

# *Research on Consumer Behavior in Tourism e-Commerce in the Post-Pandemic Era*

--Based on the AISAS Model

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**Abstract:** The arrival of the post-epidemic era makes online tourism consumption more popular among consumers. On the one hand, consumers' long-suppressed willingness to travel has contributed to the recovery of the tourism industry; on the other hand, the COVID-19 has prompted consumers to rely more on digital platforms. How to seize the opportunity to improve the platform functions and successfully transform the tourism e-commerce platform has become an important direction for businessmen to think about nowadays. This paper takes China's tourism market as the research background, combines the AISAS model to select predictor variables for each segment of the closed loop of "attention-interest-search-action-share", and analyzes the data from online research through multiple linear regression. The final results show that travel intention, business visibility, demand fit, public opinion attitude and payment convenience have significant positive effects on consumers' purchase intention, but sharing interaction will reduce consumers' purchase intention. As a result, tourism e-commerce platforms should pay attention to word-of-mouth marketing to build brand reputation, optimize product quality to meet customer needs, improve convenience, simplify payment and separate social interaction to return the function to its core.

## 1. Introduction

The rapid development of the Internet has driven the transformation of the tourism industry and the changes of consumer behavior in tourism, and as technologies such as 5G and the Internet of Things continue to mature, the digital transformation of the tourism industry has become increasingly important. Currently, in China's tourism market, tourism e-commerce platforms such as Ctrip, Fliggy, and Tongcheng-Elong have improved their platform functions and created new online transaction scenarios accordingly: Ctrip released the "Travel Marketing Hub" in 2021, with operations focusing on content conversion and marketing empowerment; Fliggy controls the increasing trend of young consumers, and help merchants to upgrade their digitalization from sales, marketing, brand building, membership management, etc. It is of great significance to handhold consumer psychology and consumer behavior and further improve platform digitization.

On the other hand, prompted by the COVID-19, consumers are more inclined to use digital products. "The 2021 China Online Travel Industry Research Report" released by iresearch shows that although the tourism industry environment under the continued influence of the COVID-19 is

not yet as good as it was in 2019, the overall travel market remains positive, and China has also achieved partial recovery growth in the transaction scale of the travel market in Xi'an in 2021, amounting to about 1.3 trillion yuan. Meanwhile, the “2021 China Online Travel Platform User Insight Research Report” shows that the current tourism e-commerce users are significantly younger, and these users have a higher pursuit of quality life, have higher consumption potential and are more inclined to use digital products. For tourism e-commerce, it is key to seize the market recovery opportunity, diversify online platform services, smarten the offline attraction environment and enable the digital transformation of the tourism industry to match the background and consumer demand in the post-pandemic era.

## 2. Model Overview

Compared with traditional consumption, consumer psychology, consumption habits and consumption patterns have changed significantly under the influence of Internet digitization. According to the traditional AIDMA model proposed by Lewis, consumers go through five stages from initial information acquisition to final purchase, which is “Attention - Interest - Desire - Memory - Action”. However, with the development of the Internet, this theory does not accurately explain other typical characteristics of consumers, such as searching for information on their own and sharing their shopping experiences through social media. Therefore, Dentsu Group has proposed the AISAS theory based on online purchasing consumer behavior, highlighting the initiative of online consumers in acquiring information through “Search” and the social interaction reflected in the current wide spread word of mouth implied by “Share”.

Therefore, in order to analyze how the current online tourism e-commerce platform products and services affect consumer behavior, this paper selects the AISAS model placing emphasis on Internet scenarios as the basic research framework, focusing on the “Attention - Interest - Search - Action - Share” closed loop, to explore the impact of tourism e-commerce platform on consumer behavior in each step.

## 3. Research Methodology and Research Process

### 3.1 Variable Selection

This paper will predict the influence factors of the corresponding segments based on the AISAS model, using “consumers’ willingness to buy” as the outcome variable, and combining the existing tourism e-commerce platforms’ products and services and operation methods.

#### *1)Attention*

In the attention link, the main behavior embodied by the user is to passively receive information and browse information, and generate a certain amount of attention to the product service itself. In the Internet era, consumers mainly pay attention to the platform’s products and services through social platforms, key opinion leaders, and word-of-mouth communication, and to a large extent, attention depends on the merchant's popularity and word-of-mouth. Therefore, we can choose “merchant awareness” as the influencing factor of this aspect of attention.

