



Factors Influencing of Consumer Purchasing Intention on Network Broadcast

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Abstract. The purpose of this study is to explore the factors that affect the purchase intention of network broadcast consumers, and discuss the impact of these factors on consumers in Guangxi, the influence of situational factors (information quality, human interaction, transaction quantity) and marketing stimulus (discount offer, time limit) on the purchase intention of Guangxi consumer. A random sampling method was used to conduct a questionnaire survey among 400 users in Guangxi who watched live network broadcasts and bought products. The questionnaire uses the self-filling questionnaire as the research tool, including information quality, human interaction, transaction quantity, discount offer, time limit and purchasing intention. The validity and reliability analyses were carried out to ensure the stability of the collected data. The research result shows that information quality, human interaction, transaction quantity, discount offer, and time limit have a positive impact on consumer purchasing intention. In order to increase purchasing intention, information quality, human interaction, transaction quantity, discount offer, and time limit can be increased. Since they have the most significant impact on purchasing intention, it is recommended to strengthen the design of information quality, human interaction, transaction quantity, discount offer, and time limit in products or services. This research provides valuable insights for businesses operating in the online sales industry and can be used to improve their marketing strategies to attract more customers.

Keywords: Network broadcast, Situational factors, Marketing stimulus, Consumer purchasing intention, SOR theoretical model

1 Introduction

In recent years, with the rapid development of network technology and the popularization of smartphones, Network broadcast has become an important way of shopping and marketing channel, More and more consumers get product information and make purchase by watching live network programs in this context, it is crucial to understand the factors that influence the purchase intention of wecast consumers. As of June 2023,

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the scale of China's online video users was 1.044 billion, accounting for 96.8% of the overall number of Internet users; the scale of online shopping users reached 884 million, accounting for 82.0% of the overall number of Internet users; the scale of network broadcast users was 526 million, an increase of 11.94 million compared with that of December 2022, accounting for 48.8% of the overall number of Internet users. The scale of China's webcast industry continues to grow, and the number of users shows an explosive growth trend, In the face of such a huge online shopping market, major network broadcast platforms are actively seeking innovation in order to obtain more customer traffic. Short-video platform Jitterbug has launched a mall function to facilitate users to search for commodities directly through the mall entrance. In the past year, Jitterbug's e-commerce merchandise trading volume (GMV) has increased by more than 80% year-on-year, with the mall's GMV increasing by 277% year-on-year. In the first quarter of 2023, another short-video platform Shutter's total revenue grew by 19.7% year-on-year, including network broadcast sales, compared with the revenue of other businesses, network broadcast sales increased by 51.3%. In the face of network broadcast such a large audience and the number of purchases occurring, companies and research institutions have also begun to pay attention to the study of consumer purchasing intention in the network broadcast. The purpose of this paper is to explore what factors affect consumer purchasing intention in network broadcast sales and the extent of the influence of these factors in network broadcast purchasing, to provide a reference for the sales of webcasters.

2 Related Work

In webcast sales, information quality has been shown to have an important impact on consumer trust. Brinberg, D., Lutz, R. J. (2012)^[1] showed that the attitude of ordinary consumers is more susceptible to the influence of opinion leaders, thus affecting the behavior and decision-making of consumers, and the process of persuasion is also greatly affected by the quality of information. Human interaction is a core element in the live sales environment as it directly influences consumers' purchasing decisions and intentions. Yuan, H.X., Huang, L.W., (2022)^[2], Luo et al., (2024)^[3], and Lin et al., (2024)^[4] both product interaction and interpersonal interaction have a positive impact on consumers' purchase intention, and e-commerce platforms can strengthen the identity influence mechanism through interpersonal interaction. Ji, M., Zhuo, X.Z., (2020)^[5], Jiixin et al., (2023)^[6] and Daxing et al., (2024)^[7] studied and built a theoretical model of e-commerce live streaming consumers' purchasing intention based on the SOR theoretical model. The results showed that both product characteristics and contextual characteristics (including the number of viewers, transaction quantity, and interactivity) positively influenced consumers' purchasing intention. Based on the SOR theory, Wang et al., (2014)^[8], Muangmee et al., (2023)^[9], Yang et al., (2024)^[10] empirically concluded that price discounts stimulate consumers' impulsive purchases intention, with the influence path being price discount - pleasure and arousal - willingness to impulsive purchase. Hao, L.G., Zeng, H., (2017)^[11], Liping et al., (2023)^[12] found that consumers pursue products that are both high-quality and inexpensive. The

explanation during live streaming only helps consumers better understand the products, while marketing stimuli such as time-limited purchase rushes and irregular lucky draws attract consumers to continue watching and stimulate pleasant emotions, prompting consumers to make quick purchase decisions.

