Problems of Tourism Development through the Creation of Digital Platforms for Sale of Craft Products

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Abstract: This article addresses the challenges of tourism development through the creation of a digital platform for the sale of handicrafts. The pandemic conditions in the world have had a serious impact on the tourism industry and handicraft trade. All countries are analyzing integration processes with other sectors to develop this sector. The indicators of tourism and national handicrafts in Uzbekistan for 2010-2021 were selected for analysis. According to the analysis, it is necessary to develop a digital platform and introduce QR code technology to develop online sales of handicrafts and attract tourists.

Keywords: digital platforms, handicrafts, tourist flow, tourist services, handicraft sales, Delphi method, co integration models.

Introduction

Tourism industry became one of the fastest growing sectors in the countryin 2019, the annual number of tourists exceeded six million, and tourism revenues reached one billion US dollars, which was determined by the right reforms in this area. The pandemic, which began in 2020, had had a momentous impact on the flow of tourists. Sales of Uzbek handicrafts declined, among other things, due to declining tourist flows. The development of digital platforms and their introduction into the trade of handicrafts allows for the effective development of the entire economy.

The impact of tourism development on other areas has always been of interest to researchers (lzboun, N. 2014; Byrd, E., Bosley, H., &Dronberger, M., 2009). One of such developing areas related to tourism is the handicraft sector (Budeva, D. G., & Mullen, M. R. (2014)).

In recent years, a number of laws and regulations have been adopted to develop national crafts. In accordance with the Decree of the President of the Republic of Uzbekistan Sh. Mirziyoyev dated December 27, 2016 No. PD-2699, the list of products and services produced by artisans in 34 directions was approved. In accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 245 of April 26, 2017, a number of benefits for the export of handicrafts to our artisans, including exemption from the examination of handicrafts in 24 areas. Our masters take advantage of these advantages and participate in international festivals, exhibitions and competitions with their products. Taking into account the fact that our national handicrafts are exhibited abroad, the interest of foreigners in the products created by our artisans, the handicrafts of more than 100 of our artisans are exhibited in about 30 countries around the world. Our masters have participated in many prestigious exhibitions and festivals around the world. The worthy participation of our masters in these events was recognized by the organizers and they were awarded diplomas, certificates and certificates of honor. There are about ten personal exhibitions of our masters. Each year, more than 10 members of the association receive grants from the Fund for Support of Non-Governmental Organizations and Other Civil Society Institutions

under the Oliy Majlis and use them to develop their activities.

The Decree of the President of the Republic of Uzbekistan dated November 17, 2017 "On measures for further development of handicrafts and comprehensive support for artisans" opened the door to more opportunities for family businesses, craftsmen. This historic document took the folk arts to a new level and stimulated the growth of the population's income. It is known that our ancestors, who have long developed handicrafts in our country, were actively involved in many types of this industry. As a result of the fact that this or that direction of handicrafts became the main occupation of one family, a dynasty of skilled craftsmen was formed. Unique schools have been established here. Today there are 34 directions of handicrafts in our country. It is known that folk handicrafts have been developed in Uzbekistan since ancient times, and handicrafts have been passed down from ancestors to generations. In this regard, the introduction of digital platforms for online sales of handicrafts allows the effective development of this industry and tourism.

Material and Method

The analysis was conducted on the basis of a sample survey of artisans to analyze the sale of national handicrafts and the development of national handicrafts, as well as the development of digital technologies through the use of digital technologies. Using the Delphi method, the authors of the article selected 250 of the currently available 38,000 artisans. In the selection of artisans, such factors as their experience, sales volume, export abroad were taken into account. The authors developed a questionnaire covering the following questions:

1. How did you make sales in a pandemic?

2. What do you mean by online sales?

3. Do you use digital technology in your work?

4. Do you want your product to be sold through an online store?

5. Want to put a unique QR code on your products to increase sales?

6. Do you want to deliver your product on time?

7. Would you like to advertise your product on social media?

8. Would you like to know the demand for the product in the world markets?

9. Do you want to deliver your product online overseas?

10. Do you want to use new digital technologies and expand your business?

More than 16 artisans from each of the 14 regions of the country were involved in the selection process. The Delphi method is that the questionnaire is sent to each artisan and the answers are received anonymously and summarized.

