

## Research on the Influence of Online Shopping Characteristics on Consumers' Shopping Intention

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**Abstract:** It is of great significance to study the influence of online shopping characteristics on consumers' shopping intentions for the establishment of online shopping platforms' marketing strategies. Based on the SOR theory, this paper divided the online shopping characteristics into four dimensions: ease of use, visuality, Interactivity and entertainment. At the same time, this paper constructed a research model of online shopping characteristics and consumer purchasing intention based on the perspective of shopping experience value. Data were collected through questionnaires, and hypothesis were tested by SPSS and Smart PLS. Results showed that ease of use, visuality, Interactivity and entertainment have significant positive influence on consumers' shopping experience value and then affect consumers' purchasing intention.

### 1. Introduction

Online shopping refers to the shopping mode of browsing, selecting, and purchasing online goods or services through Internet media. At present, China's online shopping market is developing rapidly. Online shopping has gradually transformed into the main way for consumers to shop with its preferential price, diversified products, convenient operation, and no time and space restrictions advantages. The value of the shopping experience is the perceived subjective value of the consumer's perception of all the elements that make up the complete shopping process experience, that is, the combination of various values perceived in the shopping experience. And it is characterized by the interaction of the consumer with the shopping environment or shopping atmosphere and also characterized by effectiveness events and evaluations in shopping activities [1], throughout the entire shopping experience of consumers. In the process of online shopping, the relationship among online shopping characteristics, the value of consumer shopping experience and consumers' purchasing intention remain to be further verified.

Based on the SOR model, this paper studied the relationship among online shopping characteristics, the value of consumer shopping experience and consumers' purchasing intentions. It is believed that online shopping characteristics will firstly cause consumers to generate shopping experience value, which in turn affect consumers' intention to purchase. The study constructed a research model of online shopping characteristics affecting consumers' shopping intentions, used questionnaires to collect data, and empirically verified the relationship among online shopping characteristics, consumer shopping experience value, and consumers' intention to purchase. The research results provided an in-depth analysis of online shopping and consumers' intention to purchase, which is of great significance to the development and improvement of shopping platforms' and business marketing strategies.

## 2. Related Theory Research

### 2.1. Online Shopping Characteristics.

In recent years, online shopping has become a research hotspot of many scholars. Based on immersion theory, Wei defines online shopping characteristics as ease of use, information, sociality and entertainment, and confirms that they significantly affect consumer immersion [4]. Eroglu et al. classifies online shopping related elements into tasks with high relevance (such as navigation, recommendation systems, etc.) and elements with low task relevance (such as entertainment, visual effects, etc.) according to media rich theory [6]. Yin believes that the features of online shopping which are ease of use, Interactivity and entertainment significantly affect consumers' purchasing intention [2]. Chen and other scholars proposed that visuality also significantly affects consumers' purchasing intention in view of the study of Yin and others [3]. Based on previous research, this article divided online shopping features into four parts: ease of use, visuality, Interactivity and entertainment.

### 2.2. Shopping Value.

Babin classifies shopping value into functional shopping value and enjoyment shopping value [1]. Functional shopping value refers to the subjective value that consumers feel when they purchase the basic needs of shopping during the shopping process in a cost-effective manner [7,8]. The value of enjoyment shopping is the sensory emotional experience of consumers in the process of purchasing goods or services, including pleasure and excitement, which is more subjective and personal than functional shopping value [7,8]. Rintamäki proposed the value of social shopping in view of Babin's shopping value classification system. He believed that social shopping value is the satisfaction of consumers in the process of shopping and the satisfaction of self-social image improvement [8,9]. The empirical research by Rintamäki shows that the value of functional shopping is related to the economy and convenience of the shopping process, the value of enjoyment shopping is related to the entertainment and exploratory nature of the shopping process, and the value of social shopping is related to the enhancement of social identity [9]. This paper combines the research of predecessors and divides the value of online shopping experience into functional value, enjoyment value and social value.

## 3. Model Construction and Research Hypotheses Development

SOR is a stimulus-organism-response model believes that external factors can stimulate consumers to produce emotional or cognitive responses, which in turn leads to a certain degree of approaching or evading behavioral responses [5]. Based on the SOR model, this paper divides the online shopping features into ease of use, visuality, interactivity and entertainment. And it divides the shopping experience value into functional value, enjoyment value and social value. By constructing a research model of online shopping characteristics affecting consumers' online purchasing intention, this paper explores the influence mechanism of online shopping characteristics on shopping experience value and online purchasing intention. As shown in Fig. 1.

