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Opportunities and Directions of Development of Agritourism: Evidence from Samarkand Region

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Abstract: Agritourism can enhance rural development and is a useful alternative activity to increase farm incomes. It has attracted the attention of agricultural experts and researchers around the world in recent years. As a result of rapid growth worldwide, agritourism has become one of the most significant supplementary income sources for farmers. The main purpose of this study is to identify factors influencing participation of farmer in agritourism in the Samarkand region of Uzbekistan, using scientific studies and statistical data, which indicate that there are great opportunities for agritourism activities. Increasing the economic potential of the rural areas by introducing innovative activities on the Samarkand region's medium-sized farms (farmers) and ensuring sustainable development are essential. In Samarkand, there are a lot of conditions for the development of tourism, especially agritourism. The study examined all 10 agritourism farmers and 100 randomly selected farmers in Samarkand that do not carry out agritourism activities. Based on this data collection and analysis using a logistic regression model, the results showed several factors influencing the participation of farmers in the Samarkand region in agritourism activities, which was analyzed using the logistic regression model. According to the results of this model, each farmer's income, employment, farmer's education, and distance from the city had a significantly positive effect on the farmer's initiation of agritourism.

Keywords: agriculture; tourism; agritourism; sustainable development; farmer; rural areas; logistic regression model



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Citation: Togaymurodov, E.; Roman, M.; Prus, P. Opportunities and Directions of Development of Agritourism: Evidence from Samarkand Region. *Sustainability* **2023**, *15*, 981. <https://doi.org/10.3390/su15020981>

Academic Editor: Vasiliki Vrana

Received: 3 November 2022

Revised: 22 December 2022

Accepted: 28 December 2022

Published: 5 January 2023



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1. Introduction

Agritourism has attracted the attention of agricultural experts and researchers around the world in recent years [1]. In recent years, many scientific papers have been published by several researchers reflecting on the development of agritourism in rural areas as an alternative source of income and employment. Agritourism is depicted by many researchers as a means of environmental conservation and farming diversification, as well as rural development. They recognized that agriculture and tourism are the two largest industries in the world [2]. Since the 1950s, there has been a significant emphasis on the development of economic cooperation, and it is known that limited agricultural production and the increase in the flow of tourists is another important link in the relationship between agriculture and tourism [3].

In the last four decades, the agricultural sector in many countries of the world has undergone several structural changes [4], including in Uzbekistan. This sector is one of the main economic sectors of Uzbekistan. The contribution of the agricultural sector to Uzbekistan's GDP was 25.5% and provided 28% of total employment in 2019. In total,

50.2% of the population of Uzbekistan lives in rural areas, and those people engage mainly in the agricultural sector [5]. Agriculture is the main source of livelihood of the rural population in Uzbekistan, and it is necessary to pay attention to the establishment of potential relations with other sectors of the economy. Uzbekistan has three types of agricultural farms—dehkhan, fermer, and agricultural enterprise—each of which is a legal type of farm with its own operating characteristics. Dehkhans are small farms with small land areas. Fermers are medium-sized farms and one of the main producers of agricultural products. At the same time, the head of the fermer is called a “fermer”. Agricultural enterprises are small business companies engaged in the production of agriculture and all other farming and agricultural-related industries. Economic and social development in Uzbekistan was aimed at achieving sustainable development of the agricultural sector, which has become a major source of development of the rural economy and society. Thus, as the dominance of agriculture among the sectors of economic activity has been declining around the world in recent years, farmers have been adapting to identifying and using new flows of alternative and additional income in conjunction with existing agricultural resources in rural areas. The main income source for the rural communities is the cultivation of agricultural products. Furthermore, their livelihoods are directly related to agriculture and are also based on seasonal work activities. Moreover, one of the crucial problems facing Uzbekistan today is the high level of rural unemployment, and many farmers in Uzbekistan are experiencing structural changes due to low economic incomes [6]. In many countries of the world, what has been introduced is the adaptation of farms to off-farm activities, rather than structural changes [4,7].

The tourism industry is becoming one of the most important economic activities for sustainable development, and it is one of the main growing sectors of the global economy. It brings a lot of benefits for both agriculture and tourism, as well as for the rural population and regions in many countries. Over the past five decades, international tourist arrivals have grown on average approximately 3.5% per year, making tourism one of the largest economic sectors; it contributes about 10.3% to the world’s GDP [8]. Thus, several developed and developing countries make efforts to develop tourism as a main source of their economic development process through new technologies and services.