Some of the handicrafts are sold to the domestic market, some are bought by tourists visiting the country and the rest are exported abroad. This can be expressed by the following formula:

$$ln(ce_{it}) = \alpha + \beta ln(ip_{it}) + \beta_1 ln(tn_{it}) + \beta_2 ln(ex_{it})\varepsilon_{it} \qquad [1]$$

In this case, ce_{it} stands for (*i*)is the income of the artisan in (*t*)period, ip_{it} stands for (*i*) income of the artisan in the domestic market in (*t*) period, tn_{it} stands for (*i*) the number, income of tourists visiting the region in (*t*) period, ex_{it} stands for (*i*)the volume of national handicrafts exported by artisansin (*t*) period.
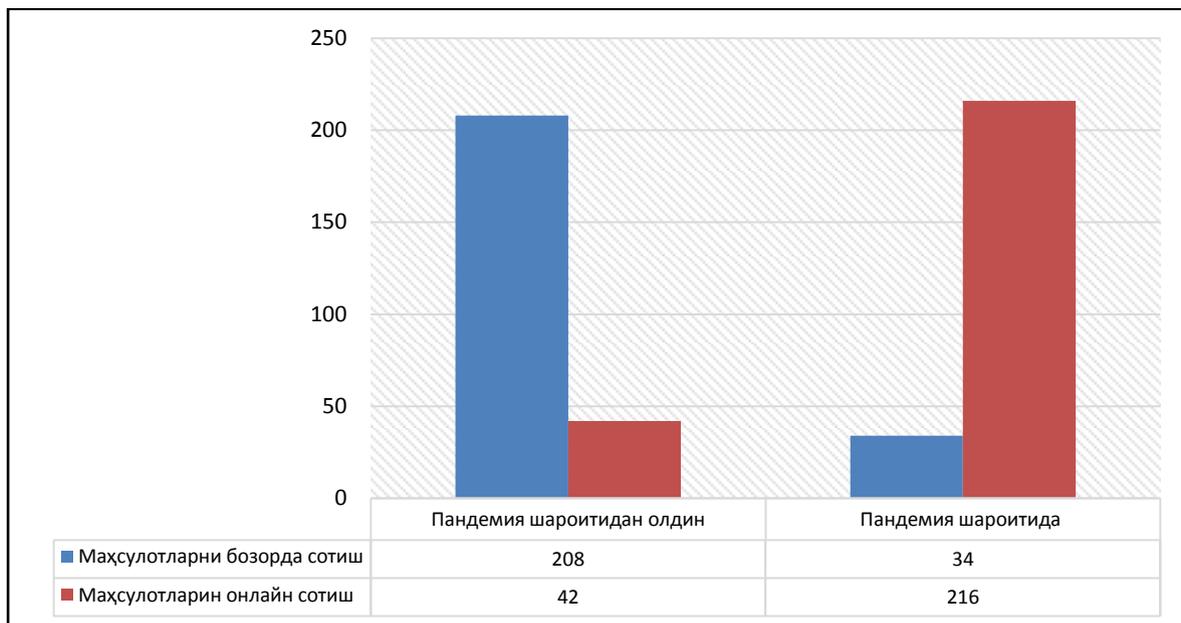
Unfortunately, in the context of the pandemic, tourist visits have decreased significantly. In the sale of handicrafts accounted for 35% of incoming tourists, 25% were held in the

framework of international exhibitions. 5% of sales were made online.

Results

Based on the results of the Delpi method, 13.9% of the 250 respondents were able to continue their work in the pandemic. 51% of respondents admitted a decrease in income from their activities, while 22.8% of respondents said they needed financial resources.

Due to the decrease in the number of tourists during the pandemic, 18.3% of respondents were found to be selling their products on the international market, while 41.1% of respondents were selling their products to tourists who had previously become their customers. The duration of the craft is also an important factor, meaning that those who have been in business for more than 10 years have their regular tourist customers. In the event of a pandemic, it was found that many artisans sold their products online through various social networks.

	Пандемия шароитидан олдин	Пандемия шароитида
■ Маҳсулотларни бозорда сотиш	208	34
■ Маҳсулотларин онлайн сотиш	42	216

(*Selling products in the markets, selling products online, before Pandemic period, in Pandemic period*)

Figure 1. State of online trade of artisans

Before the pandemic, 16% of respondents who participated in the sample survey sold their products both in the market and online, while in the pandemic, 86% of artisans sold their products online.

Summarizing all the above questions, it was found that the sale of national handicraft products to their former customers through the development of online trade is one of the most important factors. Research has shown that every artisan can increase the attractiveness of tourists through their products, while the flow of tourists is strongly influenced by national handicrafts.

An econometric model has been developed to study the impact of national handicraft products on the flow of tourists by summarizing the collected statistics and sample surveillance data.

The econometric analysis of changes in the regression equation proposed by the above authors examined the relationship between the volume of national handicraft products in 2010-2019, its share in the domestic market, the number of incoming tourists, exports of

national handicrafts.

The accounting work was done and the following results were achieved.

Table 1. Regression equation results

Variables	Ratio	Std. probability of error	t-statistics	Probability
Free had	3,76	0,41	9,21	0,01
IP	0,20	0,07	2,89	0,03
TT	0,43	0,06	5,44	0,01
EX	0,23	0,06	3,88	0,01

Table 1 shows the amount of regression, as well as standard errors, statistics, and probabilities, showing the relationship between tourism gross value added, tourism revenues, tourism spending, and tourism investment.

$R2 = 0.98$. So these factors explain 98% of the change that occurs in a Y-dependent variable.