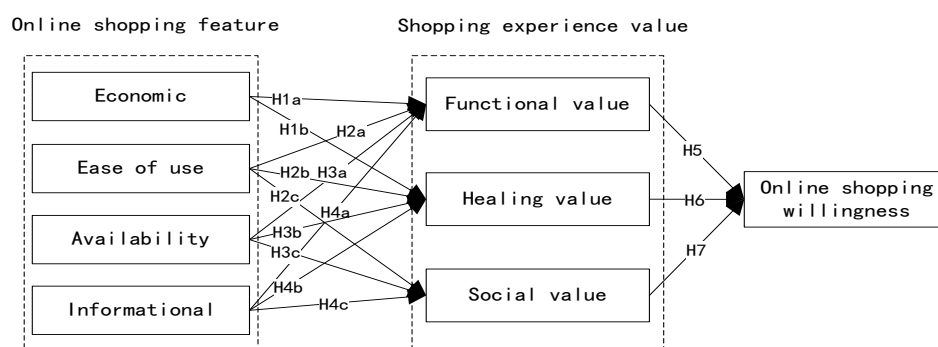


Figure 1. The theoretical model

### **3.1. Research Hypothesis of Online Shopping Characteristics and Shopping Experience Value.**

Ease of use refers to the ease of use of the online shopping interface and the convenience of shopping. Compared with physical shopping, the biggest advantage of online shopping is its ease of use. As long as people have computers or functional mobile terminal devices, they can view goods without leaving home and achieve online payment purchasing activities. Yin believes that the convenience of online shopping provides impulsive shopping possibilities for consumers and the advantages of ease use of online shopping platform, simple webpage, and convenient purchasing process will increase the shopping experience of consumers [2]. Therefore, the following research hypotheses are proposed:

H1a: Ease of use has a positive effect on the value of shopping functional experience.

H1b: Ease of use has a positive effect on the value of shopping enjoyment experience.

Visuality is the extent to which the external form presented by the online shopping platform attracts consumers. It is reflected in the layout and design of the web interface, the image of the online business, the network environment and the way of displaying the network products [10]. Adelaar believes that visuality can significantly affect consumers' perception [10]. The visual elements of the online shopping platform mainly refer to color, video, text and typesetting, which can help the shopping platform attract more customers [11]. Good visuals can attract customers' attention and generate consumer shopping value. Therefore, the following research hypotheses are proposed:

H2a: Visuality has a positive effect on the value of shopping functional experience.

H2b: Visuality has a positive effect on the value of shopping enjoyment experience.

H2c: Visuality has a positive effect on the value of shopping social experience.

Interactivity is the two-way information interaction between the online shopping platform and the participants through the Internet and modern technology, including human-computer interaction and interpersonal interaction [12]. An interactive website will have a good match and respond quickly to users' input. The timely response of merchant to user's questions, the communication and the exchange of information among consumers will make consumers generate the perceived value. Sautter's research confirms that interaction has a direct effect on emotion and cognition [13]. Therefore, the following research hypotheses can be proposed as follows:

H3a: Interactivity has a positive effect on the value of shopping functional experience.

H3b: Interactivity has a positive effect on the value of shopping enjoyment experience.

H3c: Interactivity has a positive effect on the value of shopping social experience.

Entertainment refers to the online shopping platform is a communication medium which can provide consumers with a variety of entertainment experiences through video, audio, animation and other content with shopping and entertainment functions, in order to increase the enjoyment value of the consumer shopping process [6] and make it easy for consumers to be relaxed while shopping. The shopping platform offers a lot of interesting shopping festival entertainment activities, such as "grabbing red envelopes", which gives consumers a discount while increasing the entertainment experience of consumers. Thus, the following research hypotheses are proposed:

H4a: Entertainment has a positive effect on the value of shopping functional experience.

H4b: Entertainment has a positive effect on the value of shopping enjoyment experience.

H4c: Entertainment has a positive effect on the value of shopping social experience.

