



Research on the Influencing Factors of Tiktok Users' Purchase Intention Under the Background of E-Commerce Live Broadcast

Tian Wang

Sichuan Agricultural University Business and Tourism School, Chengdu, 611830, China

e-mail:943463491@qq.com

Abstract. To explore the influencing factors of transactions between Tiktok e-commerce users and platform providers, with the help of Tiktok live streaming goods as the research object, this study has appropriately expanded the theory of planned behavior (TAM), taking perceived sincerity, trust, perceived ease of use, perceived usefulness, subjective norms as independent variables, attitude, behavioral perception control as intermediary variables, and purchase intention as dependent variables for comprehensive consideration, And based on this, a model of influencing factors on the purchase intention between users and platform providers is constructed based on the antecedent process outcome framework. In general, the expanded TPB model, when applied to the study of consumers' purchase intention in Tik Tok e-commerce, has a good role in explaining and predicting behavior intention. This study used SPSS27.0 and AMOS28.0 for statistical analysis and hypothesis testing of the data. The research results indicate that perceived sincerity, trust, perceived usefulness, perceived ease of use, and subjective norms significantly positively affect consumers' purchase intention; Meanwhile, attitude and behavioral perceptual control also have a significant positive impact on purchase intention. This study enriches the relevant theoretical models in live-streaming e-commerce and provides decision-making references for platform providers and broadcasters to develop strategies to enhance consumer purchasing intentions in live-streaming rooms

Keywords: live streaming e-commerce; TPB; SEM; Purchase intention

1 Introduction

In the era of e-commerce with rapid economic development, as competition among major internet platforms intensifies, major enterprises have deeply realized that seizing the opportunity of live streaming e-commerce is equivalent to seizing the lifeline of company development. In recent years, live streaming e-commerce, as an important emerging digital economy model in e-commerce, has rapidly developed in a short period. Compared to offline physical sales models and traditional e-commerce models, live streaming e-commerce has achieved rapid development, With many advantages such as low operating costs, good interactivity, strong entertainment, and high

© The Author(s) 2024

F. Cao et al. (eds.), *Proceedings of the 2023 5th International Conference on Economic Management and Cultural Industry (ICEMCI 2023)*, Advances in Economics, Business and Management Research 276,

https://doi.org/10.2991/978-94-6463-368-9_31

information transparency, it has also led more physical enterprises to switch to live streaming and drive consumption through live streaming. However, with the competition of major enterprises to enter, consumers' choices of products and live-streaming attitudes have shown a diversified development trend, causing great difficulties for enterprises to customize live-streaming marketing models. Therefore, it is particularly important to understand consumers' concerns about the live broadcast e-commerce. This study takes the most popular Tiktok live broadcast e-commerce as an example to explore the relevant influencing factors of consumers' purchase intention in Tiktok live broadcast goods through the expanded TPB model.

2 Theoretical Basis and Literature Review

The Theory of Planned Behavior (TPB) emphasizes that subjective norms are also one of the main factors determining behavioral intention[1]. A large number of scholars have used the TPB model to conduct in-depth research on rural e-commerce [2] and social e-commerce [3]. This theory suggests that two key factors determine behavioral intention, namely behavioral attitude and subjective norms. Behavioral attitude refers to a person's willingness to implement a specific behavior in a given context, as well as a comprehensive evaluation of the overall behavior (including positive or negative evaluations). [4] Subjective norms mainly refer to the influence of the external social environment on an individual's behavior, indicating the perceived social pressure of a person to participate or not participate in a certain behavior. [5] This pressure mainly comes from whether important people around them, such as family and friends, believe that they should participate in a specific behavior. [4] When a person perceives that others around them will support or affirm their behavior, and they also hold a positive and positive attitude towards the behavior, it can lead to a very strong behavioral intention. Perceived behavioral control refers to the perceived difficulty of executing behavior, and assumes that it can reflect expected obstacles and past behavior; Behavioral intention refers to the degree to which people are willing to execute the behavior and the amount of effort they are willing to put to execute the behavior. At present, TPB models have been matured and applied to study consumer purchasing behavior.

In recent years, domestic and foreign scholars have conducted various studies on this model, and a large number of research results have emerged. In terms of explaining and studying shopping behavior in live streaming, perceived value theory [6], immersion theory [7], and other theories have been widely used by scholars for research. At the same time, some scholars have explored the relevant factors that affect consumer purchasing decisions based on the perspective of social presence, motivation theory, and SOR theory.