However, to reap real benefits from tourism, the benefits must remain in the hands of the local community. In most developing countries, the benefits to rural communities are less from tourism due to low levels of tourism investment and promotion. In other words, agritourism has been proposed to help farmers in non-agricultural business and increase the productivity of existing resources on farms through their use of tourism activities. It would also improve the livelihood of the rural population and is popular among tourists all over the world.

Agritourism has become a widespread alternative form of tourism that links the agricultural sector with the tourism sector and creates opportunities to improve the income of the rural population. For this reason, many developed and developing countries in the world are now embarking on agritourism as a successful strategy for rural development. The concept of agritourism is not a new activity for many countries; it was recognized early in the previous century [9,10]. The value of agritourism activities to the global economy was estimated at 69.24 billion USD in 2019 [11]. Agritourism is a well-established practice in many of the developed countries as an alternative income source for the rural farming community. Agritourism activities are already being practiced in numerous countries in the world such as Italy, the USA, the UK, Germany, Spain, France, Poland, Malaysia, and Indonesia, where it provides numerous benefits to the rural areas. In these countries, agritourism activities have become an alternative and important part of the agricultural sector and the development of rural areas. It is also said to be a tool for sustainable development to diversify farming; additionally, it predominantly focuses on improving the livelihoods of the rural farming community. The agritourism trend, which has received more and more attention from travelers as well as corporations in tourism in recent years, is a good sign of the development potential of this form of tourism. Nowadays,

a number of international tourists increasingly expect to have more unique experiences, participate in learning and creating during their trips, and contribute to conservation activities rather than just relax through tourism [12]. Hence, forms of sustainable tourism and eco-friendly destinations and activities, of which agritourism is typical, have the potential to grow stronger in the future. Although agritourism in Uzbekistan is not yet well developed, the country has many opportunities and favorable conditions for the sustainable development of agritourism. Uzbekistan is an agrarian–industrial country in Central Asia. The agricultural sector is one of the largest sectors of the national economy, and the tourism sector is one of the fast-growing sectors at present. Uzbekistan is one of the most favorable countries for developing various agricultural activities as well as tourism sectors. Uzbekistan’s natural world is very diverse and is composed of desert areas, snowy mountains, rivers, and completely dry lands.

After the establishment of the independence of Uzbekistan, the government, along with all economic sectors, is creating an environment of great attention and opportunities for the sustainable development of the tourism sector. The government is also paying more attention to agritourism in rural areas in recent years. For instance, in Uzbekistan, the Ministry of Agriculture and the Ministry of Tourism and Sports have been working closely to implement agritourism activities. As a result, in Uzbekistan, international tourist arrivals have increased significantly over the last five years. In 2019, the number of international tourists amounted to 6.7 million visitors to Uzbekistan. Almost all of these tourists visited Uzbekistan for the purpose of leisure. The importance of agritourism in the sustainable development of rural areas and in the strategy of improving the livelihood of the rural population is recognized by researchers in the field. The Sustainable Development Strategy of agriculture-based tourism, which is to increase supplementary income through tourism activities, is provided in agriculture, harvesting, natural environment, participation in farming practices, and relaxation. Such social activities are based on the participation of farms in rural areas in agricultural activities; it creates favorable conditions for the sustainable development of agritourism.