### **3.2. Research Hypothesis of Shopping Experience Value and Online Purchasing Intention.**

The value of shopping runs through the whole process of the consumer's entire shopping experience with the object and content of the shopping experience as the core, so that consumers can experience various subjective perceptual values [1]. The shopping value system is divided into functional shopping value, enjoyment shopping value and social shopping value [9]. The perceived value generated by consumers in the online shopping process will have a certain degree of influence on consumers' purchasing intention. Therefore, the following research hypotheses are proposed:

H5: The value of the online shopping functional experience has a positive effect on consumers' purchasing intention.

H6: The value of the online shopping enjoyment experience has a positive effect on consumers' purchasing intention.

H7: The value of the online shopping social experience has a positive effect on consumers' purchasing intention.

#### 4. Research Design and Empirical Analysis

##### 4.1. Questionnaire Design and Variable Measure.

This paper mainly uses questionnaires to collect data. The questionnaire is divided into two parts. The first part is the investigation of the basic situation of the respondents, and the second part is the investigation of the variable measurement. In order to ensure the reliability and validity of the measurement, the questions in this research scale refer to the existing literature at home and abroad. Among them, the ease of use mainly refers to the research of Verhagen [15]; the visuality mainly refers to the research of Adelaar [10]; the interactivity mainly refers to the research of Yoo [14]; the entertainment mainly refers to the research of Mazaheri [15]; The functional value and enjoyment value mainly refer to the research of Babin [1]; the social value mainly refers to the research of Rintamaki T [9]; the intention of online shopping mainly refers to the research of DODDS [16].

##### 4.2. Data Collection and Statistical Analysis.

The questionnaire was distributed and collected mainly through the questionnaire software, and 380 questionnaires were distributed through online and offline methods, and 350 questionnaires were collected. After deleted the questionnaires that have not participated in online shopping, the questionnaires with less than one minute of response time and the same answer content, there are 288 questionnaires can be used and the effective rate of the questionnaire is 82.3%. Through statistical analysis of 288 valid questionnaires, the basic situation of the samples is showed in Table 1.

Table 1 Sample description statistics (288)

Options	Range	Frequency	Percentage	Options	Range	Frequency	Percentage
<b>Gender</b>	Male	134	46.53%	<b>Personal Monthly Disposable Income (yuan)</b>	Less than 1000	26	9.03%
	Female	154	53.47%		1001-3000	98	34.03%
<b>Age (years old)</b>	< 18	2	0.69%		3001-5000	102	35.42%
	18-24	131	45.49%		5001-10000	53	18.4%
	25-35	71	24.65%		Over 10,000	9	3.13%
	36-45	30	10.42%	<b>Average Monthly Online Shopping Spending (yuan)</b>	Less than 500	104	36.11%
	46-60	54	18.75%		501-1000	111	38.54%
	Over 60	0	0.00		1001-2000	47	16.32%
<b>Education Level</b>	High School And Below	9	3.13%		2000-3000	19	6.6%
	Specialist	22	7.64%		3001-5000	3	1.04%
	Undergraduate	221	76.74%		Over 5000	4	1.39%
	Graduate And Above	36	12.5%				
<b>Online Shopping Experience (year)</b>	1-2	37	12.85%				
	2-3	119	41.32%				
	5-10	92	31.94%				
	Over 10	10	6.25%				

##### 4.3. Reliability and Validity Test.

In this paper, SPSS software is used for data processing and statistical analysis. The path analysis and hypothesis testing are performed by Smart PLS software. And the study uses the Cronbach's  $\alpha$  value to measure the overall reliability of questionnaire and the reliability of each latent variable. The value of Cronbach's  $\alpha$  is 0.975, indicating that the overall reliability of the questionnaire was high.

And the value of KMO is 0.957 which represents that it is suitable for factor analysis. As shown in Table 2, the Cronbach's  $\alpha$  value of each latent variable are greater than 0.7, indicating that the reliability of each latent variable is high, and the composite reliability (CR) is greater than 0.7 which means that the internal consistency of each measurement item is good. The way of validity test is mainly through two aspects, the convergence validity and the discriminant validity. As shown in Table 2, the values of AVE (average variance extracted) are all greater than 0.5, which indicates that the study has good convergence validity. The discriminant validity is measured by comparing the square root of each factor AVE with the correlation between the variable and any other variable. As shown in Table 3, the diagonal is the square root of each variable AVE, and the rest is the correlation coefficient. The square root of the AVE value is greater than the correlation coefficient between variables. It shows that the sample has good discriminant validity.

