

## Development of Agritourism Activities and Improvement of Management Models in Fergana Region

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**Abstract:** The article considers the effectiveness of measures to develop and improve agro-tourism management models in Fergana region. The study analyzes the literature based on the approach of various organizations and authors to the concepts of "agrotourism", "rural tourism", "agricultural tourism", "ecological tourism" and "green tourism". The dynamics of the volume and share of agricultural production in Fergana region was analyzed and forecasts of the volume of tourist services and management expenses for 2022-2026 based on modeling of the volume of services provided by the tourist enterprise "Dilrabo Travel" were developed.

**Keywords:** tourism, agrotourism, "rural tourism", "agricultural tourism", "eco-tourism", "green tourism", agricultural activities, services, tourism industry, modeling, management, management costs.

In the process of extensive structural transformations in the development of tourism in our country, the territorial organization of agrotourism, its structure and development, as well as management of tourist enterprises in regional structures contribute to the development of regional economies in the macroeconomic balance is important. One of the tasks of the government in the development of territories with high tourist potential for the organization of agrotourism is to create conditions for the full satisfaction of the recreational needs of citizens through the development of tourism and its industries.

Restoring the physical and mental health of the population through recreation in the countryside and through participation in agricultural production, this type of activity plays an important role in improving the level and quality of life of the population, the formation of agro-tourist image of individual areas. Territorial organization and management of agro-tourist activity play a priority role in the development of tourism. The geographical location of tourist enterprises and facilities engaged in agrotourist activities plays a key role in the effective use of available agrotourist resources in the regions and meeting the tourist needs of the country's population.

Analysis of studies of problems and prospects of development of the sphere of services and tourism reveals very contradictory interpretations of individual concepts related to agrotourism and its essence, by different authors. This is especially true of new directions of tourist activity, including agrotourism. At the present time, there are relatively few scientific studies devoted to the development of agro-tourism in our country, but a comparative analysis of the definitions of the basic concepts given in them in the scientific literature shows numerous differences.

We will consider the main approaches to the essence of the concepts of "agrotourism", "rural tourism", "agricultural tourism", "ecological tourism" and "green tourism".

It is necessary to note that there are several approaches to the consideration of the essence of the above concepts. One of the most common types of tourism is rural tourism and agrotourism is one and the same concept, and ecotourism is an independent direction of tourist activity. According to another approach, agritourism and ecotourism are the directions of rural tourism.

According to N. Volodin, in his study, the categories of "rural tourism" and "agrotourism" are synonymous. According to him, agrotourism includes a temporary stay of tourists in the countryside for the purpose of recreation or participation in agricultural work [1].

A. Barlibayev and G. Nasirov under agrotourism understand a type of activity aimed at organizing leisure activities for tourists in rural areas or small towns, including the provision of housing services with the participation of labor in private households and the use of natural, cultural, historical, social and ethnographic resources [2].

M. Biryakov, L. Bitkulova, D. Panova aspire to form, organize and render to the end user (agritourist) a complex of services for the organization of active types of tourism, accommodation, meals, recreation, sports (hunting, fishing, acquisition of knowledge and skills characteristic of villagers), known as a special type of activity, which includes [3]. At the same time, the authors equate the concepts of "agrotourism" and "rural tourism".

According to another approach, agrotourism and ecotourism are areas of rural tourism. Researchers V. Chayka and A. Isaev consider rural tourism as a branch of the tourism industry, which uses natural, cultural, historical, social and other resources of the countryside to create a comprehensive tourist product [4].

The investigation examined and analyzed the resource components of agrotourism in the Fergana region, where the agricultural sectors of the country (with the exception of animal husbandry) are relatively well developed, given the limited time and data on the analysis of resource components of agrotourism in all territorial units of Uzbekistan, an attempt was made to estimate the resource components based on the results obtained.

The territory of our country by natural and climatic conditions and geographical location occupies a favorable position among the countries of the Asian continent, and in this regard, the relative advantage of existing soil conditions, the location of agricultural land and favorable climatic conditions of agricultural production areas show that these areas, along with the activities of agricultural industries and manufactures, have high potential for the development of agro-industrial complex.

The volume of gross agricultural output in Uzbekistan in 2014-2021 shows that the industry has been developing dynamically over the past 8 years (Table 1).

The volume of gross agricultural production in the country in 2014 amounted to 81794.3 billion soums, and by the end of 2021 this indicator increased 3.7 times to 302524.9 billion soums. Analysis of production dynamics by years The volume of agricultural production in the country since 2017 grew at a higher rate than in previous years.

