



Research on the Relationship Between Recommendation Mechanism of Short Video Platform and Users' Purchase Intention Under the Background of Interest E-Commerce

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Abstract

With the development of Internet technology, the development of traditional e-commerce platforms has reached a bottleneck period. Although new forms of e-commerce are emerging, such as cross-border e-commerce, social e-commerce, live broadcast e-commerce, etc. However, products are becoming more and more standardized, and users cannot find those relatively novel products, and cannot find products that meet their interests like offline shopping. Therefore, this article will focus on a new concept - interest e-commerce. In the context of the Internet economy, short video platforms can recommend short videos that meet their interests to users through algorithms, and recommend short video advertisements based on users' interests. The purpose of this is to tap users' potential needs and also allow users to buy The goods you arrive are full of personalization. However, the user may not be interested in short videos, or the user thinks that the product is not practical, etc., which may affect the user's purchase intention. Therefore, enterprises need to deal with the artificial intelligence push mechanism, such as using neural networks to summarize users' interests, and then use decision trees to decide on recommended videos, so that users can find videos and products that match their interests.

Keywords : *Interest e-commerce; algorithmic recommendation; content value perception; purchase intention.*

1.Introduction

The rapid development of Internet technology has made traditional business transactions faster. In recent years, a new method of Internet content dissemination has entered a stage of explosion, and this new method is short video. According to the 48th "Statistical Report on Internet Development in China", as of June 2021, the scale of Chinese netizens was 1.011 billion[1], of which 99.6% of netizens used mobile terminals to access the Internet, which shows that mobile terminals have become the standard in the hands of most people, and the emergence of 4G and 5G has expanded the spread and speed of short videos among young people. At present, the main short video platforms are Douyin, Kuaishou, Bilibili, etc. The growth momentum of short video users in China is very obvious. In 2021, the daily active short video of Tik Tok will exceed 600 million; the number of daily active users of Kuaishou will reach 300 million ;

Bilibili's daily active users reached 60 million, and the user population of these three short video platforms is mainly concentrated in the 20-40 age group, that is, the users are mainly young and middle-aged.

The new media platform has ushered in a new era. The traffic hotspot has gradually shifted from the graphic-based microblog platform to the short video platform. This huge traffic and number of users have made many merchants smell the opportunity of e-commerce development. The short video platform is regarded as a new marketing channel and tool. According to the data disclosed by Byte runout, its revenue in 2020 has more than doubled, reaching about 37 billion US dollars. Compared with traditional e-commerce platforms, Tik Tok has positioned itself as an e-commerce based on people's yearning for a better life, satisfying users' potential shopping interests and improving consumers' quality of life, referred to as "interest e-commerce".

Taking the short video platform as the research object, previous researches mainly focus on the connection between short video marketing and consumers' purchase intention, but rarely explore the mechanism of action between short video marketing and purchase intention, and in this role during the process, there is no research on whether there is a moderating effect of other factors. Therefore, in the context of interest e-commerce, this paper will use AIDA as an analytical framework to study the two elements of short video marketing and the intermediary factor of customer interest between purchase intentions. At the same time, the popularity of short videos is also added as a back-end adjustment variable to explore whether users have followed the trend of consumption behavior and irrational consumption behaviors for popular short video advertisements.

2. Materials and Methods

2.1 Theoretical Background and Assumptions

2.1.1 AIDA Model Framework

In 1898, Elmo Reeves first proposed the "AIDA model" theory. Its theory shows that under the economic background, the sales method adopted by the salesperson has a hierarchical and progressive nature to the user's consumption behavior. Elmo divides the process into stages and levels of attention, interest, desire, and action. In 1925, Strong introduced the AIDA model into the evaluation of advertising effects, and gradually developed into a measurement model and analysis framework for advertising effects. This model can clearly highlight the effect of advertising at different levels, and then analyze whether the effect of the advertising campaign has attracted the "attention" of consumers, then aroused their "interest", stimulated consumers' "purchase intention", and finally changed their "behavior", which in turn leads to purchases and transactions[2]. Some scholars use this model to analyze advertisements and find that if 70% of people notice the advertisement when the advertisement is broadcast, 70% of the people who notice it will feel interested; among those who are interested, 70% of the people will have demand; finally, among the people who have demand, if 70% of the people will buy, then nearly 25% of all people will be affected by the advertisement and complete the purchase behavior[3]. Combined with the research topics of this paper, it can be found that compared with graphic marketing, short video marketing itself has the characteristics of being easily noticed by consumers, especially when the number of short video users is so large today, customers can easily notice it. Short video, which prepares the follow-up to stimulate consumers' interest. When the short video content is interesting enough and the practicability of the product or service is high, the consumer's interest is stimulated, and then the consumer's willingness to consume is aroused, and finally

