

A Study on Tourists' Travel Intention Under the Situation of Novel Coronavirus Pneumonia Epidemic

—An Application of the Structural Equation Model

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ABSTRACT

The novel coronavirus pneumonia has seriously affected the development of tourism in China and even the whole world. Combining the current situation of China's mitigation and the gradual recovery of tourism, this paper puts the research perspective on tourists' travel intention, and constructs a new theoretical structure by using TPB theory, adding two elements of emotion and desire to travel. The results show that: 1) Subject norms and perceived behavioral control have no significant impact on tourists' desire to travel; 2) Tourists' emotion has a significant positive impact on tourists' desire to travel, and the desire to travel has a significant positive impact on tourists' travel intention. According to the results of the study, this paper will further put forward corresponding suggestions for the relevant management departments to guide and enhance tourists' travel intention, so as to promote the overall recovery process of China's tourism industry.

Keywords: *COVID-19, Theory of planned behaviour, Emotion, Travel Intention, PLS-SEM.*

1. INTRODUCTION

Because of the prevalence of covid-19, the world is facing an unprecedented global health, social and economic emergency. Tourism is the sector most affected. The COVID-19 is defined by WTO (World Tourism Organization) as "pandemic". According to the data of World Tourism Organization, the number of international tourists will drop by 58% to 78% in 2020, international tourists will be reduced by 850 million to 1.1 billion, tourism revenues will be reduced by 860 billion to 1.2 trillion US dollars, and 100 million to 120 million direct tourism jobs are at risk[1]. With the situation of epidemic prevention and control gradually getting better, domestic tourism is gradually recovering and boosting. In the process of tourism recovery, to explore the tourists' travel intention and the influencing factors of related travel intention is conducive to the relevant management departments to guide and enhance the tourists' travel intention, so as to further accelerate the pace of comprehensive recovery of the tourism industry.

Related scholars at home and abroad study the related factors of tourists' travel intention, among which psychological variables mainly include perceived value,

norms and attitudes. Ru(2018)'s research shows that the interaction between experience attitude and norms is positively related to green tourism intention, while the interaction between attitude and norms is negatively related to green tourism intention [2]. Behavioral variables include subjective knowledge, tourism destination image and travel mode. Wang Ting(2020) studied the mechanism of the potential risk tolerance of tourists to travel intention, and analyzed the antecedents and the moderating role of [3] in music videos under the background of COVID-19. Combined with the existing research results, most scholars use the theory of planned behavior and the theory of normative activation to study the decision-making behavior of tourists. Based on the starting point of this study, the theory of planned behavior (TPB) is chose as the main model framework.

Expected emotion hypothesis proposed by Brian Knutson in 2008 [4]. Based on the existing research, emotional factors are the important factors that affect the decision-making behavior of tourists. In the face of a public health emergency as the COVID-19, tourists often form certain expected emotions. In addition, bagozzi pointed out that in TPB, desire is ignored as a key factor affecting intention, and it did not point out

that desire has an important impact on intention [5]. Therefore, on the basis of TPB model, this paper adds three potential variables of "positive emotion", "negative emotion" and "desire to travel" to further study the relationship between emotion, desire to travel and TPB model. At the same time, it investigates the current tourists' travel intention and influencing factors.

2. RESEARCH HYPOTHESIS AND MODEL BUILDING

2.1. Research Hypothesis

Theory of planned behavior (TPB) is an extended theory of rational behavior theory (TRA), which is mainly used to predict human behavior [6]. TPB is a commonly applied and recommended theory of human behavior prediction, claiming that individuals tend to act through changes in attitudes [7]. In TRA and TPB, prominent viewpoints play an important role in providing a cognitive and emotional basis for behavioral factors (attitude, subject norms, and perceived behavioural control) [8].