3 Method

As a region in China, Guangxi has a unique consumer market and consumer groups. This paper takes 35.79 million online consumers in Guangxi as the research object. This study chose to use the Taro-Yamane formula for selecting the number of researchers; the sample size was determined by the formula to be 400 people. In order to ensure the scientific and rigor of the research, stratified sampling of online shopping consumers in Guangxi, China was conducted, and "questionnaire star" was used to issue questionnaires for investigation. In order to study factors influencing of consumer purchasing intention on network broadcast, the following steps are taken:

1. The questionnaire is measured and evaluated for validity by experts. Content validity is judged by calculating the IOC index value, which is required to be greater than 0.6 (Pukkaew, 2015).The researcher submitted the first draft of the questionnaire to the consultant for completeness review, and selected 30 people similar to the target sample for the experiment,Uses Cronbach's a value to test whether the reliability of the whole construct is consistent, and Cronbach's a value should be greater than 0.7. Evaluate reliability in the scale. From the data analysis results are shown in Table 1.

Table 1. Questionnaire Cronbach's α

Variable Items	Sample size	N of Items	Cronbach's alpha
1. Information quality	30	4	0.867
2. Human Interaction	30	4	0.832
3.Transaction quantity	30	5	0.897
4. Discount Offer	30	4	0.800
5. Time Limit	30	5	0.849
Consumer purchasing intention	30	5	0.820
Total	30	27	0.948

From Table 1 questionnaire Cronbach's alpha, the questionnaire demonstrates high reliability, stability, and consistency with all factor and total factor reliability values exceeding 0.8, ensuring the collection of authentic data that meets acceptance criteria.

2. In order to ensure the reliability and validity of the data collected, we conduct a comprehensive data collection process. The validity of the collected questionnaires was screened, invalid questionnaires were excluded, and a total of 400 valid questionnaires were retained, then SPSS software was used for data analysis.

4 Experiments and Results

4.1 Descriptive Analysis

Descriptive statistics from the survey show that the survey covered 400 users, evenly distributed by gender. In terms of age, the respondents ranged in age from under 18 to over 55, with the majority in the 26-45 age range. According to the China Internet Development Statistics Report, the age distribution of the entire survey is reasonable. In terms of occupation, the majority are office workers, followed by students and freelancers. Monthly incomes vary, with most of them between 2001 and 8,000 Yuan. The frequency of viewing the webcast is high, with more than half of people watching it once or twice a week, and a significant number of people watching it more frequently. Therefore, the use of sample data for further analysis has good credibility and representativeness.

4.2 Reliability Analysis

Table 2. Reliability analysis results of each variable

variant	sample size	Number of projects	Cronbach. alpha
1.Information quality	400	4	0.822
2.Human Interaction	400	4	0.835
3.Transaction quantity	400	5	0.872
4.Discount Offer	400	4	0.827
5.Time Limit	400	5	0.857
Consumer purchasing intention	400	5	0.856

From Table 2, Cronbach's α value of variables above 0.8 is above medium confidence. The questionnaire has a good reliability and can objectively reflect the impact of network broadcast on the purchasing intention of consumers in Guangxi.

4.3 Inferential Analysis

Table 3. shows the mean and standard deviation of Information quality, human interaction, transaction quantity, discount offer, time limit, and consumer purchasing intention.