3 Research Hypotheses and Theoretical Models

3.1 Research Hypothesis

When watching TikTok Live, consumers will be attracted by the professional qualities shown by the anchors. The more professional the anchors are, the more knowledge and experience consumers will gain. At the same time, consumers will feel psychologically identified. When consumers have their own shopping needs, there may be plans or goals to purchase a certain product. They search for relevant content and then select the online live shopping content they are interested in to watch. Through the stimulation of the relevant characteristics of the live shopping content, they generate an emotional response of identification and a self-awareness response of attitude towards the content expressed by the anchor, which in turn triggers the occurrence of purchasing behavior. At the same time, the perceived sincerity brought by the anchor to consumers can to some extent increase their attitude towards the product, while also bringing easy and relaxed feelings to consumers. In addition, the professionalism presented by anchors enables consumers to actively choose to listen and more conveniently understand product information, rather than relying on their initiative to search, search, and browse. Based on the above analysis, this study proposes hypotheses H1, H2, H3, and H4.

H1: Consumer-perceived sincerity has a significant positive impact on consumer purchasing attitudes.

H2: Consumer-perceived sincerity has a significant positive impact on consumer behavior perception control

H3: Consumer trust has a significant positive impact on consumer attitudes.

H4: Consumer trust has a significant positive impact on consumer behavior perception control.

Although the growth potential of China's e-commerce market is enormous, the emergence of live-streaming e-commerce has provided convenience and benefits to consumers to a certain extent. However, in the current buyer's market conditions where consumers are the main players, judging consumers' attitudes towards live streaming e-commerce and controlling their own perceived behavior based on their perceived usefulness and ease of perception will deeply affect their attitudes towards consumers and their level of pursuit. According to the definition of perception characteristics by TAM and TPB schools, perceived usefulness refers to the extent to which users think that using a system can improve their work efficiency, reflecting the extent to which users use Tiktok live broadcast to improve their shopping efficiency; Perceived ease of use refers to the degree to which users think it is easy to use a system, reflecting the ease with which users and consumers use Tiktok live shopping. Numerous e-commerce studies have shown that consumers' perceived characteristics and trust do not exist separately. Perceived usefulness and perceived ease of use both have a positive impact on attitudes. Based on the above analysis, this study proposes hypotheses H5, H6, and H7.

H5: Consumer-perceived ease of use has a significant positive impact on consumer purchasing attitudes.

H6: Consumer-perceived ease of use has a significant positive impact on consumer behavior perception control.

H7: Consumer perceived usefulness has a significant positive impact on consumer purchasing attitude.

Based on the research purpose of this paper, consumers' purchase intention towards Tiktok live broadcast e-commerce users. In reality, many factors will affect the purchase intention of live broadcast e-commerce consumers, such as their attitude towards the products sold live broadcast, and how others view their purchase of related products through live broadcast; It also includes substantive issues such as whether they have purchasing power, whether they can obtain more information about products, and whether they can easily identify and purchase related products. Therefore, this study suggests that the theory of planned behavior is also more suitable for predicting and explaining consumers' purchasing intentions. At the same time, a large number of studies have confirmed that attitude, subjective norms, and behavioral perceptual control all have a significant positive impact on purchase intention. Based on this, we propose assumptions H8, H9, H10.

H8: Consumer attitudes have a significant positive impact on consumer purchase intention.

H9: Consumer subjective norms have a significant positive impact on consumer purchase intention.

H10: Consumer behavior perception control has a significant positive impact on consumer purchase intention.

3.2 Theoretical Model

Reviewing the scholars' research on consumers' online shopping behavior, most of them use the theory of planned behavior (TPB) to conduct research on related issues after certain expansions. Therefore, this research follows this model and carries out innovative expansion. In terms of the choice of independent variables, it combines the relevant characteristics of TikTok live broadcast. Innovative choices perceive sincerity, trust, and perceived ease of use Perceived usefulness was used as an independent variable to explore related issues, and an integrated model was constructed to examine the impact of consumer online live shopping participation motivation on purchase intention, as shown in Figure 1.