In this context, Uzbekistan is in a position to take advantage of agritourism, which can be considered as an effective and reachable alternative practice to enhance the economic and social well-being of the rural farming community, which could lead to rural development ultimately. Agritourism in Uzbekistan is one of the new directions studied by researchers in recent years, and there is very little information available on this activity. Neither farmers nor rural people have even an initial understanding of this type of tourism. The tourism industry has been recognized as one of the main growing sectors throughout the worldwide economy. Agriculture in Uzbekistan is the main source of income in the rural community, and it is necessary to pay attention to the potentials of building linkages with another economic sphere. The majority, i.e., 50%, of the population in Uzbekistan resides in rural areas, and almost 23% of them engage in agricultural activities as their main livelihood [8]. The experience of developed countries shows that today the field of agritourism plays an important role in the diversification of agriculture and sustainable development of rural areas. Although Uzbekistan has certain kinds of activities and resources linked with the agricultural sector to be utilized for agritourism, those activities and resources have not been utilized adequately in Uzbekistan, particularly when compared to other regional countries of the world. Since the agricultural sector has been emerging as the leading economic contributor of the country, a linkage between agriculture and tourism would be complementary for both sectors. However, the country has not utilized these linkages to obtain the maximum benefits of agritourism as a successful strategy for creating alternative sources of income for the rural community, including farmers. The main part of Uzbekistan consists of rural areas with tourism and agricultural potential. However, the interrelated aspects of tourism and agriculture in Uzbekistan have been studied almost scientifically in a narrow range by the researchers, and even less so in the Samarkand region. Thus, it is important to study the existing opportunities in the region [13]. Thus, the main purpose of the study is to identify key factors influencing the participation of farmers in agritourism in

the Samarkand region of Uzbekistan as an alternative income source for the local farmers and rural population.

2. Research Area: Samarkand Region, Uzbekistan

The Samarkand region is located in the central part of Uzbekistan and is one of the leading places in the country in terms of population and gross industrial product. According to its natural geographical location, it corresponds to the middle part of the Zarafshan valley, surrounded on three sides by the mountains of Nurota, Turkestan, and Zarafshan. The mountain ranges somewhat block the flow of cold air blowing from the north, and annual rainfall is more than 250–800 mm.

This study was conducted in the Samarkand region, which was selected for two reasons. Firstly, this region is among the major tourism destinations in Uzbekistan, especially for its heritage and cultural tourism, which has close linkages with agritourism. Secondly, this region is among the major agricultural production areas in the country, and agricultural activities are greatly diversified in this area. From this region, this study utilized data that were collected from all 14 existing districts of the Samarkand region (see Figure 1). These districts were selected due to the presence of farmers. Due to the rich natural diversity of this region, Samarkand is generally considered to have the greatest potential for the tourism development of the country.

