



The Influence of the TikTok Live Stream on Consumers' Willingness of Buying Jewelry Products in China Based on SOR Model

Lian Chen^{1,a}, Jingwen Wang^{2*}

¹Wenhua College, Wuhan, Hubei, 430074, China

²Huazhong University of Science and Technology, Wuhan, Hubei, 430074, China

^aEmail: 694890153@qq.com

*Corresponding author's e-mail: aokisizufumi@gmail.com

Abstract. Since the web livestream flourished in China in 2016, it has impacted the Internet vertical field and is rapidly integrated with various industries. The e-commerce platform has also evolved from the traditional graphic website into the platform with function of live streaming in mobile e-commerce network, and the contents gradually tend to be e-commercialized. Through the selection of the TikTok platform as the research object, with the establishment of Stimulus-Organism-Response (SOR) model, this paper investigates the willingness of the TikTok users to purchase jewelry products online, and explores the influencing factors of network live stream on consumers' willingness to purchase jewelry products. Based on the data analysis, the paper draws research conclusions and puts forward some suggestions such as optimizing the layout, improving the interactivity, ensuring the authenticity, strengthening consumers' trust in the anchor, and improving the service of the direct live room.

Keywords: SOR model; the TikTok live; Jewelry products; Purchase intention

1 Introduction

In March 2024, the scale of active mobile Internet users in China reached 1.232 billion, while the traffic of small programs on the the TikTok platform reached 232 million, forming a strong "traffic pool" effect for the medium-and-long-tail apps and offline merchants. With the development of internet technology, the scale of users has approached the limitation of the scale of Internet users, and the cost of obtaining traffic gets higher and higher. "E-commerce + live stream" will be a new trend in the development of e-commerce. With the development of social platforms, the Internet celebrity economy has gradually become an important field of consumption. Especially under novel business models such as live streaming, online celebrity anchors use their influence to publicize and popularize products or services, thereby obtaining economic benefits. However, some problems have gradually emerged with the development of this industry[1]. Due to the lack of supervision, the industry chaos occurs frequently. The

Cyberspace Administration of China, State Administration for Market Regulation and relevant departments begin to manage the mode of live streaming [2].

In the process of live streaming, consumers can choose products and make decisions based on anchor's explanations, interaction and evaluation. Most scholars focus on the characteristics of jewelry products, but often ignore consumers [3]. Combining these two factors, this paper explores problems in the live streaming of jewelry products in the TikTok, so as to put forward corresponding suggestions.

2 Research Status and Significance

Complete all content and organizational editing before formatting. Please note sections A-D below for more information on proofreading, spelling and grammar.

Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph[4]. Do not add any kind of pagination anywhere in the paper. Do not number text heads-the template will do that for you.

2.1 Research Status of Live Streaming E-commerce

Through combing relevant research literature, it is found that the current research directions of e-commerce live streaming are mainly focused on: The development status and strategy of e-commerce live streaming, the application of e-commerce live streaming in other industries[5]. Moreover, researches on e-commerce live streaming based on internet celebrities and fan economy, or on the effect of e-commerce live streaming on brand marketing from the perspective of brand are common. However, researches from the perspective of consumers' psychology and behavior are relatively few [6].

At present, most of the domestic researches on the current situation of e-commerce live streaming are combed, analyzed and studied from a macro perspective, mostly focusing on the perspective of context and opinion leaders, etc. There is a relative lack of empirical analysis by using SOR model. Therefore, by means of empirical research, this paper starting from consumer psychology, explores the influencing factors of consumers' willingness to buy jewelry products in the TikTok live stream, based on which, it finds out problems of this kind of live streaming, and puts forward more targeted suggestions [7].

2.2 Research Purpose and Significance

Through the empirical analysis, the model and hypothesis can be tested, and based on which, problems that arise in the TikTok live streaming of jewelry products can also be found out, and then suggestions for live streaming of jewelry products can be made accordingly [8]. This paper explores the influencing factors of the TikTok live stream on consumers' willingness to purchase jewelry products, and constructs a model of consumers' willingness to purchase jewelry products in the TikTok live stream according to SOR theory. By designing questionnaire, the correlation between each influencing

factor and consumer’s purchase intention can be demonstrated through the regression analysis. Finally the problems of the live streaming of jewelry products in the TikTok were found and relevant suggestions were put forward.