2.1.1. Subject Norm

Subject norms refer to the social pressure that individuals feel due to the implementation or non-implementation of certain environmental behaviors [9]. According to Moutinho's (1987) research, any individual or organization of a related group may have a key influence on an individual's beliefs, attitudes, and choices, because an individual may observe the views of his/her group [10]. Qiu (2017) based on the TPB expansion model, studied the civilized behavior of Chinese citizens traveling abroad, and the results showed that subject norms have direct and indirect effects on behaviour attitudes [11]. Based on this, the following assumptions are made:

H1: Subject norms have a positive influence on tourists' desire to travel.

H2: Subject norms have a positive influence on tourists' attitudes towards travel.

2.1.2. Perceived Behavioral Control

Perceived behavioral control is the perception of the difficulty of behavior execution [9]. Theory of planned behavior believes that attitudes and subject norms may not be sufficient to explain behavioral intentions, and that they are also affected by perceived control of behavioral performance [12]. Ajzen found that high levels of perceived behavioral control lead to stronger behavioral intentions and behavioral performance [13]. Deng (2012) proposed that perceived behavioral control not only directly contributes to ethical purchase intentions, but also has an indirect important influence

on ethical purchase intentions through behavioral attitudes [14]. Based on this, the following assumptions are made:

H3: Perceived behavioral control has a positive influence on tourists' desire to travel

H4: Perceived behavioral control has a positive influence on tourists' travel attitudes

2.1.3. Attitude

Attitudes toward behavior refer to the individual's favorable or unfavorable evaluation of the behavior under consideration [9]. According to the TPB theoretical analysis framework, behavior attitude is an effective predictor variable that drives behavior intention, which can explain and predict behavior intention [9]. In addition, emotions are an effective component of attitudes. Traveling attitudes in the current context also have an impact on tourists' emotions, which further affects the desire and travel intention. Based on this, the following assumptions are made:

H5: Tourists' travel attitudes have a positive influence on positive emotions

H6: Tourists' travel attitudes have a positive influence on negative emotions

2.1.4. Emotions and Desire to Travel

Expected emotions, including "positive emotions" and "negative emotions," have been shown to have an impact on tourists' travel intention [15]. In the MGB model, desire is considered to be the direct cause of intention, and desire is an intermediary variable. When faced with public health emergencies, people's desire to travel has a positive impact on their travel intention. Attitude, subject norms, perceived behavioral control, and expected emotion all affect the intention through the intermediary variable of desire [16]. Based on this, the following assumptions are made:

H7: Positive emotions have a positive influence on the desire to travel

H8: Negative emotions have a negative influence on the desire to travel

H9: Desire to travel has a positive influence on the impact of travel

2.2 Model Building

This paper is based on the TPB model and introduces the emotional elements, constructing a model based on the TPB expansion model of tourists' travel intention influence mechanism, referred to as the hypothetical model (Figure 1). Among them: Attitude(ATT), Subject norms (SN), Perceived

behavioral control(PBC), Positive emotion(PE), Negative emotion(NE), Desire to travel (DE),Travel intention (TI)

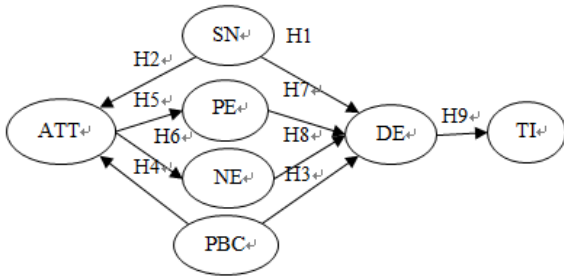


Figure 1 Hypothetical model

3. METHOD

3.1 Variable Measure

Combined with the related measures of existing scholars on subject norms, attitudes, and perceived behavioural control[17], that is, the measurement dimension of subject norms is SN1~SN4, the measurement dimension of attitude is ATT1~ATT4, and the measurement dimension of perceived behavioral control is PBC1~PBC2. Reference to existing scholars' related measures of emotion, desire to travel and travel intention [18], that is, the measurement dimension of positive emotions is PE1~PE3, the measurement dimension of negative emotions is NE1~NE3, and the measure of desire to travel is DE1~DE4, The travel intention is measured from TI1 to TI3.