Table 2 Mean, factors loading, Cronbach's  $\alpha$ , CR, AVE

Factors	Indicator	Mean	Standard Deviations	Standardized Loadings	Cronbach's $\alpha$	CR	AVE
Ease of Use	EU1	3.700	0.685	0.862	0.867	0.909	0.715
	EU2	3.980	0.678	0.865			
	EU3	4.020	0.727	0.849			
Visuality	VA1	4.020	0.681	0.923	0.877	0.916	0.731
	VA2	4.090	0.651	0.890			
	VA3	4.110	0.674	0.883			
Interactivity	INT1	4.180	0.680	0.824	0.867	0.909	0.715
	INT2	4.030	0.717	0.856			
	INT3	4.140	0.721	0.871			
	INT4	4.000	0.751	0.830			
	INT5	3.950	0.766	0.824			
Entertainment	ET1	4.090	0.703	0.867	0.895	0.927	0.760
	ET2	4.010	0.732	0.871			
	ET3	3.790	0.843	0.881			
	ET4	3.390	0.844	0.867			
Functional Value	FV1	4.000	0.663	0.853	0.870	0.911	0.720
	FV2	3.960	0.734	0.829			
	FV3	4.030	0.635	0.867			
	FV4	3.950	0.723	0.832			
	FV5	3.850	0.718	0.853			
Enjoyment Value	EV1	3.770	0.744	0.822	0.819	0.881	0.650
	EV2	3.680	0.714	0.828			
	EV3	3.700	0.737	0.880			
	EV4	3.690	0.786	0.887			
Social Value	SV1	3.830	0.729	0.748	0.914	0.940	0.796
	SV2	3.810	0.742	0.848			
	SV3	3.660	0.752	0.864			
	SV4	3.680	0.775	0.759			
Purchasing Intention	PI1	3.880	0.731	0.908	0.908	0.936	0.784
	PI2	3.880	0.737	0.894			
	PI3	3.810	0.735	0.902			
	PI4	3.600	0.781	0.864			

Table 3 Table type styles

Factors	EU	VA	INT	ET	FV	EV	SV	PI
EU	<b>0.846</b>							
VA	0.451	<b>0.855</b>						
INT	0.499	0.651	<b>0.846</b>					
ET	0.592	0.655	0.672	<b>0.872</b>				
FV	0.645	0.656	0.686	0.755	<b>0.849</b>			
EV	0.521	0.583	0.616	0.755	0.676	<b>0.855</b>		
SV	0.478	0.592	0.648	0.659	0.641	0.739	<b>0.892</b>	
PI	0.517	0.524	0.596	0.711	0.668	0.748	0.724	<b>0.885</b>

#### 4.4. Hypotheses Test.

The study constructed the structural equation model by Smart PLS and performed path analysis and hypotheses testing. The path relationship between variables is verified by PLS Algorithm, and the level of significance between variables is calculated by Boot Strapping. When the T value is greater than 1.96, the significance level is \*, which indicates that the significance level is acceptable; when the T value is greater than 2.58, the significance level is \*\*, indicating that the significance level is better; when the T value is greater than 3.29, the significance level is \*\*\*, indicating a very good level of significance.  $R^2$  mainly reflects the degree of interpretation of the explanatory variables to the explained variables. The path analysis results, the significance level and  $R^2$  are showed in Fig. 2.

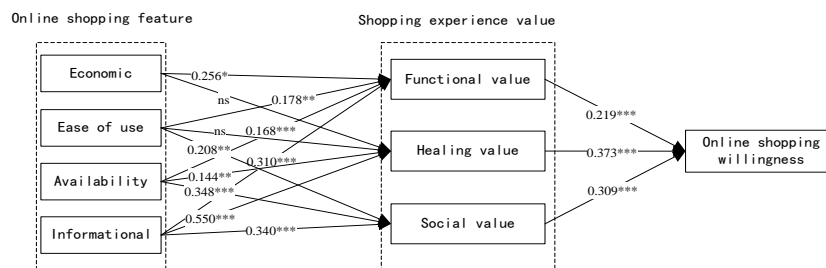


Figure 2. Path coefficients and significance level

#### 5. Research Results and Discussion

The analysis results of this empirical study are showed in Table 4. Except for the H1b and H2b hypothesis, all other hypotheses are true.