The reliability of the regression equation is checked by tests F and t. Zero and one-sided alternative hypotheses are written as follows:

H_0: $\rho^2=0$

H_1: $\rho^2>0$

For the significance level a = 0.05 we find the input value of F: Fj = Fa (k-1; n-k) = F0.05 (3; 7) = 2.62

Table 2

ANOVA table:

Dispersion	Freedom level(DF)	Squares sum (SS)	MS	F-RATIO
Regression	3	3,90	1,30	159,45
Residual error	6	0,05	0,01	
Total	9	3,95		

The calculated value of the selection , $F = \frac{SSR/(k-1)}{SSE/(n-k)} = 21,24 = 159, 45$

Here, n - the number of observations; k-the number of variables; SSR is the sum of regression squares; SSE is the sum of the residual squares.

Decisive rule: Since $F_j < F_h$, the hypothesis H_0 is rejected.

The purpose of the t-test in the model is to examine whether the coefficients of the estimated linear regression equation of the main set differ significantly from zero, i.e., that they are not random (Bahar, O., Dogan, B., & Bozkurt, K. (2013).

The corresponding zero and one-sided hypotheses are constructed as follows:

H_0: $\beta_1 \leq 0$ H_0:$\beta_2 \leq 0$ H_0:$\beta_3 \geq 0$ H_0:$\beta_4 \geq 0$

H_1: $\beta_1 > 0$ H_1:$\beta_2 > 0$ H_1:$\beta_3 < 0$ H_1:$\beta_4 < 0$

Find the critical value of t for the significance level $\alpha=0,05$:

$t_{cr}=t_\alpha(n-k)=t_{0,05}(7)=1,71$

Now we calculate the selective value of t. To do this, we first need to determine some of the statistical values we need.

Standard error of regression coefficients

S_{b1}=0,41; S_{b2}=0,07; S_{b3}=0,06; S_{b4}=0,06;

t_1=9,21; t_2=2,89; t_3=5,44; t_4=3,88;

Decisive rule: Since $t_{cr} < |t_i|$ (i=1,2,3,4,5) the H_0 hypothesis is rejected in all cases (Bai, J., &Perron, P. (1998). Hence, all coefficients of the estimated regression equation of the population are positive. the model successfully passed the F-test and the t-test.

The final regression equation:

$$\ln(ce) = 0{,}20\ln(ip) + 0{,}43\ln(tn) + 0{,}23\ln(ex) + \varepsilon \quad (3.2)$$

While the number of tourists has a strong impact on the sale of national handicrafts, the coefficient of determination of 98% indicates that these factors have a strong impact on the sale of national handicrafts. When we evaluated the reliability of the regression equation by F-test and t-test, it was found that all the parameters and the equation itself are reliable.

Discussion

During the study, a model of the interdependence of these industries was developed, jointly analyzing the interdependence of national crafts and tourism. In order to check the adequacy of the model, when we evaluated it by F-test and t-test, it was found that all the parameters and the equation itself are reliable. It was also checked that the logarithmic multivariate regression equation was chosen correctly and that the parameters were found using the least squares method.

According to the model, the share of artisans in the domestic market will increase by 1%, while the income of artisans will increase by 0.20%. This means that the domestic market also remains the main source of national handicrafts in a pandemic. Every tourist visiting the republic will definitely try to get a gift, in which the first place will be taken by national handicrafts. According to the model, the number of tourists visiting the country will increase by 1%, while the sale of national handicrafts will increase by 0.43%. If the number of tourists decreases, in turn, the sale of national handicrafts will fall sharply. According to the results of a selective survey conducted using the Delphi method, artisans with many years of experience have regular customer visitors, to whom the preservation of online trade can prevent the decline of tourists.

Exports of national handicrafts also increase the attractiveness of tourism in the country. Consumers who buy national handicrafts abroad are definitely interested in coming to the country, picking up national handicrafts, and seeing how they are made. According to the model, an increase in exports of national handicrafts by 1% will lead to an increase in trade in handicrafts by 0.23% in total.

The model shows that the strongest influencing factor is the number of incoming tourists. In the event of closed borders for tourists in a pandemic, we can increase the flow of tourists to the republic through the national handicrafts sold through this system, with a QR code affixed to each national handicraft product.

Conclusion

The following conclusions were drawn during the research:

1. The state has created a wide range of conditions for the development of national crafts and tourism, and if they are used wisely, the efficiency would be correspondingly high.

2. Today, national handicrafts are attracting more and more attention not only from foreign visitors, but also from those interested in local art.

3. Every tourist who comes to our country, first of all, is interested in our culture and living conditions as a tourist. When he returns to his homeland, he decides to buy a souvenir that reminds him of these warm qualities. He can buy it while touring the city. But for some tourists, extensive work is being done to increase efficiency in the National Craft.

4. It is necessary to create conditions for artisans to promote online trade, provide a QR code for each product and thereby develop the tourism industry.

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