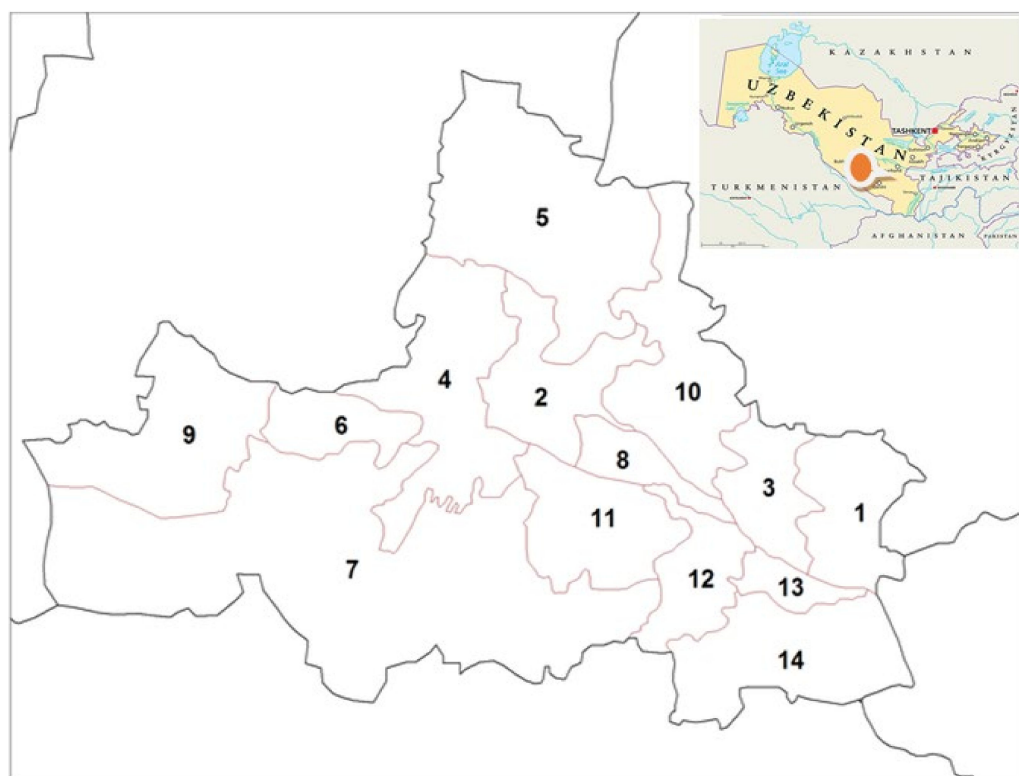


Figure 1. Location of Samarkand region, Uzbekistan. Note. 1. Bulungur, 2. Ishtikhon, 3. Jomboy, 4. Kattakurgan, 5. Koshrabot, 6. Narpay, 7. Nurobod, 8. Okhdaryo, 9. Pakhtachi, 10. Payarikh, 11. Pastdargom, 12. Samaraknad, 13. Toylokh, and 14. Urgut.

Two main forms of tourism in the Samarkand region are very popular among international and national tourists. Of the total tourists, 60% try to participate in Heritage and Pilgrimage tourism and 26% in recreational tourism, respectively (see Figure 2.). The majority of local tourists want to pay attention to heritage and pilgrimage tourism and a small number of them have been interested in other types of tourism in the last decade. These forms of tourism are nature-related tourism, for instance, ecotourism, sports tourism, and agritourism. These three forms of tourism are new and young activities in the tourism in-

dustry of Uzbekistan. In the developed countries of the world, these forms of tourism have already formed, and they significantly reflect their importance in the socio-economic sphere.

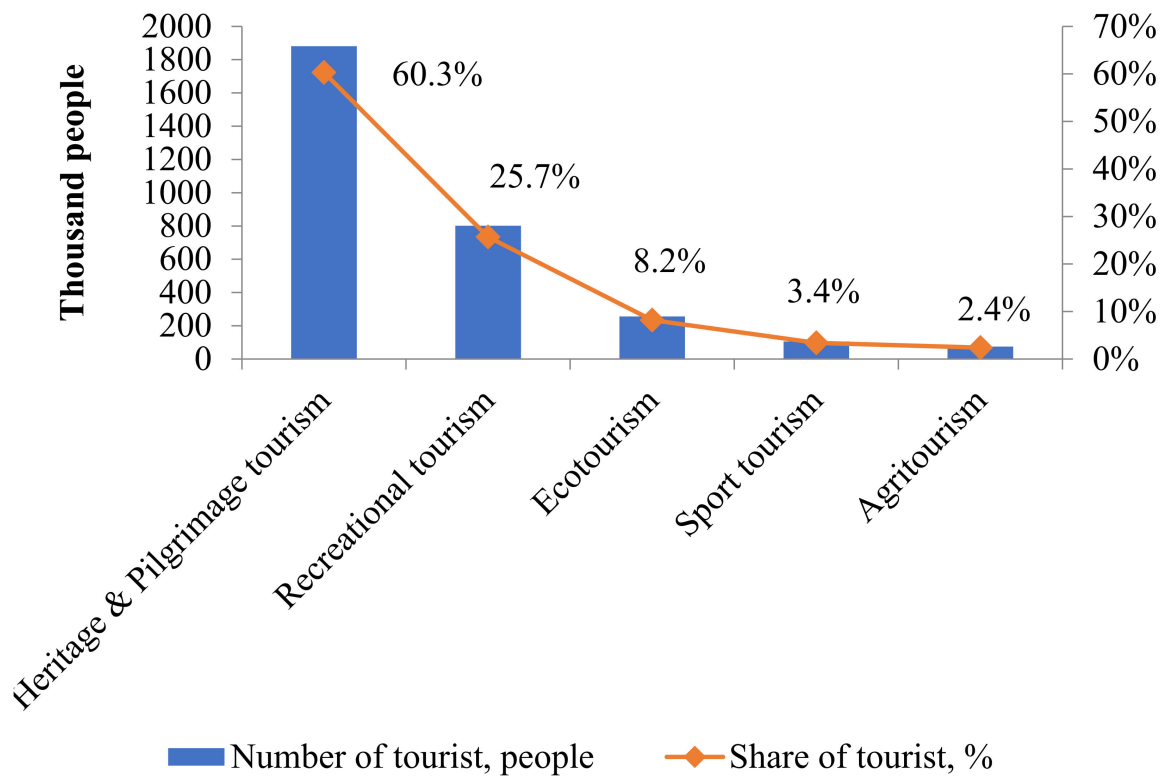


Figure 2. The current state of tourism in Samarkand region in 2019.