	\bar{X}	n	SD	MIN	MAX	LEVEL
Information quality	3.87	400	.930	1	5	high level
Human interaction	3.83	400	.962	1	5	high level
Transaction quantity	3.82	400	.958	1	5	high level
Discount offer	3.82	400	.950	1	5	high level
Time limit	3.78	400	.963	1	5	high level
Consumer purchasing intention	3.85	400	.910	1	5	high level

From Table 3, the mean value of consumer purchasing intention is at a high level were 3.85, the average value is from high to low: Information quality was 3.87; human

interaction was 3.83; transaction quantity was 3.82; discount offer was 3.82; time limit was 3.78. From the given standard deviation value, the standard deviation of consumer purchasing intention is the smallest, which is 0.910, indicating that its data is relatively concentrated. The standard deviation of time limit and human interaction is the largest, 0.963 and 0.962, indicating that their data are scattered. From these analyses, we can conclude that the consumer purchasing intention project has the most concentrated data and the least fluctuation. Discount offer, transaction quantity and information quality project data are more concentrated and less volatile. Time limit and human interaction project data are scattered and fluctuate greatly.

4.4 Correlation Analysis

This study, in order to analyze the relationship between the variables of the questionnaire on consumer purchasing intention, correlation analysis was carried out. The research results are shown in Table 4.

Table 4. Shows the results of the correlation coefficient analysis Correlations

Factor	Information quality	Human interaction	Transaction quantity	Discount offer	Time limit	Consumer purchasing intention
Information quality	1	.833**	.834**	.838**	.815**	.823**
Human interaction	.833**	1	.845**	.821**	.823**	.845**
Transaction quantity	.834**	.845**	1	.826**	.862**	.856**
Discount offer	.838**	.821**	.826**	1	.819**	.842**
Time limit	.815**	.823**	.862**	.819**	1	.838**
Consumer purchasing intention	.823**	.845**	.856**	.842**	.838**	1

From Table 4, Result display there is a correlation between information quality, human interaction, transaction quantity, discount offer, time limit and consumer purchasing intention. This indicates that there is a positive correlation between the above variables and consumer purchasing intention, and the values are all greater than 0.5. Therefore, the correctness of hypothesis has been preliminarily verified, indicating that although there is a correlation between the two, the correlation is strong.

4.5 Regression Analysis

In this study, multiple linear regression analysis was used to test the direct effects of independent variables on dependent variables.

Table 5. Regression coefficient analysis results

Model	Unstandardized Coefficients		Standardized Coefficients	t	sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF

1	(Constant)	.311	.087		3.583	.000		
	Information quality	.091	.046	.093	1.996	.047	.210	4.771
	Human interaction	.210	.044	.222	4.744	.000	.209	4.775
	Transaction quantity	.230	.048	.242	4.785	.000	.179	5.580
	Discount offer	.227	.044	.237	5.172	.000	.219	4.567
	Time limit	.167	.045	.177	3.740	.000	.205	4.879
a. Dependent Variable: consumer purchasing intention								

From Table 5, from the regression coefficient analysis results, it is found that independent variables are composed of information quality, interpersonal interaction, transaction quantity, discount and time limit, and their significance P-value is 0.000, less than 0.05, indicating that the global regression model is significant, indicating that each independent variable has a significant impact on consumers' purchase intention. VIF values are all less than 10, and tolerance values are between 0.2 and 0.4, indicating that there is no collinearity between independent variables and other independent variables. This shows that the variable frame has high explanatory power.

4.6 Results of Data Analysis

To study the influence of network broadcast information quality, human interaction, transaction quantity, discount offer and time limit on consumers purchasing intention in Guangxi.

Information quality has a positive impact on consumer purchasing intention.

Human interaction has a positive impact on consumer purchasing intention.

Transaction quantity has a positive impact on consumer purchasing intention.

Discount offer has a positive impact on consumer purchasing intention.

Time limit has a positive impact on consumer purchasing intention.

5 Conclusions

This study further consolidates the theoretical understanding of the influence of online broadcast sales on consumer purchasing intention. Compared with traditional e-commerce purchasing intention research, we introduce independent variables unique to online live broadcast sales here, effectively expanding the field of consumer purchasing intention research under specific scenarios. In addition, our research not only enriched the theoretical connotation of consumer purchasing intention in webcast sales, confirmed the impact of independent variable on dependent variable, namely consumer purchasing intention, but also deeply explored the specific influencing factors of webcast sales on consumer purchasing intention, and comprehensively analyzed the generation process of consumer purchasing intention.

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