Table 4 Results of the study

Hypotheses	Path coefficient and significance level	T value	Results
H1a	0.256*	2.024	support
H1b	ns	1.115	not support
H2a	0.178**	2.809	support
H2b	ns	1.688	not support
H2c	0.208**	2.809	support
H3a	0.168***	4.820	support
H3b	0.144**	2.672	support
H3c	0.348***	5.597	support
H4a	0.310***	7.520	support
H4b	0.550***	11.16	support
H4c	0.340***	6.786	support
H5	0.219***	3.927	support
H6	0.373***	6.104	support
H7	0.309***	5.907	support

Ease of use significantly affects functional shopping value and enjoyment shopping value. The

convenient operation of online shopping, the easy-to-use shopping interface, and the easy-to-learn operation process enable consumers to generate perceived value. Therefore, the online shopping platform should reduce the shopping complexity, simplify the shopping process, and make the online shopping quick and easy under the premise of ensuring the safety of online shopping, thereby enhancing users' perceived value and online purchasing intention.

Visuality significantly affects the value of functional shopping value and social shopping value, and has no significant impact on the value of enjoyment. The visual effects of the online shopping platform can significantly enhance the functional and social value of consumers, such as shopping product display, shopping live interface, etc. Therefore, the online shopping platform should continuously improve the product display interface, improve the product display effect, enhance the interface visuality and enhance the perceived value in order to improve the online purchasing intention.

Interactivity has notable effects on functional shopping value, enjoyment shopping value, and social shopping value. The human-computer interaction and interpersonal interaction of consumers in the process of online shopping can significantly affect the perceived value of consumers. Therefore, the online shopping platform should actively respond to the needs of consumers, interact positively with consumers and enhance the perceived value in order to improve the online purchasing intention.

Entertainment has marked effects on functional shopping value, enjoyment shopping value and social shopping value. The added variety of animations, entertainment videos and platforms which are the online shopping platform designed in order to attract consumers significantly affect the perceived value of consumers. Therefore, shopping platforms can combine its own special platform features to increase the entertainment experience of consumers while giving consumers preferential treatment for the purpose of promoting consumers to generate shopping value in the shopping experience process.

Functional shopping value, enjoyment shopping value and social shopping value have positively effects on consumers' purchasing intention. The perceived value generated by consumers in the online shopping process has a significant impact on the purchasing intention. Therefore, the online shopping platform should effectively use the features of online shopping to enhance the value of consumers' online shopping, and enhance consumers' online shopping willingness.

## **6. Research Conclusions and Contributions**

### **6.1. Research Conclusions.**

According to previous studies, this paper divided the online shopping characteristics into four dimensions: ease of use, visuality, interactivity and entertainment based on the SOR theory. It constructed a research model of the influence of online shopping characteristics on consumers' purchasing intentions and collected data for statistical analysis and hypotheses testing. The study found that the online shopping features including ease of use, visuality, interactivity, and entertainment have significant effects on the value of consumers' shopping experience, which in turn affect consumers' purchasing intention.

### **6.2. Research Contributions.**

Based on SOR theory, the research study contributes to the literature on the influence of online shopping characteristics on consumers' purchasing intentions in several ways. First of all, this paper took online shopping as the research context and studied the influence of online shopping characteristics on consumers' shopping willingness. And it divided Shopping features into ease of use, visuality, interactivity, and entertainment. Therefore, the paper enriched the research content of online shopping. Secondly, in the research of online shopping, this paper introduced the SOR theoretical model and studied the value of consumer shopping. The research confirms that online shopping characteristics as external environmental stimulus variables will significantly affect consumers' perceived value. The study enriched the value of online shopping research content at the

same time.

The research results of this paper can help the online shopping platform to develop and improve their marketing strategies and characteristics which include the ease of use, visuality, interactivity and entertainment in order to promote consumer's functional shopping value, enjoyment shopping value and social shopping value and then increase consumers' online purchasing intention. The shopping platform can improve the ease of use of the platform through building a fast, simple and clear shopping process and enhance the overall visual effect of the platform by improving the colorful shopping interface, platform color display, product image and so on. The platform can continuously enhance online shopping interaction through proactive communication with consumers and attract consumers to pay attention to the platform by setting up colorful platform games and exciting entertainment video displays. Meanwhile, effectively combine entertainment and shopping activities to enhance consumers' online shopping willingness while improving the value of consumers' shopping. The value of shopping runs through the whole process of the consumer's entire shopping experience. Consumers' perceived value of shopping plays an important role in improving shopping satisfaction, customers' loyalty and customers' repurchase intention.

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