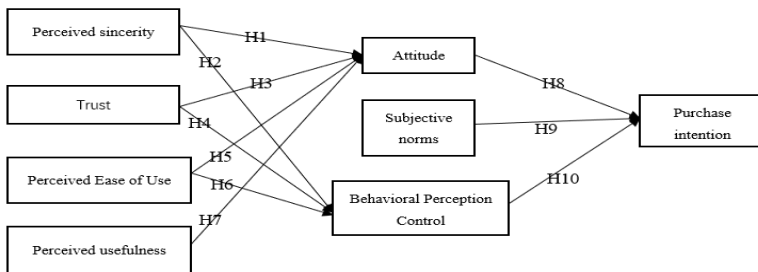


Fig. 1. Influencing factors model of TikTok live broadcast users' purchase intention based on the TPB framework

4 Research Design

4.1 Questionnaire Design

The questionnaire structure designed by this research institute is divided into three parts. The first part collects four parts: perceived sincerity, trust, perceived ease of use, and perceived usefulness, including 12 items; The second part measures four variables, namely consumer attitudes and perceived control of subjective normative behavior. The third part collects the basic information of users. All measurement items in this study were measured using the Likert 5-level scale, ranging from 1 point ("strongly disagree") to 5 points ("strongly agree"). Before the formal survey, the designed questionnaire was revised and improved, and the final version of the questionnaire was determined for publication.

4.2 Data Collection

This study questionnaire was distributed online, with 533 questionnaires distributed. Invalid questionnaires were automatically removed by setting answer trap questions, and related questionnaires such as short answer times were manually checked to ensure the effectiveness of the survey. In the end, 450 valid questionnaires were collected, with an effective response rate of 84.4%.

5 Data Processing

5.1 Reliability and Validity Analysis

This study used SPSS 27.0 and AMOS28.0 to analyze the reliability and validity of the collected samples, and the reliability of the collected variables was Cronbach's α . The values are all greater than 0.7, indicating a high degree of internal consistency between each item, indicating that the collected data for each variable is reliable; Simultaneously testing whether factor analysis is suitable, the KMO test value is 0.891, and the significance probability of the χ^2 statistical value in Bartlett's sphere test is 0.000, therefore suitable for factor analysis. Next, validity testing will be conducted using AMOS 28.0 to test the fitting validity, convergence validity, and discriminant validity of the collected scale data. Among them, the fitting validity index chi-square ratio of freedom $\chi^2/df=1.207$ (less than 3), the root mean square error of approximation RMSEA=0.022 (less than 0.08), the comparative fitting index CFI=0.984, the growth adaptation index IFI=0.984, and the TLI=0.980 (all greater than 0.9) indicate that the overall fitting validity of the model is good and has passed the test.

The test of convergence validity is mainly reflected through the combined reliability (CR), factor load, and average variance extraction (AVE) data of each dimension. The validity data is shown in Table 1. For each variable, the factor load and AVE value are greater than 0.5, and each variable's combined reliability (C.R) is greater than 0.7, indicating that the collected sample data has good convergence validity and has passed the test.

Table 1. Convergence validity and combined reliability of various dimensions

	Path relationship	Estimate	AVE	CR	
ZC1	<---	Perceived sincerity	0.741		
ZC2	<---	Perceived sincerity	0.743	0.5239	0.7673
ZC3	<---	Perceived sincerity	0.686		
XR3	<---	Trust	0.728		
XR2	<---	Trust	0.679	0.5244	0.7675
XR1	<---	Trust	0.763		
PEOU3	<---	Perceived Ease of Use	0.709		
PEOU2	<---	Perceived Ease of Use	0.696	0.5231	0.7666
PEOU1	<---	Perceived Ease of Use	0.786		
PU3	<---	Perceived usefulness	0.725		
PU2	<---	Perceived usefulness	0.788	0.5112	0.7566
PU1	<---	Perceived usefulness	0.622		
AT1	<---	Attitude	0.797		
AT2	<---	Attitude	0.72	0.5569	0.79
AT3	<---	Attitude	0.719		
SN3	<---	Subjective norms	0.679		
SN2	<---	Subjective norms	0.725	0.5003	0.75
SN1	<---	Subjective norms	0.717		
BPC1	<---	Behavioral Perception Control	0.777		
BPC2	<---	Behavioral Perception Control	0.735	0.5774	0.8038
BPC3	<---	Behavioral Perception Control	0.767		
BI1	<---	Purchase intention	0.745		
BI2	<---	Purchase intention	0.733	0.5223	0.7662
BI3	<---	Purchase intention	0.689		

5.2 Structural Equation Model Analysis

Model Fit Test.