3.2 Data Collection

This article mainly collects data by way of questionnaire survey. The questionnaires will be distributed online from 20-25 May 2020. A total of 103 questionnaires will be filled out, including 100 valid questionnaires and an effective recovery rate of 97.15%.

According to the questionnaire data, in terms of gender, male account for 36% and female 64%; in terms of age distribution, they are concentrated in 19-25 years old (55%), 26-30 years old (15%), 31-40 years old (15%); In terms of education level, college or vocational high school/high school or secondary school/junior high school and below account for 28%, undergraduate 55%, master degree and above 17%; occupational distribution is also concentrated on staff and students; average Monthly income below 2,000 yuan is 40%, 2001~5000 is 22%, and 5001~10000 is 19%. In addition to the basic demographic elements, the average annual number of trips and annual tourism expenditures are inserted into the questionnaire. The number of trips is 49% for 0~2 trips, 36% for 3~5 trips, and 15% for more than 5 trips; In tourism expenditure, 23% below 100 yuan, 41% from

1001 to 4000, 20% from 4001 to 8000, and 16% from above 8000.

4. EMPIRICAL ANALYSIS

4.1 Reliability and Validity Test

The total reliability of the scale is 0.930, and the Cronbach's α of each latent variable is between 0.756 and 0.888 (Table 4-1). Overall, the scale selected in this article has good reliability. In addition, the corresponding standardized factor load value of each latent variable is between 0.598 and 0.812, the combined reliability is between 0.760 and 0.888, and the AVE is between 0.443 and 725, indicating that overall, the convergence validity is better.

4.2. Structural Equation Model Analysis

4.2.1. Hypothesis Model Path Coefficient Test

According to the analysis results of SmartPLS (Table 4-2), H2, H5, H6, H7, H8, H9 passed the hypothesis test, and H1, H3, H5 failed the hypothesis test.

4.2.2. Conclusion

First, subject norms and perceived behavioral control don't have a significant direct impact on tourists' desire to travel in the current context, but indirectly through behavioral attitudes. This has some discrepancies with most previous research results, but it also has a certain basis. The results of subject norms help explain why strategies based on passively providing information to people cannot produce the expected behavioral changes [19]. The insignificant effect of perceived behavioral control on desire to travel may be due to changes in demand or available resources or when new and unfamiliar factors enter this situation [20]. Therefore, in summary, the main reasons are: 1) Differences in tourism situations. The background of the COVID-19 is different from the usual environment of tourists. The degree of binding force and pressure from the outside world are obviously different. The Novel Coronavirus Pneumonia epidemic is defined as a "pandemic" by the World Health Organization. What can be controlled and perceived, combined with the possible risk factors, the impact of tourists' subject norms and perceived behavioral control on desire to travels may change. 2) Differences in the concept of tourism consumers: At present, Chinese residents pay more and more attention to health. In the face of the risk of epidemics, tourists more reflect the initiative and compliance behavior, so the outside influence on the behavior of tourists is much smaller.

Table 1. Reliability and validity test of the scale

Latent variable	Measurement dimension	Factor load	Cronbach's α	C.R.	AVE
Subject Norm	Those who are important to me are very relieved of my travel	.726	.881	.882	.652
	Those who are important to me are supportive of my travel	.795			
	Those who are important to me agree with me when I travel	.771			
	Those who are important to me understand my travels	.759			
Attitude	I think traveling abroad has a positive meaning	.603	.842	.840	.570
	I think traveling abroad is a pleasure	.793			
	Traveling abroad is very attractive to me	.665			
	Travel behavior is very valuable to me	.694			
Perceived Behavioral Control	I am sure that if I want to travel, I can do it	.628	.776	.776	.634
	I am fully able to make my own decisions about my travel arrangements	.645			
Positive emotions	I will be happy if I successfully achieve my travel goals	.787	.888	.888	.725
	If I succeed in achieving my goal of traveling, I will be excited	.812			
	If I succeed in achieving my goal of traveling, I will be satisfied	.763			
Negative emotions	If the goal of traveling is not achieved, I will be angry	.677	.787	.780	.553
	I will be disappointed if the goal of traveling is not achieved	.743			
	If the goal of traveling is not achieved, I will be sad	.792			
Desire to travel	I want to travel recently	.598	.756	.760	.443
	I am going to travel recently	.720			
	I am eager to travel recently	.625			
	I am eager to travel soon	.668			
Travel intention	I plan to travel soon	.731	.848	.848	.650
	I do my best to travel recently	.721			
	I will invest as much time and resources (money) as possible to travel recently	.740			

