

# Study on the influence of Douyin short video marketing on camping travel intention

Zhiping Zheng\*, Changtai Lu, and Weiyi Zhao

College of Business and Tourism, Sichuan Agricultural University, Sichuan, China

**Abstract:** In order to explore the impact of three dimensions of short video marketing (namely, influence, trust and bias) on camping tourism intention, this paper takes perceived usefulness and perceived ease of use as intermediary variables to build a theoretical framework and conduct empirical analysis. The results show that: the three independent variables have a positive impact on perceived usefulness, perceived ease of use and camping travel intention, Perceived usefulness plays an intermediary role between the three independent variables and camping travel intention, while perceived ease of use only plays an intermediary role between Douyin short video influence, bias and camping travel intention. This paper will put forward corresponding suggestions on Douyin short video marketing based on the research conclusions.

## 1. Introduction

The outbreak of the novel coronavirus epidemic in early 2020 has greatly affected people's life and travel, and camping has taken on a large number of travel demands under the epidemic. The domestic camping tourism has witnessed explosive growth in 2020<sup>[1]</sup>. In November 2022, the Ministry of Culture and Tourism and 14 other departments jointly issued the Guiding Opinions on Promoting the Healthy and Orderly Development of Camping Tourism and Leisure, which clarified the emerging business forms of camping tourism and leisure at the national level, and made clear requirements in the three aspects of "expanding product supply, improving service quality, and standardizing safe production and operation", bringing new development opportunities for the camping economy<sup>[2]</sup>. As a new focus and trend of China's tourism industry, camping tourism has been widely welcomed by tourists. With the popularization and upgrading of 5G signal coverage and smart mobile devices, Douyin short video has entered people's "palm" and become one of the most influential network new media at present<sup>[3]</sup>. According to the survey of the official account of Douyin, 62.2% of the respondents browse travel information through Douyin and the travel information these respondents obtain through the Douyin short video platform also affects their consumption intention<sup>[4]</sup>. Therefore, this paper investigates the effect of Douyin short video marketing on camping tourism consumption intention, providing a theoretical basis for camping tourism product managers to carry out network marketing, improve the attractiveness of camping tourism products,

and provide new theoretical support for the high-quality development of domestic tourism.

## 2. Review of relevant literature

Tourism intention can be affected by many factors. Scholars believe that the influencing factors of tourists' travel intention include not only their internal perception, but also external stimuli. In terms of Douyin short video marketing, these factors involve the influence, trust and bias of Douyin short video itself<sup>[5]</sup>. SOR theory holds that the external environment will affect individual behavior by stimulating individual perception and emotion<sup>[6]</sup>. Therefore, in the relevant research on travel intention, SOR model can well explain the process of such changes.

In 1989, Fred Davis, an American scholar, proposed the changing process of people's willingness and behavior in the process from exposure to acceptance of new technologies, which is called the technology acceptance model<sup>[7]</sup>. When accepting and using new technology, perceived usefulness and perceived ease of use play a decisive role together. Perceived usefulness means that users can improve their work efficiency with the help of new technology. Perceived ease of use refers to the degree to which users perceive the simplicity or difficulty of the new technology<sup>[8]</sup>.

Camping refers to the travel behavior that people leave their daily living environment and stay in a camping site close to nature with the help of certain camping facilities and equipment<sup>[9]</sup>. Camping tourism breaks through the shackles of traditional tourism, and is related to more industries with better participation and experience<sup>[10]</sup>. It is a key focus for future tourism upgrading and optimization.

\* Corresponding author: 1569430808@qq.com

Tourism intention refers to the tendency of tourists to carry out tourism activities in a specific tourist attraction, and is the willingness of tourists to participate in certain tourism activities<sup>[11]</sup>.