3. Materials and Methods

3.1. Data Collection

This study selected the Samarkand region in Uzbekistan for analyzing the research area. The data collection was conducted through a questionnaire survey on 110 farmers in 14 districts of the Samarkand region in 2021. The amount of questionnaire was made up of 100 farmers not engaged in agritourism, and 10 farmers engaged in agritourism. The questionnaire was made in printed versions for both types of farmers. According to the department of Statistics of the Samarkand region in 2019, the total number of farmers in the Samarkand region was reported to be 9662 farmers in 2019. In addition, all of them are registered with the department of statistics and the association of farmers.

Since 2013, farmers in Uzbekistan have begun to engage in agritourism as an alternative activity. This study identified farms across two groups as follows: $Y_1(Y_{ATF})$ is considered to be farmers engaged in agritourism activities, and $Y_0(Y_{NATF})$ is considered to be farmers not engaged in agritourism activities in their farm operation.

3.2. Empirical Model

3.2.1. The Conceptual Framework of Econometric Analysis

A farmer's desire to participate in new and modern activities can be considered as an effort to diversify their own production activities in the agricultural sphere. It provides an opportunity to analyze the choice model of the consumer theory and utility maximization equations in determining the farmer's choice to join agritourism or not to introduce agritourism activities and maximize additional income from it [14].

In this study, the attitude of the farmer towards agritourism activities was expressed in a dummy form (whether the farmers offer agritourism or not). Let $Y_i = 1$ if this farmer engages in agritourism and $Y_i = 0$ if this farmer does not engage in agritourism, as the

probability of a given farmer adopting or not adopting an innovative activity is bounded by zero and one.

Therefore, the logistic regression model is used to model the probability of an event in statistics. This model has been used in the probability of agritourism adaption by the farmer [1,14,15]. Using the logistic regression model, where farmers estimate the probability of agritourism participation (Y_i (Y_{ATF} and Y_{NATF})) based on independent variables (X_i), the probability of agritourism adaptation can be calculated in the following equations:

$$Y_{ATF} = \frac{e^{X_i}}{1 + e^{X_i}} \quad \text{and} \quad Y_{NATF} = \frac{1}{1 + e^{X_i}} \quad (1)$$

$$\begin{aligned} AGRITOURISM = & \beta_0 + \beta_1 Farm_income + \\ & \beta_2 Farm_employment + \\ & \beta_3 Education + \beta_4 Farm_location + \beta_5 Distance_city \\ & + \varepsilon. \end{aligned} \quad (2)$$

where,
 $Y(AGRITOURISM)$ = dummy dependent variable;
 X = independent variables;
 β = parameter to be estimated;
 ε = error term.

This empirical model was used to analyze the influence of factors on the likelihood of the participation of farmers in agritourism. The data on farmers' interest about whether to participate in agritourism were collected from the study area; additionally, it was statistical analyzed based on the STATA-16 software.

3.2.2. Theoretical Foundation of Data Analysis

The Samarkand region provides an important geographical object for scientific research analysis for a number of reasons. Since 2000, existing farmers have been facing several challenges: structural changes, urbanization processes, migration, low incomes, and so on. Such challenges have led to a decline in their economic incomes and a reduction in arable land, as well as the closure of some farmers. Nowadays, a lot of farmers are trying to save their farming activities from these problems, including processing their products, multifunctional farming, and off-farm activities. According to Statistics of Uzbekistan (2020), in recent years, 0.10 percent of farmers in the Samarkand region are engaged in agritourism activities and are getting additional income from agritourism.

The description of dependent and independent variables is shown in Table 1 for the entire sample and the subsets of agritourism farmers ($n = 10$) and nonagritourism farmers ($n = 100$). The final dataset contained 110 farmers, of which 0.10% reported extra income from agritourism activities. The dependent variable (Agritourism) based on the binary data developed for the logistic regression model is set to "1" if the farmer is engaged in agritourism, otherwise to "0". The empirical model can be formulated as:

Table 1. Description of dependent and independent variables.