lead to consumer behavior. This paper uses the AIDA model as an analysis framework, uses short video interest and product practicality to describe attracting consumers' attention, uses content value perception to describe arousing consumers' interest, and finally uses willingness to explain consumers' purchasing desire.

2.1.2 Theory of Planned Behavior

The theory of planned behavior (theory of planned behavior, abbreviated as: TPB), Ajzen believes that the behavior of users is related to behavior intention, and three factors of personal attitude, subjective norm and perceived behavior control determine behavior intention, and perceived behavior Control has an impact on the occurrence of behavior [4]. Chinese scholars Zheng Xiaodong and others have similar interpretations of the theory of planned behavior to foreign scholars. They believe that in the TPB theory, an individual's behavioral attitude is the emotional reflection of an individual's liking or disliking a certain behavior, and the subjective norm mainly reflects the surrounding environment and others' attitudes toward it. The influence of individual decision-making, perceived behavioral control is the individual's perception of the difficulty of executing a certain behavior, which reflects the individual's understanding of promoting or hindering the execution of behavior[5]. In the AIDA model, most scholars focus on the first three, namely attention, interest, and willingness. Purchasing behavior mainly depends on consumers' willingness to purchase. In the theory of planned behavior, some scholars propose that the more positive an individual's attitude is, the stronger the perceived behavioral control, and the stronger the behavioral intention. When consumers are more willing to buy, the purchase behavior is triggered.

2.2 Build research models

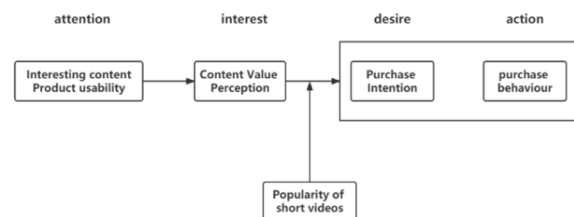


Figure 1 Model

2.3 Propose a hypothesis

With the rapid expansion of information today, the attention and interest of customers in the Internet age are particularly important. With the blessing of big data algorithms, short videos can often be pushed to consumers in need, which shows that the fun of short videos cannot be lacking[6]. Chinese scholar Li Yan and others have mentioned that according to the theory of

emotional transfer, when short videos are pleasant, consumers will be more likely to have a positive attitude towards products, and interesting video advertisements will make consumers happy, happy, etc. Positive emotions are associated with products in short videos, promoting consumers to have positive emotions about short video advertisements themselves[7]. On the other hand, Chinese scholars Li Fuda and others have shown in their research that when short video users watch short video advertisements, they will consider whether the products appearing in the video have use value[8]. Foreign scholar Davis F D put forward the TAM technology acceptance model in his article, and used this model to study and analyze consumers' attitudes. The results found that perceived usefulness has an impact on customers' consumption attitudes, and finally affects the factors of willingness to consume[9]. Combined with the concept of interest e-commerce proposed in this article, the advertisements in the short video move consumers' offline window shopping habits to online. Consumers may not think that they need this kind of product. The fun of short videos will attract consumers into videos, and the practicality of products or services will make consumers deepen their consideration of products. The two together stimulate consumers' interest in products. Interest, and subsequent purchase intentions may arise. In summary, this paper proposes the following assumptions:

H1: Video interest has a positive effect on content value perception.

H2: Product usability has a positive effect on content value perception.