#### *2)Interest*

After gaining the consumer’s attention, usually the platform needs to generate consumer interest in the known information about the product service through a series of marketing operations. Usually, the marketing activities provided by the platform, the activity on the social platform and whether the products and services provided by the platform are of real value to the individual are the key factors for consumers’ interest or not. Therefore, “marketing interaction” and “conformity with demand” can be selected as influencing factors.

### *3)Search*

Compared with the traditional mode of offline store consultation, consumers now prefer to use APP and official websites to obtain information about products. When searching, consumers pay attention to the public opinion of merchants through platform reviews to varying degrees, and learn about the details of the products and services provided by the platform through chatting and consulting with customer service. Therefore, in the search process, the influencing factors can be summarized as “attitude of public opinion” and “quality of customer service”.

### *4)Action*

After obtaining sufficient information, consumers will take actions based on the promotional power of the platform, the cost effectiveness of the products and services offered, and the ease of payment. Therefore, “price of the product” and “ease of payment” are considered as influential factors in the action process.

### *5)Share*

After the transaction, many consumers will comment, post information or share their experiences on the platform, creating sharing interactivity in the consumption process. Therefore, “sharing interaction” can be an important influencing factor in the sharing process.

## **3.2 Research Hypothesis**

Combining the model and predictor variables the following hypotheses were made about the results.

- H1: Willingness to travel positively affects consumers’ willingness to purchase.
- H2: Merchant awareness positively influences consumers’ purchase intentions in the attention segment.
- H3: The degree of marketing interaction positively influences consumers’ willingness to buy in the interest segment.
- H4: The degree of conformity with demand positively influences consumers’ purchase intentions in the interest segment.
- H5: The attitude of public opinion positively influences consumers’ willingness to purchase in the search segment.
- H6: Customer service quality positively influences consumers’ purchase intention in the search segment.
- H7: The price of the product positively influences consumers’ willingness to buy in the action segment.
- H8: Payment convenience positively influences consumers’ purchase intentions in the action segment.
- H9: Sharing interaction positively influences consumers’ purchase intentions in the sharing session.

## **4. Questionnaire Design and Data Analysis**

### **4.1 Questionnaire Design**

This questionnaire is designed to investigate the use of tourism e-commerce platforms. Before the formal survey, the questionnaire directly distinguishes between valid and invalid responses through the question “Have you ever used Ctrip, Fliggy and other tourism e-commerce platforms when planning a trip?”, and the question “What is your current willingness to travel” was used to confirm consumers’ willingness to travel in the post-pandemic era.

Thereafter, according to the proposed hypothesis, the survey was conducted through eight single-choice questions to investigate consumers' awareness of the tourism e-commerce platform, marketing interaction, conformity with demand, public opinion attitude, customer service quality, product price, ease of payment and sharing interaction, by setting the gradient options "strongly disagree" "disagree", "average", "agree" and "strongly agree" to obtain consumers' attitudes.