Variables	Description
Dependent Variable	
Agritourism	Agritourism farmer (1), Nonagritourism farmer (0)
Independent Variables	
Farm_income	Annual income of farmer, US\$
Farm_employment	Employment (person)
Education	(Primary = 0; Secondary school = 1; Bachelor = 2; Master = 3; Other = 4)
Farm_location	Rural area (1), others (0)
Distance_city	Farmer location to Samarkand city (km)

Both the dependent variable and independent variables are described in Table 1. In 2020, Farmer characteristic variables were derived from the survey-collected data in the Samarkand region. The independent variables considered and used for the empirical estimation consist of socio-economic factors of farmers in the Samarkand region. The independent variables influencing the adaptation of farmers to agritourism activities have been chosen based on the scientific views of previously studied researchers [1,14,15]. In the empirical model, it showed that the coefficient of Farm_location was expected to be negative, while variables Farm_income, Farm_employment, Education, and Distance_city were expected to have positive coefficients. These estimated coefficients probably answer the questions that motivated the study. The theoretical bases upon which the expected signs of the coefficients are based can be explained as follows: All farmer types (farmer) and binary variables reflecting whether the farm is engaged in agritourism (Agritourism).

4. Results and Discussion

This section discusses the results analyzed using STATA-16 statistic software. The logistic regression model analysis of the sustainable development of agritourism in the Samarkand region was performed. The analysis contains two categorical dependent variables which represent farmers' choice in terms of farming operation, and this is shown in Table 1. The statistical analysis utilized several methods, which are the descriptive statistics, t test, and logistic regression model. Each table was displayed in this section. This section addresses the general characteristics of nonagritourism farmers in the Samarkand region, Uzbekistan; general contestations on agritourism development in the research area; prospects of agritourism; and problems of the sustainable development of agritourism for farmers in the region.

There were 100 nonagritourism farmers involved in the study. Among the farmers in the Samarkand region, 12% of farmers were familiar with the concept of agritourism, 47% of farmers had heard of it, and 41% of farmers did not know about it. However, 36% of farmers were interested in agritourism, while 64% of farmers chose another off-farm sector (see Table 2).

Table 2. The number of farmers by the awareness of agritourism (n = 100).

Categories	Number of Farmers	Including	
		Interested in Agritourism	Non-Interested in Agritourism
Know	12	12	0
Heard	47	24	23
Do not know	41	0	41
Total	100	36	64

Although 36% (36 farmers) of nonagritourism farmers surveyed were interested in engaging in agritourism activities, most of them are facing a poor socio-economic situation to develop agritourism in the region. The study found that lack of knowledge on agritourism and readily available facilities are among the challenges facing the sustainable development of agritourism in the Samarkand region.

As shown in Table 3, 82 farmers are males and 18 farmers are females, or in percentage, more than 82% of farmers are males, while their average age falls between 41 and 50 years. Furthermore, most of the farmers had achieved higher education, mainly bachelor's degrees, which is higher than the average higher education level in Uzbekistan. This figure is less than 20% in Uzbekistan. The results of a comparison of the gender, age, and education of nonagritourism farmers using the t test of the difference between farmers interested in agritourism and farmers not interested in agritourism showed that a clear correlation was observed only in education ($t = 2.071$; $p < 0.05$). According to the result, the level of higher

education of farmers interested in agritourism is higher than that of farmers non-interested in agritourism.

Table 3. General information of nonagritourism farmers (owner) in study area (n = 100).

Variables	Categories	Nonagritourism Farmers	Including	
			Interested in Agritourism	Non-Interested in Agritourism
Gender	Male	82	29	53
	Female	18	7	11
Age	<24	0	0	0
	25–30	3	1	2
	31–40	24	7	17
	41–50	30	10	20
	51–60	23	9	14
	61>	20	9	11
Education	Secondary school	25	7	18
	Bachelor	71	25	46
	Master	3	3	0
	Other	1	1	0

Source: Survey results of study areas, 2021.

Demographically, 102 (98.2%) farmers were located in rural areas. In total, 7 of them are agritourism farmers, and 95 farmers are nonagritourism farmers. A total of 8 (1.8%) farmers were located in other parts of the Samarkand region (see Table 4).

Table 4. Demographic characteristics of nonagritourism farmers (n = 100).