Verify the rationality of the preset model by fitting the index. The fitting values of various adaptation indicators are $\chi^2/df=1.362$ (less than 3.0), $GFI=9.323$ (greater than 0.9), $AGFI=0.926$ (greater than 0.9), $RNSEA=0.025$ (less than 0.08), $TLI=0.943$ (greater than 0.09), $CFI=0.932$ (greater than 0.9), $IFI=0.953$ (greater than 0.9), and $SRMR=0.032$ (less than 0.08), all falling within the recommended range. Therefore, the model has a good fit, and the theoretical model proposed in this study is reasonable.

Hypothesis-testing.

Verify the correlation between variables through path analysis and validate the rationality of the proposed assumptions. The test results are shown in Table 2, which shows that all hypotheses are supported.

Table 2. Inspection Results

Assume	Path relationship		Estimate	S.E.	C.R.	P	results
H1	Attitude	← Perceived sincerity	0.488	0.088	3.176	0.001	Pass
H2	Behavioral Perception Control	← Perceived sincerity	0.431	0.167	2.654	0.008	Pass
H3	Attitude	← Trust	0.675	0.252	2.931	0.003	Pass
H4	Behavioral Perception Control	← Trust	1.408	0.488	5.705	***	Pass
H5	Attitude	← Perceived Ease of Use	0.602	0.095	3.571	***	Pass
H6	Attitude	← Perceived usefulness	1.002	0.266	3.959	***	Pass
H7	Behavioral Perception Control	← Perceived Ease of Use	0.425	0.177	2.439	0.015	Pass
H8	Purchase intention	← Attitude	1.802	0.501	5.238	***	Pass
H9	Purchase intention	← Subjective norms	0.131	0.047	2.258	0.024	Pass
H10	Purchase intention	← Behavioral Perception Control	1.255	<u>0.236</u>	4.285	***	Pass

6 Conclusion

From the perspective of convergence of antecedents, processes, and results, based on the characteristics of TikTok live broadcast, this research creatively expands the TPB model, selects perceived sincerity, trust, perceived ease of use, and perceived usefulness as independent variables, combines the research directions of a large number of scholars, breaks through the single research of traditional live broadcast e-commerce, and builds an integrated model based on which consumer motivation affects purchase intention, And based on Tiktok live broadcast e-commerce users, the model was empirically tested. At the same time, based on previous research, this study deeply analyzed the impact path and transformation mechanism of consumer participation motivation on purchase intention in TikTok live broadcast. From the empirical results, it can be found that consumers' perceived sincerity, trust, ease of use, and usefulness are the antecedents of consumer participation in purchasing and are indispensable factors that affect consumer behavior. Therefore, based on the various utilitarian and hedonic motivations of consumers participating in watching TikTok live broadcasts, platform providers can grasp consumers' consumption psychology, adjust their operation strategies in time, and develop more effective marketing communication strategies. This study will lay the foundation for future research in the field of live-streaming e-commerce, to delve deeper into the determining factors of consumer purchase intention in live-streaming e-commerce.

References

1. Icek, Ajzen. The theory of planned behavior[J]. *Organizational Behavior & Human Decision Processes*, 1991.DOI:10.1016/0749-5978(91)90020-T.
2. Xu Yingnan, Liu Yi. Model construction of influencing factors for the participation of new vocational farmers in rural e-commerce development under rural revitalization: based on TAM and TPB theory [J]. *Jiangsu Agricultural Science*, 2019,47 (15): 56-60. DOI: 10.15889/j.issn.1002-1302.2019.15.013.
3. Ding Wenjian. Analysis of Consumer Behavior in Social E-commerce under the Theory of Planned Behavior [J]. *Business Economics Research*, 2019 (03): 50-53.
4. Armitage C J, Conner M. Efficacy of the Theory of Planned Behaviour: A meta-analytic review - Armitage - 2010 - *British Journal of Social Psychology - Wiley Online Library*[J]. 2001, 40(4):417-499. DOI: 10.1348/014466601164939.
5. Mark, Conner, Rebecca, et al. Application of the theory of planned behavior to the prediction of objectively assessed breaking of posted speed limits[J]. *British Journal of Psychology*, 2010, 98(3).DOI:10.1348/000712606x133597.
6. Ma H, Mei H. Empirical Research on the Decision-Making Influence Factors in Consumer Purchase Behavior of Webcasting Platform[J]. *International Conference on Management Science and Engineering Management*,2018(6):1017-1028.
7. Yu Xin, Xu Zhengliang. Research on the Information Participation Behavior of Bullet Screen Users in Online Live Broadcasting Platforms: From the Perspective of Immersion Theory [J]. *Intelligence Science*, 2017,35 (10): 147-151.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