Table 2. Path coefficient test of hypothesis model

Hypothetical path	Path coefficient	T value	conclusion
H1: Subjective norm → Desire to travel	0.011	0.055	Refuse
H2: Subjective norm → Attitude	0.354*	2.147	support
H3: Perceived behavioral control → Desire to travel	0.143	0.726	Refuse
H4: Perceived behavioral control → Attitude	0.277	1.644	Refuse
H5: Attitude → Positive emotion	0.828***	10.873	support
H6: Attitude → Negative emotion	0.428**	3.137	support
H7: Positive emotions → Desire to travel	0.405**	3.016	support
H8: Negative emotions → Desire to travel	0.469**	2.937	support
H9: Desire to travel → Travel intention	0.833***	9.409	support

Note: *P<0.05; **P<0.01; ***P<0.001

Second, in the influence of emotion on desire to travel, positive emotion has a significant positive effect on desire to travel, which is consistent with previous research results. However, negative emotions also have a significant positive impact on the desire to travel, which may also be attributed to the impact of the tourism scenario. Due to the epidemic, the residents of our country have prevented the spread of the epidemic for a long time at home. So even if the purpose of travel has not been achieved, negative emotions are generated. With the gradual recovery of China's tourism industry, tourists' desire to travel has manifested a growing trend, which has caused negative emotions to be significantly positive for the desire to travel.

Third, through the path coefficient test of the entire model structure diagram, attitude has a significant positive effect on emotion, emotion has a significant positive effect on desire to travel and desire to travel has a significant positive effect on desire to travel, the main path of this article is "Attitude-Emotion-Desire to Travel- Travel intention". Therefore, behavioral attitude is the most important factor for tourists' travel intention in the context of the new coronary pneumonia epidemic, which is also consistent with previous research conclusions.

5. RESEARCH ENLIGHTENMENT

First, based on behavior attitude. The government should introduce relevant policies to enhance tourists' travel confidence, strengthen the publicity and education of the value of outbound travel, and let tourists realize the significance of outbound travel. An important part of enhancing the tourists' travel confidence is the integrity of the epidemic prevention measures of the scenic spot management department, and the protective measures should be implemented in all aspects of tourism. In addition, the degree of mastery of information affects the attitude of tourists to travel; therefore, the scenic spot should ensure the accuracy and timeliness of information dissemination. Eventually, the value of guiding tourists to travel abroad is affirmed.

Second, based on subject norms. Although the impact of subject norms on desire to travels is not significant, it can be created through multiple subjects to stimulate tourists' desire to travels. Then this requires the promotion of multiple parties, that is, units, schools and other platforms, to cooperate with the promotion and marketing of relevant tourist destinations.

Third, focus on the aspect of perceived behavioral control. The current product design of tourist attractions is also based on the current mainstream market demand, improve the richness of recreational tourism, cultural tourism and related tourism products, increase the selectivity of tourists, and enhance the self-control of tourists, thereby enhancing desire to travel.

Fourth, based on emotional aspect. In order to correctly guide tourists' cognition, it is necessary to add specific contextual elements in the process of propaganda and education to increase tourists' specific tourism development in a specific environment the cognitive situation finally achieves the purpose of balancing tourists' emotions.

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