Variables	Categories	Nonagritourism Farmers	Including	
			Interested in Agritourism	Non-Interested in Agritourism
Location	Rural area	95	35	60
	Other	5	1	4
Distance *	<10	1	0	1
	11–20	9	5	4
	21–40	17	7	10
	41–60	19	4	15
	60>	54	20	34
Distance **	<10	56	21	35
	11–20	15	5	10
	21–40	20	5	15
	41–60	6	3	3
	60>	3	2	1
Farm size	<5	0	0	0
	6–10	1	0	1
	10>	99	36	63
Employment	<10	30	13	27
	11–20	59	19	40
	20>	11	4	7

Source: Survey results of study areas, 2021. Note: *-from Samarkand city; **-from highway.

Agritourism has a strong impact on farm incomes, as shown in Table 5. A statistical comparison between agritourism and nonagritourism farmers shows that the average income of the former was double that of the latter (USD 36,098.4 versus USD 18,085.1).

Furthermore, more than 80% of agritourism farmers had annual incomes of more than USD 30,000. When we analyze the average income of the 100 nonagritourism farmers and compare the two groups of farmers interested in agritourism and farmers not interested, the study finds that the average and minimum incomes of the farmers interested in agritourism were higher than those of farmers not interested in agritourism. The p values of the t test for testing the significance of differences in means for the two types of farmers are presented (see Table 1). There is clearly a strong relationship between annual incomes and whether farmers are engaged in agritourism or not engaged. However, there is no relationship between annual incomes and whether nonagritourism farmers are interested in agritourism or not interested.

Table 5. Farmers' annual incomes in Samarkand region, 2019.

Categories	All Farmers (n = 110)	Including			
		All Farmers (n = 110)		Nonagritourism (n = 100)	
		Agritourism (n = 10)	Non-Agritourism (n = 100)	Interested (n = 36)	Non-Interested (n = 64)
US\$ 0–5000	23.9%	0.0%	11.0%	4.3%	14.1%
US\$ 5001–10,000	34.8%	0.0%	16.0%	8.7%	18.8%
US\$ 10,001–20,000	87.0%	0.0%	40.0%	32.6%	39.1%
US\$ 20,001–30,000	43.5%	20.0%	20.0%	19.6%	20.3%
US\$ 30,001–~	28.3%	80.0%	13.0%	34.8%	7.8%
Mean	19,722.7	36,098.4	18,085.1	24,016.4	16,658.3
Min	2299.5	23,861.0	2299.5	3165.8	2299.5
Max	63,101.6	50,000.0	63,101.6	63,101.6	58,930.5
<i>t</i> -test results		$p < 0.01$	$p > 0.1$		

Note: USD 1 = UZS 9350 (Uzbekistan som) (Central Bank of Uzbekistan, 2019).

As shown in Table 6., the share of off-farm activities as a source of annual income for farms was very small. The study found that when analyzed between agritourism and nonagritourism farmers, only 0.10 percent of agritourism farmers received their annual income from agritourism services, and it constituted 14.1 percent of their annual income. The income of nonagritourism farmers is derived only from on-farm activities. Fewer farmers generate additional income from other services.

Table 6. The share of off-farm activities in annual income of farmers (n = 110).

	On-Farming	Off-Farming		
		Industry	Agritourism	Other
		1. Agritourism farmers (n = 10), in %		
10 farmers	83.2	-	14.1	2.7
		2. Nonagritourism farmers (n = 100), in %		
2 farmers	89.7	-	-	10.3
98 farmers	100.0	-	-	-
		2.1. Interest in Agritourism farmers (n = 36), in %		
36 farmers	95.9	-	3.1	1.0
		2.2. No interest in agritourism farmers (n = 64), in %		
64 farmers	100.0	-	-	-

Source: Survey results of study areas, 2021.

The decisions of farmers in the Samarkand region to engage in agrotourism activities were analyzed based on the logit regression model. The model fits very well for the analysis of the odds ratio of the farmers participating in agritourism activities. In this model, the chi-square test for the estimation that includes all independent variables relative to the estimation with only the constant term (intercept) is 43.030 and significant at a level of less

than 0.000. In this study, all coefficients of independent variables are significant at a level of 10 percent or lower. The model produces a Pseudo R-square of 0.642, and its predictions are correct. The model estimates that, associated standard errors based on the odds ratios, and chi-square test for the goodness-of-fit measures generated by the model are shown in Table 7.