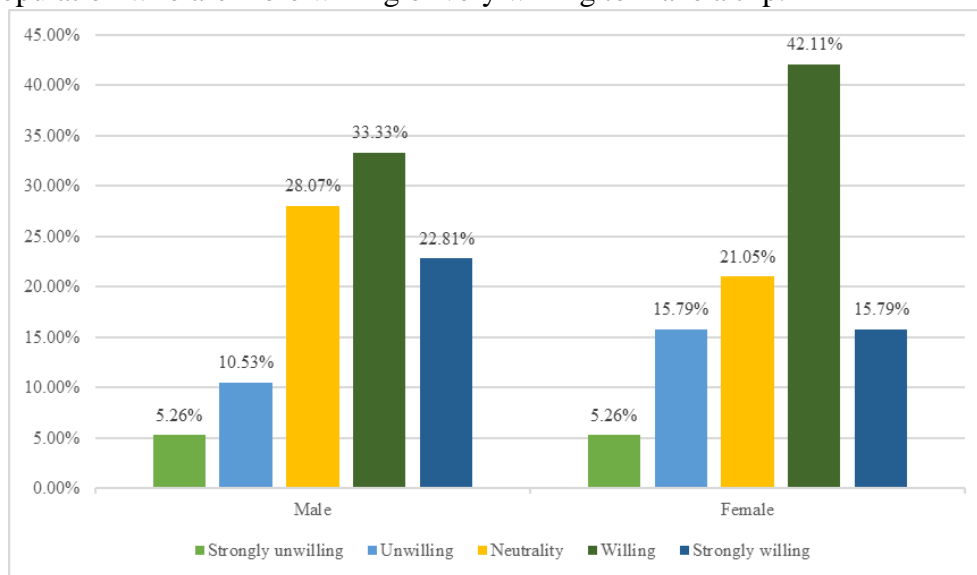
## 4.2 Questionnaire

In order to ensure the quality of the study, this paper mainly used Questionnaire Star to issue questionnaires for online research, and finally a total of 163 questionnaires were collected, among which 152 valid questionnaires were used by Ctrip, Fliggy and other tourism e-commerce platforms when planning a trip, with a valid questionnaire rate of 93.25%.

Specific information on the surveyed consumers' gender, age, career, monthly income range and the distribution of their long-term city of residence are were collected and collated for subsequent research.

This paper also presents a cross analysis of consumers' willingness to travel in the post-pandemic context covered by 153 questionnaires.

A cross analysis of gender and willingness to travel reveals that there is no large gap between the willingness of men and women to travel. In the post-pandemic context, there are still higher than 50% of the population who are more willing or very willing to make a trip.



*Fig.1 Histogram of Cross Analysis between Gender and Willingness to Travel*

A cross analysis of gender and willingness to travel reveals that, overall, willingness to travel is directly proportional to consumers' monthly income. The higher the monthly income, the greater the willingness to travel, and it can be seen that the majority of consumers who travel at present are still middle- and high-income groups.

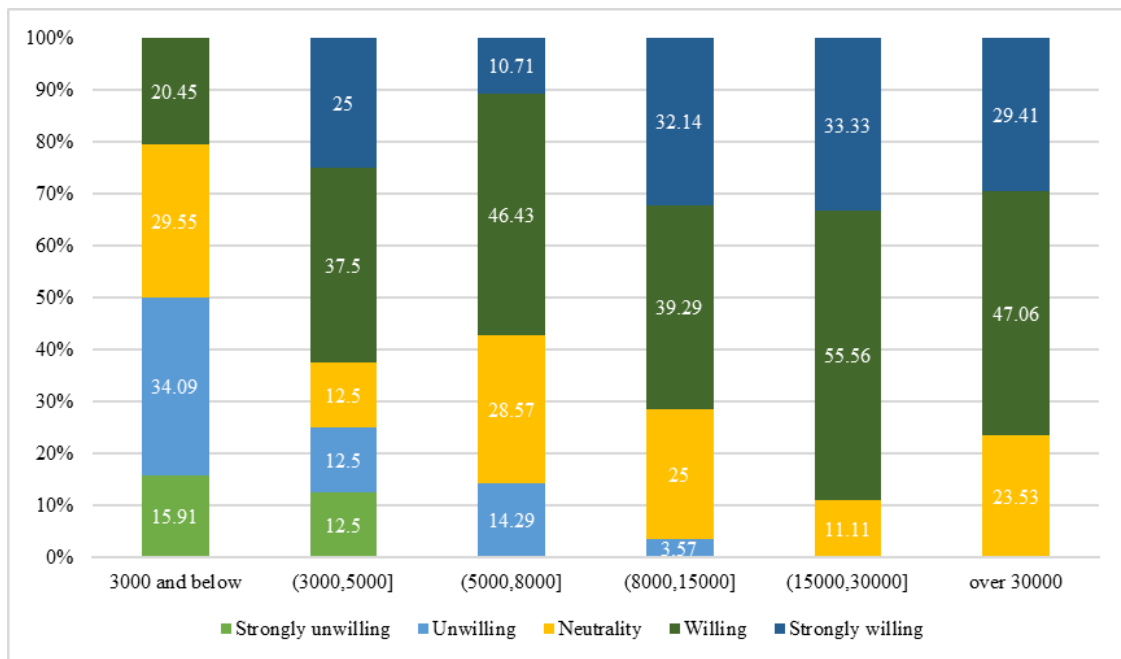


Fig.2 Histogram of Cross Analysis between Monthly Income and Willingness to Travel