**1-Table. The dynamics of the volume and share of agricultural production in Fergana region <sup>1</sup>**

Territories	Years								Change in 2021 compared to 2014, in %
	2014	2015	2016	2017	2018	2019	2020	2021	
<b>Republic of Uzbekistan</b>	81794,3	99604,6	115599,2	148199,3	187425,6	216283,1	250250,6	302524,9	369,9
<b>Proportion %</b>	100	100	100	100	100	100	100	100	x
Ferghana region	7459,1	9382,8	10039,4	12692,3	18007,7	18946,3	22069,1	28095,1	376,7
Proportion %	9,1	9,4	8,7	8,6	9,6	8,8	8,8	9,3	+0,2

Fergana region is one of the regions producing a significant part of the gross agricultural output of the country due to the above-mentioned natural and climatic conditions. Analysis of the development of the agrarian sector of the region for 2014-2021 shows that the volume of agricultural production of the region increased from 7459.1 billion soums in 2014 to 28095.1 billion soums (3.8 times) in 2021. Moreover, the share of regional agricultural production in the gross agricultural output of the country has increased from 9.1% to 9.3% over the past 8 years. It can be seen that in Fergana province, with the effective use of available agricultural land and conditions, the industry is increasing production.

In the econometric analysis of the factors affecting the development of entrepreneurship in the field of tourism, tourism was selected using data from a survey conducted at the tourist enterprise "Dilrabo Travel", which is engaged in entrepreneurial activities in tourism, as objects of sampling, given the extensive use of multifactor production functions we determine the econometric model in the form of a production function based on the multifactor relationship of the change in the volume of services. The identified models will help to determine the target forecast indicators of the tourist enterprise for the medium term based on the volume of tourist services and factors affecting it, as well as determine the measures necessary to ensure these indicators.

Conducted a multifactor analysis of changes in the volume of tourist services provided by the selected tourist enterprise, i.e. under the influence of the main factor affecting the indicator, which is an endogenous factor.

Considering the high peak of the production function of the volume of tourist services, i.e. as a factor of the result, the following indicators were selected as indicators affecting it: based on the conclusions of industry experts:

$X_1$  – the number of tourists served;

$X_2$  – the costs of managing a tourist enterprise;

$X_3$  – the amount of funds attracted to the enterprise from abroad.

Each of the influencing exogenous factors by its very nature is one of the main influencing factors on the formation of the volume of provided tourist services. For example, if the number of tourists provided determines the amount of work and income from services, the management costs of the tourist enterprise constitute the possibility of optimization of the tourist enterprise, the amount of funds attracted from abroad in the tourist enterprise activity.

<sup>1</sup> Developed by the author on the basis of data from the State Committee of the Republic of Uzbekistan on Statistics ([www.stat.uz](http://www.stat.uz)).

Modeling the volume of services provided by "Dilrabo Travel", which operates in the tourism services market, can be done using models such as trends, tendencies and time series in the tourism services market. The study analyzes the volume of tourist services provided by "Dilrabo Travel" tourism enterprise in Fergana region and the main trends affecting its formation in 2011-2021.

**2-Table. The volume of tourist services in "Dilrabo Travel" and factors affecting its change <sup>2</sup>**

Years	Volume of domestic tourism services rendered, million rubles amount (Y)	The number of tourists served, units. (X <sub>1</sub> )	Management expenses in the tourist enterprise, million rubles amount (X <sub>2</sub> )	Volume of foreign investment in the enterprise, million rubles amount (X <sub>3</sub> )
2011	32,7	2442	5,4	8,5
2012	35,3	2658	5,8	9,2
2013	41,4	2594	6,4	12,3
2014	45,6	2935	6,1	13,7
2015	53,8	3248	5,9	15,9
2016	59,2	3512	6,7	19,4
2017	78,5	3609	7,2	28,1
2018	127,9	3837	9,3	38,6
2019	165,1	4721	12,6	56,2
2020	62,6	2915	5,7	17,4
2021	102,3	4108	8,3	34,1

On the basis of the correlation analysis the volume of tourist services in the activity of tourist enterprise "Dilrabo Travel" and the degree of double correlation of factors influencing it were studied. Correlation analysis satisfies the necessary condition that the relationship density between the resulting factor and influencing factors is  $ryx1 = 0.9312$ ,  $ryx2 = 0.9634$  and  $ryx3 = -0.9929$ . All three correlation coefficients belong to the densest range of defined criterion ranges, indicating that the bulk of the factors influencing the outcome factor were chosen correctly.