According to SOR theory, Douyin short video marketing, as an external stimulus, includes three parts: influence, trust and bias. The three forms of stimulus produced by short video marketing of Douyin, as external stimuli, can increase the degree of perceived value of consumers, and then enhance the willingness of consumers to travel camping. In the theory of technology model, perceived usefulness and perceived ease of use are important factors affecting users' decision making. Perceived usefulness is defined in the tourism context as the extent to which the use of mobile short video will help tourists to obtain effective tourism information and improve travel efficiency. Perceived usability refers to the degree of tourists' difficulty in mastering mobile short video applications<sup>[12]</sup>. The more simple and convenient it is for tourists to use Douyin short videos, the more useful they think Douyin short videos are, and the more positive their evaluation is. Therefore, this paper holds that perceived usefulness and perceived ease of use as intermediary variables can well explain the internal relationship between Douyin short video marketing and camping tourism intention. External stimuli in the field of tourism are the key factors that affect consumers' decision making, especially Douyin short video marketing, including text, pictures, short videos, live broadcast and other abundant forms of external stimuli, these marketing forms with authentic perceived value have a positive impact on the formation of consumers' camping travel intention. In the scenario of camping tourism, Douyin short video marketing highly restores the real situation of camping tourism through various forms of expression means and marketing modes, and enhances the willingness of consumers to camp tourism. Camping sites can highly restore the geographical environment and tourism resources of camping sites by releasing short videos and live broadcasting on Douyin. Compared with unfamiliar tourism environment, Douyin provides richer visual clues through short videos and live broadcasting and other marketing forms, arouses consumers' tactile memory of camping tourism, makes consumers feel immersive, reduces the strangeness and uncertainty of camping tourism, and further enhances consumers' willingness to camping tourism<sup>[13]</sup>. To sum up, this paper puts forward the following hypothesis:

H1a: The influence of Douyin short video has a positive impact on camping travel intention

H1b: Trust degree of Douyin short video has a positive impact on camping travel intention

H1c: Douyin short video bias has a positive impact on camping travel intention

H2a: The influence of Douyin short video has a positive influence on perceived usefulness

H2b: Trust degree of Douyin short videos has a positive influence on perceived usefulness

H2c: Douyin short video bias has a positive influence on perceived usefulness

H3a: The influence of Douyin short videos has a positive impact on the perceived ease of use

H3b: Trust degree of Douyin short videos has a positive impact on perceived ease of use

H3c: Douyin short video bias has a positive impact on perceived ease of use

H4a: Perceived usefulness plays a mediating role in the relationship between Douyin short video influence and camping travel intention

H4b: Perceived usefulness plays a mediating role in the relationship between trust in Douyin short videos and camping travel intention

H4c: Perceived usefulness plays a mediating role in the relationship between Douyin short video bias and camping travel intention

H5a: Perceived usability plays a mediating role in the relationship between Douyin short video influence and camping travel intention

H5b: Perceived ease of use plays a mediating role in the relationship between trust in Douyin short video and camping travel intention

H5c: Perceived ease of use plays a mediating role in the relationship between Douyin short video bias and camping travel intention

### 3. Empirical Analysis

#### 3.1. Sample selection and variable measurement

This study includes Douyin short video marketing, perceived usefulness, perceived ease of use, camping travel intention and demographic variables. Among them, the Douyin short video marketing mainly refers to the scale of Lu Ting et al.<sup>[13]</sup>, and divides the Douyin short video marketing into three dimensions of Douyin short video influence, Douyin short video trust and Douyin short video bias, including 12 items. Perceived usefulness refers to the scale of Moon, Kim<sup>[14]</sup>, Davis et al.<sup>[15]</sup>, with a total of 4 items. Perceived ease of use refer to the scale of Davis et al.<sup>[15]</sup>, and Yen et al.<sup>[16]</sup>, with 4 items. Camping travel intention draws on the scale of Yao Yanbo and Jia Guangmei<sup>[17]</sup>, with a total of 3 items. The above variables have been revised according to the characteristics of camping tourists. All the scales involved in this study were scored on a Likert five-point scale, increasing from 1 (strongly disagree) to 5 (strongly agree).

#### 3.2. Descriptive statistical analysis of population frequency

This survey adopts the online questionnaire survey method, and a total of 400 questionnaires are collected, of which 352 are valid, with an effective rate of 88%. The female sample was 53.1%, and the male sample was 46.9%. In terms of age, all age groups were evenly distributed, with the proportion of 26-35 years old being slightly higher, reaching 33.5%. In terms of education, college/bachelor's degree is 50.6%, the largest number. In terms of occupation, the majority are enterprise personnel, accounting for 29.5%. In terms of monthly income, 4,001 to 5,000 yuan topped the list, accounting for 36.6 percent, followed by 5001 yuan and above, accounting for 25 percent.

### 3.3. Reliability and validity test

#### 3.3.1 Reliability analysis

In this study, SPSS27.0 data analysis software was used to test the reliability. The Cronbach's  $\alpha$  coefficients of all latent variables were greater than 0.80, as shown in Table 1, indicating that all variables had good reliability.