3 Research Hypothesis and Model Proposal

In the context of live stream of jewelry products, the the TikTok platform is used as the medium between the user and the anchor. As the recipient of the anchor's information, the user will be affected by the characteristics of the anchor's personal information sources. In order to better explore consumers’ behavior in the the TikTok live stream of jewelry products, this paper systematically sorts out and summarizes characteristics of live streaming of jewelry products in the the TikTok, flow experience theory and other relevant theoretical studies. This paper also defines the concept of each variable in combination with the specific research context, and puts forward a theoretical model for this study (see Fig.1).

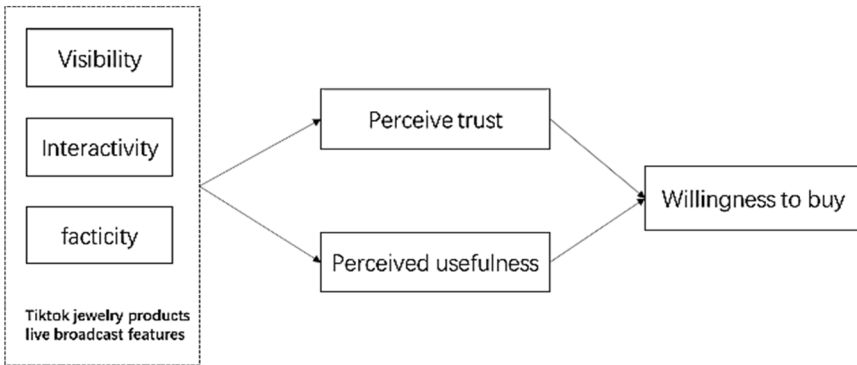


Fig. 1. Theoretical model of consumers' purchase intention for jewelry products in the TikTok live stream

3.1 Design Variables

There are three independent variables designing in this paper — visibility, interactivity and authenticity of the live stream of jewelry products in the the TikTok. The dependent variable is consumers' purchase intention. Perceived trust and perceived usefulness are added as the mediating variable. This questionnaire is distributed in selected fan groups established by the anchors of jewelry products in the the TikTok, by issuing the links after obtaining the consent of the anchors, so as to ensure appropriate survey groups.

3.2 Research Hypotheses

Based on the flow experience theory, this paper researches consumers' purchase intention of jewelry products in the TikTok live stream, and puts forward a total of 4 hypotheses.

1)B1 There is a positive correlation between the impact of the TikTok live stream features of jewelry products on perceived trust .

2)B2 There is a positive correlation between the influence of the live stream characteristics of the TikTok jewelry products on the perceived usefulness.

3)B3 There is a positive correlation between the live stream characteristics of the TikTok jewelry products and the purchase intention.

4)B4 There is a positive correlation between perceived trust and perceived usefulness on purchase intention.

4 Data Collection and Empirical Research

For this questionnaire, the fan groups established by anchors of jewelry products in the TikTok are selected, and links are distributed after obtaining the consent of anchors, so as to ensure appropriate survey groups. A total of 300 questionnaires were distributed and 258 were returned. Among them, there were 22 invalid questionnaires, and 236 valid questionnaires were obtained after deletion, with an effective rate of 91.5%.

4.1 Correlation Test between Variables

In this paper, SPSS 26 software was used to conduct correlation analysis on various independent variables: the live stream characteristics of the TikTok jewelry products (visibility, interactivity, authenticity), perceived trust, perceived usefulness, and purchase intention, so as to preliminarily observe the degree of correlation among the variables, and preliminarily test the research hypothesis. The analysis results are shown in the table:

According to Table 1, the correlation coefficients of the visibility, interactivity, authenticity and perceived trust of the live stream of jewelry products in the the TikTok were 0.311, 0.241 and 0.229, and the correlation is significant ($P < 0.01$). Hypothesis B1, B2 and B3 have been preliminary verified. The correlation coefficients of the visibility, interactivity, authenticity and perceived usefulness of the live stream of jewelry products in the TikTok were 0.268, 0.279 and 0.257, and the correlation was significant ($P < 0.01$). Hypothesis B1, B2 and B3 were preliminary verified. The correlation coefficients of visibility, interactivity, authenticity, perceived trust, perceived usefulness and purchase intention of the TikTok jewelry live streaming were 0.421, 0.434, 0.450, 0.454 and 0.376 respectively, and the correlation was significant ($P < 0.01$). Hypothesis B1, B2, B3 and B4 were preliminary verified.