Table 7. Logistic regression model estimates the probability of participation of farmers in agritourism activities.

Variables	Odds Ratio	Std. Err.	p Value
Intercept	0.000 ***	0.000	0.002
Farm_income	1.000 ***	0.000	0.005
Farm_employment	1.164 **	0.079	0.026
Education	8.564 **	9.334	0.049
Farm_location	0.024 **	0.040	0.027
Distance_city	2.862 **	1.432	0.036
Number of observations = 110		Log likelihood = −11.993	
LR $\chi^2(5) = 43.030$		Prob > $\chi^2 = 0.000$	
Pseudo $R^2 = 0.642$			

Note: ** $p < 0.05$ *** $p < 0.01$.

In blue, I revised the interpretation of Table 7 as well as I could. However, I am not sure it was well written. Please check too.

The concept of agritourism has widely developed as a sub-branch of rural tourism in many countries of the world. Agritourism activities have developed through its conservative approach in the local development [16]. As the issue of rural development is currently one of the most important problems for countries in increasing the unbalanced economy between urban and rural geographies, agritourism occupies an attractive place, with its structure dependent on local dynamics [17]. This type of tourism provides opportunities for development through existing resource sources of the region and creates a new communicative area in the rural area [18]. The concept of agritourism was developed as a means of rural development by increasing the demands of urban residents for tourism in rural areas and organic living conditions in general [19]. However, in the world, the migration tendency of rural communities from rural to urban still continues [20], and agritourism should be evaluated as an integrated part of rural development policies of a rural areas [21]. Moreover, agritourism is vital to distinguishing the relationship between rural development and tourism because it is a main source for rural development [22]. It is also a part of the entire development strategies of countries [23].

5. Conclusions

In this study, methods for the sustainable development of agritourism in the Samarkand region have been studied. Many scientific, theoretical, and practical conclusions have been made, and recommendations have been developed. Today, the emerging environmental problems of many countries make tourism activities a new potential approach to the protection of natural resources [24,25]. The concept of agritourism has improved as a main characteristic of tourism activities on farms and is a market form of tourism to sell farm's agricultural products [26,27]. It is considered as one of the main mechanisms of forming new social, cultural, and economic opportunities for farmers [12,28–31].

The results of this study showed that the participation of farmers in the Samarkand region to the agritourism activities is significantly affected by each farmer's income, education, employment, location, and distance from Samarkand city. The research results may be beneficial to the local economy and would help to increase the number of farmers. These findings are particularly useful for farmers who want to start agritourism activities and training. For example, the importance of a farmer's income, education, and location can help the farmer to start agritourism.

Finally, there is a lack of scientific literature on the development of agritourism in the country, and a few researchers have conducted research on these activities. Therefore, the organization of large-scale agritourism research can generate more information and insights among the public. We hope the results of this study in agritourism will increase the interest of farmers in engaging in the agritourism business in the region and serve as a starting point.

It should also be mentioned that some limitations were encountered during the research, which were mainly caused by the COVID-19 pandemic and the difficulty of reaching a larger number of respondents. Therefore, the presented research results can be considered as a pilot study and helpful in planning further, extended studies that are planned for the near future. The obtained results of current and future research will serve the local community, decision makers, policymakers, and farmers. They can also be used by other researchers conducting similar research in developing countries where farmers may be interested in increasing the income of their farms through the development of agritourism activities.

Author Contributions: Conceptualization, E.T. and M.R.; methodology, E.T. and M.R.; software, E.T. and M.R.; validation, E.T. and M.R.; formal analysis, E.T. and M.R.; investigation, E.T. and M.R.; resources, E.T. and M.R.; data curation, E.T. and M.R.; writing—original draft preparation, E.T., M.R. and P.P.; writing—review and editing, E.T., M.R. and P.P.; visualization, E.T. and M.R.; supervision, E.T. and M.R.; project administration, M.R.; funding acquisition, E.T., M.R. and P.P. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: We would like to thank the staff of the Statistics Department of Samarkand regional and the managers of farmers who participated in the questionnaire for their assistance in creating the data sources used in this study.

Conflicts of Interest: The authors declare no conflict of interest.

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