**Table 1.** Reliability test results

Dimensions	Cronbach's Alpha	Number of terms
Douyin short video influence	0.873	4
Douyin short video trust	0.871	4
Douyin short video deviation	0.875	4
Perceived usefulness	0.882	4
Perceived ease of use	0.874	4
Camping Travel Intentions	0.852	3
Overall Scale	0.938	23

#### 3.3.2 Validity analysis

Validity analysis includes convergent validity and discriminative validity. When testing the convergent validity of the scale, it is first necessary to test the standardized factor load of the item, and then calculate the mean variance extraction (AVE) and combined reliability (CR) of the latent variable according to the standardized factor load. The convergent results are shown in Table 2. The standardized factor load of each item of each latent variable is greater than 0.7. And AVE of each latent variable is greater than 0.5, and the combined reliability is greater than 0.7, indicating good convergent validity<sup>[18]</sup>. The discrimination validity test results are shown in Table 3. There is a positive correlation between the influence of Douyin short videos, trust of Douyin short videos, bias of Douyin short videos, perceived usefulness, perceived ease of use and camping travel intention. The arithmetic square root of each latent variable AVE is greater than the correlation coefficient between this latent variable and other latent variables, indicating good discrimination validity.

**Table 2.** Results of convergent validity test

Variables	Item	Standardized factor load	AVE	CR
Douyin short video Influence	TSVI1	0.811	0.631	0.873
	TSVI2	0.806		
	TSVI3	0.792		
	TSVI4	0.769		
Douyin short video trust	TSVT1	0.826	0.628	0.871
	TSVT2	0.783		
	TSVT3	0.769		

Douyin short video bias	TSVT4	0.790	0.638	0.876
	TSVD1	0.752		
	TSVD2	0.815		
	TSVD3	0.818		
Perceived usefulness	TSVD4	0.808	0.652	0.882
	PU1	0.809		
	PU2	0.828		
	PU3	0.817		
Perceived ease of use	PU4	0.776	0.633	0.873
	PEOU1	0.818		
	PEOU2	0.788		
	PEOU3	0.777		
Camping Travel Intentions	PEOU4	0.798	0.659	0.853
	CTI1	0.825		
	CTI2	0.819		
	CTI3	0.791		

**Table 3.** Results of discriminative validity test

	CTI	PEOU	PU	TSVD	TSVT	TSVI
<b>CTI</b>	<b>0.812</b>					
<b>PEOU</b>	0.595 **	<b>0.796</b>				
<b>PU</b>	0.600 **	0.615 **	<b>0.807</b>			
<b>TSVD</b>	0.572 **	0.644 **	0.575 **	<b>0.799</b>		
<b>TSVT</b>	0.582 **	0.520 **	0.555 **	0.523 **	<b>0.792</b>	
<b>TSVI</b>	0.546 **	0.552 **	0.514 **	0.475 **	0.556 **	<b>0.794</b>

Note: The italicized bold number located on the diagonal is the arithmetic square root of the latent variable AVE, \*\* at level 0.01 (double-tailed), the correlation is significant.

### 3.4. Structural equation model testing

In this study, AMOS26.0 software was used to conduct confirmatory analysis of the structural equation model. The model fitting results were shown in Table 4. All indicators met the discrimination criteria, indicating that the structural equation model had high intrinsic quality and was suitable for subsequent hypothesis deduction and intermediate effect testing.

**Table 4.** Test results of model fitting degree index

Test index of fit degree	CMIN /DF	RMSEA	GFI	CFI	TLI	AGF I
<b>Adaptation standard</b>	< 3	< 0.05	> 0.90	> 0.90	> 0.90	> 0.50
<b>Model results</b>	1.177	0.022	0.941	0.992	0.990	0.925
<b>CONCLUSION</b>	Ideal	ideal	Good	Good	Good	Good

In this paper, the structural equation model is used to analyze the path relationship among the six latent variables of Douyin short video influence, Douyin short video trust, Douyin short video bias, perceived usefulness,

perceived ease of use and camping travel intention. The test results are shown in Table 5. The influence, trust and bias of Douyin short video all have a positive impact on camping travel intention. The standardized path coefficients of 0.151, 0.209 and 0.158 are all greater than 0, and the P-values are all less than 0.05. Therefore, hypothesis H1a, H1b and H1c are verified. The influence, trust and bias of Douyin short video have a positive impact on perceived usefulness and perceived ease of use. The standardized path coefficients of 0.211, 0.257, 0.355, 0.263, 0.143 and 0.455 are all greater than 0, and the P-values are all less than 0.05. Therefore, Hypothesis H2a, H2b, H2c, H3a, H3b and H3c are verified.

