

# Research on Influencing Factors and Optimization Strategies of Short-Video Marketing on Consumption Willingness

Yuchen Liu, Linke Li, Jiamin Xi, Jiamin Ma, Tangxin Chen\*

Xi'an Polytechnic University, Xi'an, Shaanxi, 710600, China

\*Email: 2391874530@qq.com

## Abstract

With the rapid development of the Internet, short-video marketing has become a new trend. By virtue of its rich traffic, easy dissemination, high fun, and other characteristics, short videos comply with the highly informational life, cater to people's needs for fragmented entertainment and product information, and have become the preferred way for people to live, entertain, consume, and shop in the new era. Based on this, this paper combs and integrates the existing literature, and combines with the reality. By exploring the current situation of short-video marketing encountered by consumers and the consumption status under its influence, as well as the influencing factors of short-video marketing on consumers' purchase intention, it obtains samples through the way of issuing questionnaires on online and offline platforms, carries out factor analysis, difference analysis, and constructs a structural equation model to verify the hypothesis, analyze the marketing mode that consumers prefer, and the advantages and disadvantages of various short-video marketing.

## Keywords

**Short-video Marketing; Purchase Intention; Influencing Factors; Analysis of Variance; Structural Equation.**

## 1. Introduction

According to the 54th Statistical Report on the Development of China's Internet, as of June 2024, the number of Internet users in China is nearly 1.1 billion (1,099,670,000), an increase of 7.42 million compared with December 2023, and the Internet penetration rate reaches 78.0%. The continuous optimization of the network environment has promoted the rapid growth of the scale of short-video users, providing a broad market space for short-video marketing. The Internet industry maintains a good development momentum, the basic resources of the Internet consolidate the development foundation, digital consumption stimulates the potential of domestic demand, digital applications release innovative vitality, and more people access the Internet to share the convenience and dividends of the digital era. In the first half of 2024, the online shopping market maintained steady growth and increasingly played a positive role in promoting consumption. The national online retail sales in the first half of the year were 7,099.1 billion yuan, a year-on-year increase of 9.8%. Among them, the online retail sales of physical goods increased by 8.8% year on year, accounting for 25.3% of the total retail sales of social consumer goods, and the proportion has continued to increase since this year. Short-video marketing has high commercial media value and unique forms and advantages. By virtue of the characteristics of short-video content such as rich content and traffic, easy dissemination, and high fun, it has become a vital part of the enterprise marketing strategy. Based on this, this paper combs and integrates the existing literature, and combines with the reality. By exploring the current situation of short-video marketing encountered by consumers and the consumption status under its influence, as well as the influencing factors of short-video marketing on

consumers' purchase intention, it analyzes the marketing mode that consumers prefer and the advantages and disadvantages of various short-video marketing, so as to help businesses formulate more potential promotion plans.

## 2. Literature Review

In recent years, short videos, supported by big data technology, strong interactivity, and user experience advantages, have become an important marketing model for reconstructing the consumption chain. Studies have shown (Gao Peng et al<sup>[1]</sup>, 2020; Dong Xiaozhou<sup>[2]</sup>, 2020; Gao et al<sup>[5]</sup>, 2022) that short videos significantly affect consumers' purchase decisions by enhancing product trust, inspiring inspiration experience, and deepening product cognition. As the core creators of short videos (Bergkvist & Zhou<sup>[6]</sup>, 2016), short-video bloggers have the same effect as celebrity endorsements in terms of professional expressiveness (Shi et al<sup>[7]</sup>, 2021), and the content communication matrix promotes industrial upgrading through a four-dimensional model (Bi Xiang<sup>[3]</sup>, 2021).

Most of the existing studies focus on the impact of short-video e-commerce information on direct consumption behavior, and there is a lack of systematic research on the differentiation of advertising implantation forms and the action mechanism of the communication matrix. Therefore, it is urgent to construct an integrated theoretical model, deeply analyze the influence path of advertising implantation methods and communication strategies on consumers' acceptance, and improve the theoretical framework of short-video marketing<sup>[4]</sup>.