When users watch short videos, the platform will use algorithms to push various types of videos to users, including advertising videos, and advertising videos usually take 10-15s to attract users to watch them. Product practicality can effectively retain users and filter consumers among users. After 15 seconds, users who are still in the video can preliminarily judge that they are consumers. When consumers are interested in short video advertisements, as the video continues to advance, consumers' perception of content value deepens. Consumers can experience a similar effect to offline window shopping in the video. They may not be interested in the product or actively search for the product before watching the video, but the video attracts consumers and triggers their potential demand. The platform can fully tap the potential needs of users, users generate positive emotions, gain greater value from watching short videos, and then integrate more into follow-up behaviors. Combined with the AIDA model theory, the stronger the consumer's perception of content value, The faster the interest accumulates, and when the interest accumulates to a certain level, the willingness to purchase will be formed. Therefore, this paper proposes the hypothesis:

H3: Content value perception has a positive effect on

purchase intention.

In order to explore whether consumers will make impulsive consumption when "online window shopping", the article will analyze the subjective norm in the theory of planned behavior. In TPB theory, subjective norms indicate that consumers' decisions are influenced by the environment and others. This paper believes that the popularity of short videos refers to the number of likes and comments on short videos, which will have a certain impact on whether consumers buy products, and scholars Zhang Min and others also pointed out the number of likes and comments on short videos. The more, the stronger the impulse buying intention of consumers[10]. This is actually the reason why consumers are risk-averse, because in the case of impulsive consumption, if the buyer has a large number of approvals and a high degree of approval, the risk that the consumer bears is relatively small[8]. Therefore, this paper proposes the hypothesis:

H4: Short video popularity has a positive effect on purchase intention.

2.4 Research method

This paper publishes at least 500 questionnaires on the Internet to investigate whether netizens will be attracted by short video advertisements and generate purchase intentions when watching short videos. This paper will explore the influencing factors of short video platform users' purchase intention under the background of interest e-commerce. Among them, the short video interest, product practicality and content value perception are all referenced to the more mature scales in the existing literature to ensure the reliability and validity of the data, and some modifications have been made in combination with the research content of this paper. Among the questionnaire data collected, men accounted for 43.5% and women accounted for 56.5%. From the ratio of men and women, it can be seen that women usually prefer to go shopping offline, but in the context of interest e-commerce, women still reflect their gender characteristics, and they still remain online. Like watching short videos and shopping; 65% of users are 17-24 years old, 23.5% are 25-32 years old, and more than 80% are young people.

3. Discussion

The tool for data analysis in this paper is SPSS 26. The reliability test was carried out for each item first, and the results showed that the Cronbach's coefficient of each item was higher than 0.7, which indicated that the reliability of the scale was good. Then the article uses exploratory factor analysis to test the validity and feasibility, and uses KMO value and significant P value to illustrate the validity and feasibility of the scale. It can be seen from the table that the KMO value is 0.911, which is greater than 0.8, and the significant P value is less than

0.001, indicating that the validity data of the questionnaire performed well.

This paper will use the process (model 14) for data analysis to obtain the following data.

Table 1 Exploratory Factor Analysis Results

KMO	.911
Bartlett's Test of Sphericity	Approximate chi-square 2020.258
	df 171
	P value .000

Table 2 Analysis of the regression results of the output M

	Coeff	Se	T	P	LLCI	ULCI
Constant	-2.4947	0.2396	-10.4108	0.0000	-2.9672	-2.0221
X	0.6237	0.0591	10.5462	0.0000	0.5071	0.7403

Table 3 Output Y regression result analysis

	Coeff	Se	T	P	LLCI	ULCI
Constant	4.3710	0.2914	15.0003	0.0000	3.7963	4.9457
X	-0.2228	0.0726	-3.0677	0.0025	-0.3660	-0.0796
M	0.4626	0.0901	5.1348	0.0000	0.2849	0.6402
W	0.7518	0.0807	9.3139	0.0000	0.5926	0.9110
Int_1	0.1034	0.0499	2.0713	0.0396	0.0049	0.2019

Among them, X is the independent variable, representing the interest of short videos; M is the mediating variable, representing the user's perception of content value; W is the moderating variable, representing the popularity of short videos; Y is the dependent variable, representing the user's purchase intention.

Int_1: M (content value perception) × W (popularity of short videos)

According to the data in Table 2, it can be known that there is a very significant relationship between the independent variable and the mediating variable (P<0.001). Combined with the data in Table 3, it can be seen that the interest of short videos can directly affect the user's purchase intention (P<0.001). 0.01), and interestingness significantly affects users' purchase

intention by affecting their content value perception (P<0.001), which indicates that there is a mediating effect in the model. Moreover, Int_1 shows that under the influence of the interest of short videos, users will tend to be curious, and notice the products and services in the short videos. At this time, the adjustment variable, that is, the popularity of short videos, has a significant impact. Users' purchase intentions can be learned through data. Daily users are also attracted by interesting products when shopping. Combined with the background of interest e-commerce, interesting short videos can fully tap users' interests and meet their potential needs, which indirectly meet the user's "online window shopping" idea.