**3-Table. Logarithmic value of the volume of tourist services provided by the tourist enterprise "Dilrabo Travel" and the factors affecting its change <sup>3</sup>**

t	<i>LnY</i>	<i>LnX<sub>1</sub></i>	<i>LnX<sub>2</sub></i>	<i>LnX<sub>3</sub></i>
2011	3,49	7,80	1,69	2,14
2012	3,56	7,89	1,76	2,22
2013	3,72	7,86	1,86	2,51
2014	3,82	7,98	1,81	2,62
2015	3,99	8,09	1,77	2,77
2016	4,08	8,16	1,90	2,97
2017	4,36	8,19	1,97	3,34
2018	4,85	8,25	2,23	3,65
2019	5,11	8,46	2,53	4,03
2020	4,14	7,98	1,74	2,86
2021	4,63	8,32	2,12	3,53

<sup>2</sup> Developed on the basis of the author's research.

<sup>3</sup> Developed on the basis of the author's research.

The parameters identified during the regression analysis using the Eviews10 software package and the significance of the model were evaluated using the main estimators calculated by the program. Logarithmic trend model is formed by extracting the coefficients of the regression model from the results of regression analysis.

Using the identified data, a multifactor econometric model of changes in the volume of tourist services provided by "Dilrabo Travel" and the factors affecting it was developed. According to him,

$$\ln Y = -0,346 \cdot \ln X_1 + 0,174 \cdot \ln X_2 + 0,912 \cdot \ln X_3 + 3,912$$

Regression equation reflecting this process was constructed.

Reliability and adequacy of the model and its parameters created with the software package should be tested on the basis of several criteria to ensure the accuracy of the results. In the detected trend the autocorrelation turned out to be slightly higher than the set optimal limit (DW = 2,18) and higher than other criteria - regression equation turned out to be reliable and proved to be adequate.

The tourism enterprise "Dilrabo Travel", obtained for the analysis by using a multivariate econometric model, expressed the values of change in the short term, i.e. in 2022-2026, under the influence of economic factors of the volume of tourist services.

**4-Table. Predictions of the volume of tourist services and management costs provided by Dilrabo Travel in 2022-2026. <sup>4</sup>**

Years	Volume of domestic tourism services rendered, million rubles amount (Y)	The number of tourists served, units. (X <sub>1</sub> )	Management costs in tourism enterprises, million rubles amount (X <sub>2</sub> )	Volume of foreign investment in the enterprise, million rubles amount (X <sub>3</sub> )
2022	122,0	4302	9,4	42,4
2023	130,8	4465	9,8	45,6
2024	138,4	4627	10,2	48,8
2025	145,6	4790	10,5	52,0
2026	153,1	4953	10,9	55,3

Based on the multifactor model, the growth of management costs in Dilrabo Travel, the amount of external financing and the total impact of random factors are directly related to the change of the result factor, and the number of tourists served is inversely proportional. In this case, it is recommended to increase the number of factors directly related to the tourist enterprise, to optimize the cost of necessary resources in proportion to the number of tourists served.

Today, in developed countries, where the share of developed countries in the tourism industry in terms of volume and overall performance is increasing, the development of agrotourism resources in the country is largely influenced by the growth and development of activities.

Agritourism was originally a separate type of activity in the developed countries of the European agrarian sector, and an important factor in the rapid development of this tourist activity is the high level of comfort of homes in rural areas. The basic concept of agrotourism in Europe is focused on the

<sup>4</sup> Developed on the basis of the author's research.



development of small family businesses in rural areas. In the development of agritourism, first of all, the following necessary conditions must be considered:

- availability of free or relatively affordable housing in rural areas (including small towns);
- a sufficiently high level of comfort and good condition of the housing stock for tourist accommodation;
- availability of state support for agrotourism;
- creation of special structures that provide systematic assistance and are engaged in the organization of agro-tourism, as well as the introduction of information technology to provide services in agro-tourism in electronic form;
- creation of associations of subjects of agrotourism, their classification and standardization by function, assessment of the quality of services in agrotourism, advertising and information support, etc.;
- development of a system of activity regulation (adoption of relevant laws and state programs), introduction of information and advertising of national and regional agro-tourism products and services, information and advertising activities;
- Financial support for agro-tourism facilities (the formation of systems of concessional lending, direct subsidies, preferential taxation), as well as quality provision of roads, sewerage, water, gas, energy, communications, etc.

## Literature

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