**Table 5.** Results of path hypothesis test

Path Relation	Estimate	S.E.	C.R.	P
Douyin short video influence → Perceived usefulness	0.211	0.066	3.286	**
Douyin short video trust → Perceived usefulness	0.257	0.070	3.814	**
Douyin short video bias → Perceived usefulness	0.355	0.064	5.576	**
Douyin short video influence → Perceived ease of use	0.263	0.067	4.152	**
Douyin short video trust → Perceived ease of use	0.143	0.068	2.216	*
Douyin short video bias → Perceived ease of use	0.455	0.066	7.090	**
Douyin short video influence → Camping Travel intentions	0.151	0.074	2.230	*
Douyin short video trust → Camping Travel intentions	0.209	0.076	3.035	**
Douyin short video bias → Camping Travel intentions	0.158	0.081	2.072	*

Note: \* means  $p < 0.05$ , \*\* means  $p < 0.01$ , \*\*\* means  $p < 0.001$

In this study, structural equation model and Bootstrap mediation test method were used to analyze the mediating effects of perceived usefulness and perceived ease of use, and the results were shown in Table 6. Except that the mediating effect of the path "trust of Douyin short video → perceived ease of use → camping travel intention" (mediating effect value is 0.025, 95% Bootstrap confidence interval is [0,0.081], including 0 interval, and  $p > 0.05$ ) does not exist, that is, H5b is assumed to be invalid. All the other 5 paths in the 95% Bootstrap confidence interval did not contain the 0 interval, and the P values were less than 0.05. Therefore, hypotheses H4a, H4b, H4c, H5a and H5c were verified.

**Table 6.** Results of mediating effect test

Path relationship	Estimate	95% confidence interval		P
		Lower	Upper	
Douyin short video influence → Perceived usefulness →	0.045	0.011	0.097	**

Camping travel intentions				
Douyin short video trust → perceived usefulness → camping travel intention	0.054	0.015	0.123	**
Douyin short video bias → Perceived usefulness → Camping travel intention	0.075	0.024	0.143	**
Douyin short video influence → Perceived ease of use → Camping travel intention	0.046	0.005	0.108	*
Douyin short video trust → perceived ease of use → camping travel intention	<u>0.025</u>	<u>0.000</u>	<u>0.081</u>	<u>0.054</u>
Douyin short video bias → perceived ease of use → camping travel intention	0.080	0.009	0.170	*

Note: \* means  $p < 0.05$ , \*\* means  $p < 0.01$ , \*\*\* means  $p < 0.001$

#### 4. Conclusions and recommendations

Through empirical analysis, this paper draws the following conclusions: The three independent variables of Douyin short video influence, trust degree and bias have a positive impact on perceived usefulness, perceived ease of use and camping travel intention. Perceived usefulness plays an intermediary role between the three independent variables and camping travel intention, and perceived ease of use has an intermediary effect between Douyin short video influence, bias and camping travel intention. Therefore, in order to promote the development of camping tourism, this paper puts forward the following suggestions on Douyin short video marketing:

- (1) Carry out personalized marketing promotion to enhance the influence of camping sites. Classified marketing and targeted promotion should be conducted based on users' travel preferences. Different strategies can be adopted for the promotion of Douyin short videos. When launching on the "DOU+" page, you can choose to customize targeted launch and select gender, age, region, interest, fans with similar talents, etc. The promotion effect will be doubled with half the effort, so as to expand the influence of the campsite. Improve consumers' willingness to camp and travel, and attract tourists to play.
- (2) Enhance interaction and improve user trust. Research shows that enhanced interaction with video viewers can quickly narrow the distance between each other, enhance tourists' sense of trust, and contribute to the generation of tourism decisions. Compared with traditional media, Douyin short video has the advantage of real-time interaction and information feedback, in which user portraits can be drawn to identify the direction of marketing. Therefore, tourism enterprises should interact more with video viewers and open up channels to meet the

needs of tourists. For example, more live camping Tours can be broadcast, coupons can be used to draw prizes, the amount of viewing and interaction can be increased, and the trust and viscosity of users on Douyin short videos can be enhanced.

(3) Strengthen the management of public opinion guidance on the Douyin platform and enhance the reputation of camping sites. In the Internet era, the public opinion orientation of Douyin platform is a decisive factor in determining the success or failure of marketing activities, and negative word-of-mouth will greatly reduce consumers' willingness to camp and travel. The marketing management department of camping tourism should always pay attention to the public opinion direction on the platform, improve the function construction of online service module, properly handle and actively respond to the complaints and problems of the users of the platform, correctly guide the public opinion direction on the platform, reduce the possibility of tourists spreading negative public opinion, and improve the Internet reputation of the camping site.

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