## 3. Research Hypothesis

This paper obtains the relevant factors affecting consumers' purchase intention on short-video platforms or through the recommendation of short-video platforms by sorting out literature materials and obtaining practical experience. It issues questionnaires to investigate consumers' psychological feelings and need characteristics when watching short videos, and then sets secondary indicators and primary indicators. The primary indicators include product functional value, popularity, and emotional value; the four secondary indicators of short-video content are perceived usefulness value and perceived emotional value; the dependent variable is consumption intention. Based on this, this paper puts forward hypotheses according to the conceptual model:

- **H1:** Emotional value has a positive impact on consumption intention.
- **H2:** Product functional value has a positive impact on consumption intention.
- **H3:** Popularity has a positive impact on consumption intention.

## 4. Empirical Analysis

### 4.1. Data Processing of Questionnaire Collection

This study adopts an online closed questionnaire to implement stratified data collection, covering three major modules: demographic characteristics (gender/age/region/education/income), short-video marketing perception dimensions (authenticity/fun/informativeness and other five-dimensional satisfaction and consumption behavior frequency), and product decision-making elements (blogger influence/brand awareness/quality service evaluation). The questionnaire design relies on three quality control mechanisms: pre-investigation, two-dimensional measurement system, and academic endorsement verification. The reliability coefficient is stable at 0.895, the KMO value is increased to 0.967 ( $p < 0.0001$ ), and the confirmatory factor analysis shows that the model fit is good (CMIN/DF=4.973, RMSEA=0.086, IFI/TLI/CFI are all  $> 0.9$ ). The study finally constructs a

statistically robust four-dimensional measurement system, providing a reusable verification framework for the scale development in the field of short-video marketing.

### 4.2. Difference Analysis

The difference test uses test methods such as independent sample t-test, chi-square test, and one-way analysis of variance to study the difference of variables in different dimensions.

**Table 1.** Table of Basic Characteristics of Respondents

Dimension	Variable	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance	Multiple Comparisons
Education	Perceived Emotional Value	86.705	4	21.676	0.442	0.778	/
	Within Groups	59089.46	1205	49.037			
	Perceived Ease of Use	30.926	4	7.732	0.684	0.603	
	Within Groups	13621.5	1205	11.304			
	Product Functional Value	43.347	4	10.837	0.996	0.408	
	Within Groups	13106.02	1205	10.876			
	Popularity	15.072	4	3.768	0.8	0.525	
	Within Groups	5678.088	1205	4.712			
Monthly Income	Perceived Emotional Value	55.531	3	18.51	0.378	0.769	/
	Within Groups	59120.64	1206	49.022			
	Perceived Ease of Use	74.204	3	24.735	2.197	0.087	1>2, 1>3
	Within Groups	13578.22	1206	11.259			
	Product Functional Value	18.129	3	6.043	0.555	0.645	/
	Within Groups	13131.24	1206	10.888			
	Popularity	8.334	3	2.778	0.589	0.622	
	Within Groups	5684.827	1206	4.714			

Dimension	Variable	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance	Multiple Comparisons
Age	Perceived Emotional Value	616.082	4	154.021	3.169	0.013	1>2, 4>2
	Within Groups	58560.09	1205	48.598			
	Perceived Ease of Use	38.913	4	9.728	0.861	0.487	/
	Within Groups	13613.51	1205	11.298			
	Product Functional Value	54.056	4	13.514	1.244	0.291	
	Within Groups	13095.31	1205	10.867			
	Popularity	15.397	4	3.849	0.817	0.514	
	Within Groups	5677.763	1205	4.712			
Gender	Perceived Emotional Value	1 (Male)	569	33	-0.317	0.751	/
	2 (Female)	641	33.13				
	Perceived Ease of Use	1 (Male)	569	14.3	-0.357	0.721	
	2 (Female)	641	14.37				
	Product Functional Value	1 (Male)	569	14.54	0.124	0.901	
	2 (Female)	641	14.52				
	Popularity	1 (Male)	569	7.61	-1.226	0.22	
	2 (Female)	641	7.76				

**Note:** In the education dimension, 1 represents junior high school and below, 2 represents high school/technical secondary school, 3 represents junior college, and 4 represents undergraduate and above; in the monthly income dimension, 1 represents below 2,000 yuan, 2 represents 2,000-5,000 yuan, 3 represents 5,000-10,000 yuan, and 4 represents above 10,000 yuan; in the age dimension, 1 represents below 15 years old, 2 represents 16-25 years old, 3 represents 26-35 years old, 4 represents 36-45 years old, and 5 represents above 45 years old; in the gender dimension, 1 represents male and 2 represents female.