The following explores the user's purchase intention under the usefulness of the product or service.

Table 4 Analysis of regression results of output M (synthetic independent variables)

	Coeff	Se	T	P	LLCI	ULCI
Constant	-2.7569	0.2533	-10.8832	0.0000	-3.2564	-2.2574
X	0.7302	0.0663	11.0056	0.0000	0.5993	0.8610

Table 5 Regression result analysis of output Y (integrated independent variables)

	Coeff	Se	T	P	LLCI	ULCI
Constant	2.5989	0.3538	7.3448	0.0000	1.9010	3.2967
X	0.2372	0.0941	2.5218	0.0125	0.0517	0.4227
M	0.2447	0.0869	2.8161	0.0054	0.0733	0.4161
W	0.6423	0.0892	7.1985	0.0000	0.4663	0.8183
Int_1	0.0513	0.0515	0.9967	0.3202	-0.0502	0.1529

In this paper, the interest of short videos and the practicality of products are numerically integrated. At this time, X is the independent variable, which represents the comprehensive situation of the interest of short videos and the practicality of products. From the data results in Table 4, we can know that the independent variable still has a significant impact on the mediating variable (content value perception) ($P < 0.001$). The data in Table 5 show that the model has a mediating effect, from weakly significant ($p < 0.05$) direct effects of independent variables to more significant indirect effects ($p < 0.01$), but also found that there is no moderating effect ($p > 0.05$), the result shows that when users consider the practicality of the product, they will weaken the influence of the interest of the short video, and at the same time consider more rationally whether they need the product, rather than fall into the public thinking and follow the trend to buy, at this time the short video The popularity of the video, the number of likes and comments, etc. have a weak influence on the purchase intention of users themselves, which proves that there is no impulsive consumption among the surveyed users, and also shows that the above is only based on the interest of short videos. The adjustment variable will only work when it is affected. This is because the user, out of curiosity, first feels the content or product in the video is interesting, and then arouses the user's interest. At this time, the number of likes and comments on the short video will increase the user's desire to buy, because the number of likes and comments is a kind of appreciation and recognition for themselves in the eyes of users. Users believe that many people agree with their opinions, and these opinions promote the positive emotions of users themselves, and users continue to accumulate interest until they form a purchase intention.

4. Conclusions

Based on the AIDA analysis framework, this paper studies the influencing factors of short video platform users' purchase intention in the context of interest e-commerce, and uses the popularity of short videos, that is, the popularity of short videos as a moderating variable, to explore whether users will be in front of traffic and popularity. With popular psychology and impulsive consumption, it can provide some reference for short video companies and creators to help them better develop

interest e-commerce and fully tap the potential needs of users. This paper draws the following conclusions: ① The interest of short videos and the practicability of products will affect users' perception of content value, which in turn affects purchase intentions, and the practicability of products has a more significant impact than the interest of short videos; ② When users perceive After the value of the content, they will continue to accumulate their interest in the product. When the interest reaches a certain threshold, it will stimulate the user's purchase intention; ③ Only a small number of users choose to pay for the fun of short videos due to their unique interests, and the popularity of short videos is in At this time, it has a regulating effect, but now most young people mainly focus on the practicality of products, and will not fall into the trap of impulsive consumption. Therefore, short video platforms can seize this opportunity to transform from traditional e-commerce to interest e-commerce that is more in line with user consumption habits. In the context of the Internet economy, these conclusions also give companies and content creators some inspiration: ① For enterprises, big data algorithms can be used to recommend more appropriate content for users, and more interesting videos can be appropriately recommended for users through user comments and the types of videos watched. Fully consider the user's point of interest, and tap the user's potential needs. At the same time, it provides a good creation environment for content creators, so that their videos can be seen by more users; ② For content creators, they need to always consider the type of their private domain traffic users when working with advertisers. Therefore, creators need to focus on interest of users, create content that interests users, and produce higher-quality short video ads.

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