Table 1. Correlation analysis between variables

Variable	Correlation	Visibility	Interactivity	Authenticity	Perceived trust	Perceived usefulness	Purchase intention
Visibility	Pearson correlation	1					
Interactivity	Pearson correlation	0.333**	1				
Authenticity	Pearson correlation	0.374**	0.367**	1			
Perceived trust	Pearson correlation	0.311**	0.241**	0.229**	1		
Perceived usefulness	Pearson correlation	0.268**	0.279**	0.257**	0.310**	1	
Purchase intention	Pearson correlation	0.421**	0.434**	0.450**	0.454**	0.376**	1

**At the level of 0.01 (Double tail), Significant correlation.

In the above research, it has been proved that there is a certain correlation between variables in the model. However, since correlation analysis cannot fully determine the relationship between variables, this paper adopts regression analysis to further analyze the variables, and chooses gender, age and monthly consumption level as the controlled variables.

4.2 Result Analysis

This paper sorts out and summarizes previous studies and the development status of e-commerce live streaming[9]. It selects the TikTok platform as the research object, and based on SOR model, applies the flow experience theory to the study of consumers' purchase intention of jewelry products in the TikTok live stream, and establishes a theoretical model of consumers' purchase intention of jewelry products in it[10]. Empirical analysis was conducted by questionnaire survey to study the influence of live stream features (visibility, interactivity, authenticity) of jewelry products in the TikTok on purchase intention, and the mediating role of perceived trust and perceived usefulness was also analyzed.

Finally, the conclusion is drawn: the live stream characteristics of the TikTok jewelry products (visibility, interaction, authenticity) have a significant positive impact on the purchase intention; Perceived trust and perceived usefulness play an intermediary

role between the live stream characteristics of the TikTok jewelry products and consumers' purchase intention[11]. Through the conclusion, relevant suggestions are put forward for the problems existing in the live stream of jewelry products in the TikTok: optimizing the layout of live stream room, improving the interaction of live stream of jewelry, ensuring the authenticity of live stream of jewelry, strengthening consumers' trust in anchors, and improving the service of live stream[12].

References

1. M.Beverland, A. Lindgreen, M. Vink, Projecting authenticity through advertising: consumer judgments of advertisers claims, *Journal of Advertising*, vol.1, pp. 5-15, 2008.
2. H.Chang , W. Su, The impact of online store environment cues on purchase intention: trust and perceived risk as a mediator, *Online Information Review*,vol.6, pp. 818-841, 2008.
3. C.Chen, Y. Lin, What drives live-stream usage intention? the perspectives of flow, entertainment, social interaction, and endorsement, . *Telematics and Informatics*, vol.1, pp. 293-303, 2018.
4. F.Davis, R. Bagozzi, P. Warshaw, User acceptance of computer technology: a comparison of two theoretical models, *Management Science*, vol.8, pp. 982-1 003, 1989.
5. A.Flangin, M. Metzger, Internet use in contemporary media environment, *Human communication research*, vol. 1, pp. 153-181,2001.
6. M.Andrea, N. Francesco, D. Schirone, Sales impact of service scape' s rational stimuli: A Natural Experiment. *Journal of Retailing and Consumer Services*, vol. 45, pp. 256-262, 2018.
7. B.Daniel, W. Gianfranco, Scene Sells: Why spatial backgrounds outperform isolated product depictions online. *International Journal of Electronic Commerce*, vo.24, no. 4, pp. 497-526, 2020.
8. J.Comeretal, Methods in sales research: perceived trust in business to business Sales: a new measure. *Journal of Personal Selling & Sales Management*, vol. 19, no. 3, pp. 61-71, 2013.
9. M.Mantrala, K. Raman, R. Desiraju, Sales quota plans: mechanisms for adaptive learning. *Marketing Letters*, vol. 8, no. 4, pp. 393-405, 1997.
10. S.Hani, A. Marwan, A. Andre, The effect of celebrity endorsement on consumer behavior: Case of the lebanese jewelry industry. *Arab Economic and Business Journal*, vol. 13, no. 2, pp. 190-196,2018.
11. T.Friedrich, S. Schlauder, S. Overhage, The impact of social commerce feature richness on website stickiness through cognitive and affective factors: An experimental study, *Electronic Commerce Research and Applications*, vol. 36, pp. 854-861, 2019.
12. Z.Maryam, Review: An ethereum-based product review system for mitigating rating frauds, *Computers & Cecurity*, 2021, pp. 94-102.

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.