According to the results of the one-way analysis of variance, it can be seen that each dimension has no significant impact on gender and education, and there is a significant gap in age in the perceived emotional value dimension. According to the results of multiple comparisons, the impact of 16-25-year-old users on the perceived value of short videos is less than that of users under 15 years old and 36-45 years old. In terms of the perceived ease of use dimension, 0.087 is close to the significance level of 0.05, indicating that there may be significant differences in perceived ease of use among different income groups.

### 4.3. Analysis of Influencing Factors of Consumption Intention under Short-video Marketing

#### 4.3.1. Correlation Analysis of Influencing Factors of Consumption Intention

Table 2. Correlation Test

Dimension	Blogger Brand IP	Advertising Perceived Value	Advertising Trust	Advertising Heterogeneity	Content Matrix Communication
Blogger Brand IP	1				
Advertising Perceived Value	.694**	1			
Advertising Trust	.718**	.771**	1		
Advertising Heterogeneity	.621**	.669**	.656**	1	
Content Matrix Communication	.623**	.657**	.652**	.595**	1

**Note:**Correlation is significant at the 0.01 level (two-tailed).

In this analysis, the correlation between various variables is explored through Spearman correlation analysis. According to the analysis results, it can be seen that they are significantly significant at the 0.01 significance level. There is a significant correlation between each variable.

#### 4.3.2. Dimensionality Reduction Based on Entropy Weight Method

This study uses the entropy weight method to determine the importance of each index in constructing new features, so as to realize the dimensionality reduction processing of high-dimensional data.

The calculation formula of the entropy weight method is as follows:

$$H_i = -\lambda \sum_{j=1}^n p_{ij} \ln p_{ij} \quad (i = 1, 2 \dots m, j = 1, 2 \dots n)$$

$$p_{ij} = \frac{x'_{ij}}{\sum_{j=1}^n x'_{ij}}, \lambda = \frac{1}{\ln n}, \sum_1^r \varepsilon_i z_i$$

$\varepsilon_i$  represents the weight of each variable in the secondary index, and  $z_i$  is the standardized data.

**4.3.3. Specific Analysis of Influencing Factors of Consumption Intention**

This paper uses the path analysis tool of AMOS 26.0 to verify the relevant hypotheses of the influencing factors of short-video marketing on consumption intention, and uses the structural equation model (SEM) to study the influencing factors of short-video marketing on consumers' consumption intention. Each index meets the standard of the fitting index.

**Table 3. Adaptability Test Form**

Index	Evaluation Standard	Measured Result				
CMIN/DF	<5	4.393				
RMSEA	<0.08	0.080				
IFI	>0.9	0.947				
TLI	>0.9	0.933				
CFI	>0.9	0.947				
Path Relationship	Estimate	S.E.	C.R.	P	Significance	Hypothesis Test Result
Consumption Intention ← Short-video Content	0.993	0.053	17.797	***	Significant	Established
Advertising Heterogeneity ← Short-video Content	0.987	0.057	15.506	***	Significant	Established
Advertising Trust ← Short-video Content	1.035	0.056	17.869	***	Significant	Established
Advertising Perceived Value ← Short-video Content	0.994	0.052	19.703	***		

In this path hypothesis relationship test, short-video content significantly and positively predicts consumption intention ( $\beta=0.993$ ,  $p<0.001$ ); the prediction effect of the content communication matrix on consumption intention is not significant ( $\beta=0.165$ ,  $p>0.05$ ). In terms of the specific influencing factors of short-video content on consumption intention, advertising trust, advertising heterogeneity, and advertising perceived value all significantly predict short-video content ( $p<0.001$ ).

