d_i$$

The value of the taxonomic indicator of development can take values in the range from 0 to 1 ( $0 \leq K \leq 1$ ). The higher it is, the higher the efficiency of KSZ activity. This indicator allows you to compare objects with a large number of characteristics and rank them according to the level of development. The main advantage of the taxonomic method is the standardization process, as a result of which various described qualitative and quantitative characteristics of the object are converted into a single standardized measurement system, which allows for its wide application with ease of use.

#### KSZ activity performance evaluation indicator system

No	Indicator name	Calculation formula	Explanation
1	KSZ development level indicator	$RDK = \frac{IH}{UHH}$	IH- investment volume UHH- total cost ҳажми
2	Employment level of KSZ area	$HBD = \frac{BBYM}{UEM}$	BBYM-occupied land area UEM-total land area
3	Indicator of production capacity	$IchQ = \frac{IchH}{YIchH}$	HDIchH-reporting period production volume GDP-annual production volume
4	Job growth rate	$IO'O'D = \frac{YIO'S}{JIO'S}$	YIO'S-Annual number of new jobs JIO'S-Total number of jobs
5	The degree of import substitution of KSZ production	$IO'BD = \frac{IO'BMH}{JMH}$	HDIO'BMH-Volume of import substitute products during the reporting period Total volume of products
6	Export volume level indicator	$EHD = \frac{EMH}{JMH}$	HDEMh-Volume of products exported during the reporting period JMH- Total volume of products
7	Show permanent products	$DS = \frac{SS}{IS}$	The volume of products exported during the reporting period

The organization of monitoring of the effectiveness of the activity of small industrial zones established in the regions on the basis of the proposed system of indicators at the level of the republic at the level of regions, and then at the level of districts in each region is of interest to regional authorities as well as to the participant of KSZ (tenant or project owner) and is an integral part of their management. element is counted and allows to quickly make the necessary management decisions that correct the strategy and tactics in the development of projects

### National rating of regions in the Republic of Uzbekistan on the activity of KSZ

No	Name of the area	Number of KSZs
1	Tashkent city	8
2	Kashkadarya region	33
3	Ferghana region	68
4	Andijan region	24
5	Namangan region	54
6	Republic of Karakalpakstan	33
7	Surkhandarya region	36
8	Syrdarya region	16
9	Tashkent region	60
10	Samarkand region	90
11	Khorezm region	20
12	Bukhara region	40
13	Navoi region	13
14	Jizzakh region	25

### Conclusions and suggestions

By using the taxonomic analysis method, it is possible to make a large number of different indicators, that is, with different units of measurement, uniform. This makes it possible to determine the influence of various indicators on the effectiveness of KSZ activity. On the basis of the established efficiency index, it is possible to compile a rating of the development of KZZs, which allows state authorities to monitor the state and dynamics of development of small industrial zones, to estimate the effectiveness of the development of regions, and at the same time, it facilitates the evaluation and selection of a location for attracting foreign investors. For the management company, this creates an incentive to develop and improve the quality of services provided to increase the park's position in the rating. The proposed KSZ ranking method should follow the "transparency" principle, i.e. the algorithm and the list of indicators are open, allowing experts to improve this method by introducing additional indicators to increase its accuracy. Also, this method is based on the use of objective statistical data, and not on the subjective assessments of individual experts.

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