A cross analysis of age and willingness to travel shows that a larger proportion of consumers in the age groups 26-30, 31-40 and 51-60 are “willing” to travel; even a large proportion of consumers in the age group 51-60 are “strongly willing” to travel. It can be reasonably assumed that, the strong willingness to travel is still dominated by the young and middle-aged groups at present, while the elderly, since they have money and leisure, are also important consumers of tourism. Considering the results of the valid questionnaire, the total number of counted consumers in the age group of 26-30 and 31-40 is 69, while only 9 consumers in the age group of 51-60, it is reasonable to speculate that it can be verified that the main consumers of the current tourism e-commerce platform are the middle-aged and young people who have certain economic level and pursue quality life.

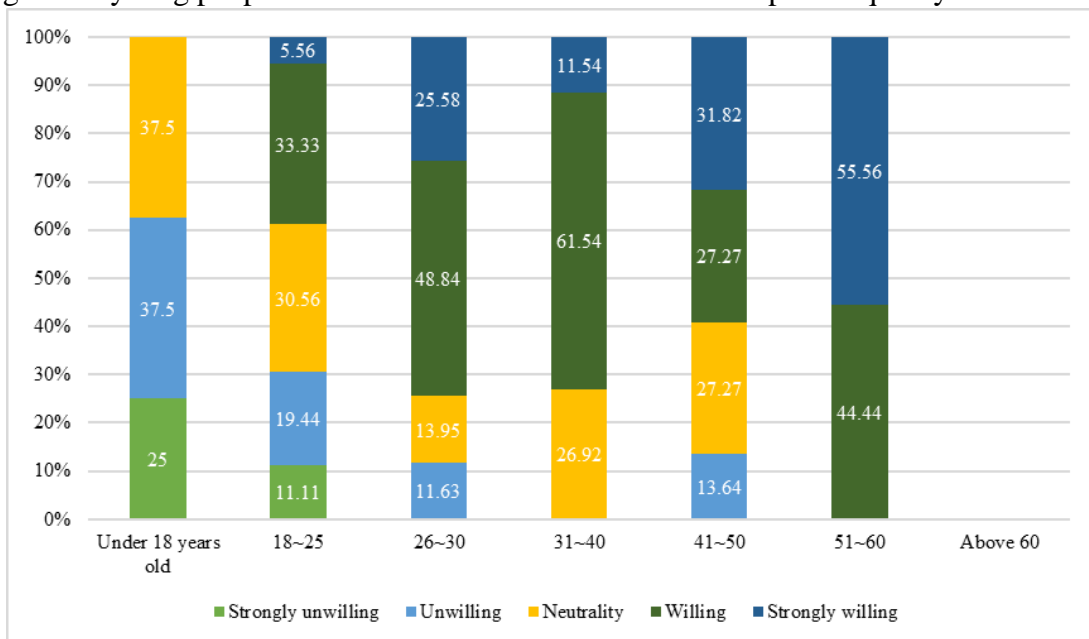


Fig.3 Histogram of Cross Analysis of Age and Willingness to Travel

### 4.3 Data Analysis

This paper investigates the impact of various factors of the tourism e-commerce platform in the post-pandemic era, combined with the AISAS model tourism e-commerce platform on consumers' final purchase decision on the platform, uses multiple linear regression to carry out the analysis. Use "willingness\_to\_buy" as the dependent variable to represent consumers' willingness to purchase, and "willingness\_to\_travel" "popularity" "interactive" "compactness" "public\_opinion" "service" "convenience" "social" represent the dependent variables respectively, therefore, the multiple linear regression model of this paper is:

$$Y = \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7 + \beta_8x_8 + \beta_9x_9 + \varepsilon$$

The results of the regression analysis of the data using Stata/MP 16.0 are shown below.