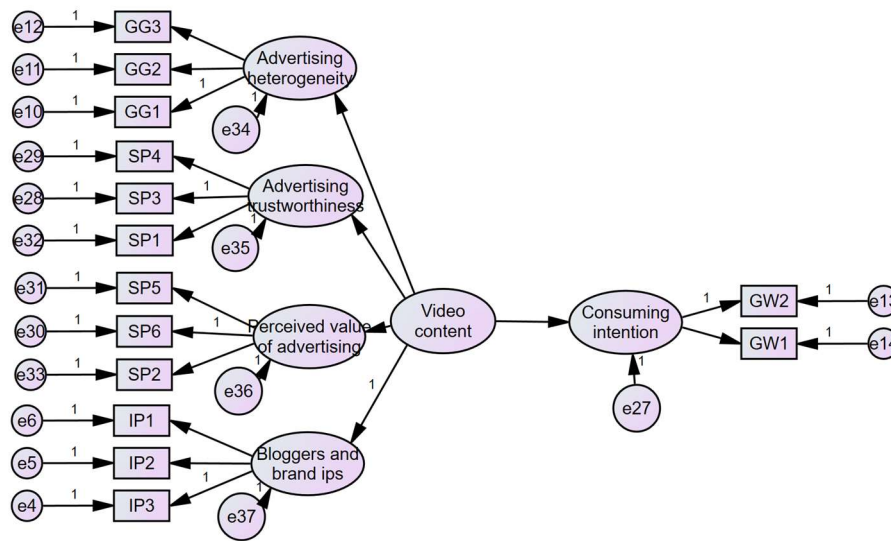


Figure 1. Structural Model Diagram

## 5. Conclusion and Suggestions

### Conclusions drawn from the empirical analysis:

- 1) Short-video content can effectively enhance consumers' purchase intention.
- 2) Advertising trust, heterogeneity, and perceived value have a significant impact on short-video content.
- 3) Middle-aged people are most affected by short-video marketing.
- 4) Consumers with lower education are more likely to be affected by short-video marketing.

### Based on the above research conclusions, the following suggestions are put forward:

- 1) In short-video marketing, bloggers should clarify their own positioning and form a unique personal style.
- 2) Improve the content quality of short videos from the aspects of content positioning, content creativity, narrative mode, picture presentation, and editing.
- 3) Break the traditional advertising mode in an innovative way.
- 4) Bloggers should verify the content before publishing advertisements, establish a strict review mechanism to ensure the accuracy and compliance of advertisements, and share real product experiences to improve the credibility of advertisements.
- 5) Formulate appropriate video release time and video duration according to the video characteristics and audience habits of different short-video platforms.

## References

- [1] Gao Peng, Li Chunqing, Chu Yujie, Xie Ying. The Trigger Mechanism of Short-video Customer Inspiration and Its Impact on Customer Engagement [J]. Advances in Psychological Science, 2020, 28(05): 731-745.
- [2] Dong Xiaozhou. Does Perceived Product Innovation Bring Inspiration or Risk to Customers: The Moderating Role Based on Hedonic Shopping Motivation [J]. Journal of Industrial Engineering and Engineering Management, 2020, 34(05): 95-104.
- [3] Bi Xiang. Research on the Reconstruction and Optimization Strategy of Short-video Marketing Mode in the Post-epidemic Era [J]. Price Theory and Practice, 2021 (10): 121-124.

- 
- [4] Guo Hailing, Wang Haige, Pan Lulu, Chang Qing. Research on the Impact of Short-video E-commerce Information Display on Customer Engagement Behavior [J]. *Price Theory and Practice*, 2021(09): 155-158.
- [5] Gao P, Zeng Y, Cheng Y. The Formation Mechanism of Impulse Buying in Short Video Scenario: Perspectives From Presence and Customer Inspiration [EB/OL]. *Frontiers in Psychology*, 2022.
- [6] Bergkvist L., Zhou K. Q. Celebrity endorsements: a literature review and research agenda [J]. *International Journal of Advertising*, 2016, 35(04): 642-663.
- [7] Shi P, Lu X, Zhou Y, et al. Online Star vs. Celebrity Endorsements: The Role of Self-Concept and Advertising Appeal in Influencing Purchase Intention [EB/OL]. *Frontiers in psychology*, 2021.