| Linear regression     |       |         |                      |         |           |           |     |
|-----------------------|-------|---------|----------------------|---------|-----------|-----------|-----|
| willingness_to_buy    | Coef. | St.Err. | t-value              | p-value | [95% Conf | Interval] | Sig |
| willingness_to_travel | .425  | .043    | 9.87                 | 0       | .34       | .51       | *** |
| popularity            | .104  | .042    | 2.47                 | .015    | .021      | .187      | **  |
| interactive           | .044  | .042    | 1.05                 | .297    | -.039     | .126      |     |
| compactness           | .09   | .043    | 2.07                 | .04     | .004      | .175      | **  |
| public_opinion        | .112  | .04     | 2.76                 | .007    | .032      | .191      | *** |
| service               | .065  | .043    | 1.52                 | .13     | -.019     | .15       |     |
| price                 | .068  | .044    | 1.56                 | .12     | -.018     | .155      |     |
| convenience           | .077  | .043    | 1.77                 | .079    | -.009     | .162      | *   |
| social                | -.021 | .041    | -0.51                | .613    | -.102     | .06       |     |
| Constant              | -.16  | .157    | -1.02                | .31     | -.471     | .151      |     |
| Mean dependent var    |       | 3.263   | SD dependent var     |         |           | 0.975     |     |
| R-squared             |       | 0.811   | Number of obs        |         |           | 152       |     |
| F-test                |       | 67.880  | Prob >F              |         |           | 0.000     |     |
| Akaike crit. (AIC)    |       | 189.026 | Bayesian crit. (BIC) |         |           | 219.265   |     |

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

Fig.4 Multiple Linear Regression Results

The regression results reveal that the model is significant overall and the degree of model fitting is high.

The independent variables "willingness\_to\_travel" and "public\_opinion" are significant at  $p < 0.01$ , the independent variables "popularity" and "compactness" are significant at  $p < 0.05$ , and the independent variable "convenience" is significant at  $p < 0.1$ .

Depending on Coef., all independent variables are positively correlated with the dependent variable except the independent variable "social", and the independent variable "willingness\_to\_travel" has a greater impact on the model, while the independent variable "social" is

negatively correlated with the dependent variable. The independent variable “willingness\_to\_travel” has a greater influence on the model, while the independent variable “social” is negatively correlated with the dependent variable.

## 5. Conclusions and Recommendations

From the regression results, the following results can be obtained.

- Willingness to travel positively affects and significantly influences consumers’ willingness to purchase.

- Merchant awareness positively influences and significantly affects consumers’ purchase intention in the attention segment.

- The degree of marketing interaction positively influences consumers’ willingness to purchase in the interest segment.

- The degree of conformity with demand positively influences and significantly affects consumers’ purchase intentions in the interest segment.

- The attitude of public opinion positively affects and significantly influences consumers’ purchase intention in the search segment.

- The quality of customer service positively influences consumers’ purchase intention in the search segment.

- The price of the product positively influences consumers’ willingness to buy in the action segment.

- The convenience of payment positively affects and significantly influences consumers’ purchase intentions in the action segment.

- Sharing interactions negatively affect consumers’ purchase intentions in sharing sessions.

According to the results, the following recommendations are made for the construction and operation planning of the tourism e-commerce platform.

(1) Pay attention to word-of-mouth marketing and build brand reputation. The research results show that merchant popularity positively affects and significantly influences consumers’ willingness to purchase in the “attention” segment; the attitude of public opinion positively affects and significantly influences consumers’ willingness to purchase in the “search” segment. Therefore, tourism e-commerce platforms need to focus on word-of-mouth marketing to build a good foundation of public opinion and brand reputation to get more customers.

(2) Optimize product quality and make it fit customer needs. Research results show that the degree of conformity with demand in the “interest” segment positively and significantly affect the consumer’s willingness to buy. Therefore, the tourism e-commerce platform should conduct rigorous market research, grasp customer needs, refine product categories, and fit customer needs.

(3) Improving convenience and simplifying the payment process. The research results show that the convenience of payment positively and significantly affects consumers’ willingness to purchase in the “action” segment. Tourism e-commerce platforms simplify the means of payment by supporting multiple payment channels to improve customer satisfaction and increase customer purchase intentions.

(4) Separate social interaction and return functionality to its core. The research results show that sharing interaction negatively affects consumers’ willingness to purchase in the sharing segment, presumably because consumers tend to use platforms with streamlined functions, so platforms can verticalize platform functions and additionally develop sub-brands with social community functions as support.

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