Study on The Influence of Situational Factors of E-commerce Live Broadcasting on Consumers' Impulse Buying Behavior

Xiao Zimiao ¹, Cai Shenggui²

¹ GuiZhou University of Finance and Economics, graduate student. Research direction: Consumer behaviour.

Abstract. Based on SOR theory, the situational factors of e-commerce live streaming are sorted out, and the influence of the information processing process of e-commerce live streaming viewers on impulse buying behavior is studied. To verify the research hypothesis, 246 valid questionnaires were collected, and SPSS software was used for empirical analysis. The results show that flow experience has a significant impact on user cognition and behavior. In addition to the factors of anchors themselves, other viewers have a significant impact on users' cognitive attitude and emotional attitude.

1. Introduction

Live streaming has gradually become a new growth engine for e-commerce platforms in the course of continuous development and evolution, which is closely related to all walks of life. This study focuses on exploring the mechanism of the influence of e-commerce live broadcast situational factors on consumers' impulse buying behavior and explores how e-commerce live broadcast situational factors influence consumers' online behavior intention through research.

Cai¹ analyzed users' participation behaviors in e-commerce live broadcasting, and their research showed that the utilitarian intention of users' behaviors was mainly related to products, while the hedonic intention was mainly related to anchors. In social commerce, user participation behavior can cause users' purchase intention. Others have verified the significant influence of user participation behavior on purchase intention in the context of live broadcasting.

Take the live broadcast in Douyin as an example. Nowadays, the form of live broadcast of e-commerce is seriously homogenized and lacks innovation. In December 2021, "Oriental Selection" was launched². It entered everyone's vision in a new and representative form of live broadcasting and became popular quickly. Different from general e-commerce live broadcasting, Oriental Selection's live broadcasting method is methodical and highly knowledgeable, which is in sharp contrast to the hysterical cries of other anchors. This live broadcasting method gives Dongfang Zhenxian unique competitiveness.

The cumulative sales volume of Oriental Selection in 3 months is 2.249 billion yuan, and there is no fierce livestream atmosphere to support it. How does this kind of e-commerce livestream affect consumers' impulse buying behavior, and the internal mechanism of consumers' purchasing behavior is worth studying.

2. Research hypothesis and model building

2.1 Theoretical basis

2.1.1 SOR theory

SOR is the stimulus - organism - response theory³. Jacob believes that consumer behavior occurs because individuals are stimulated by external factors and trigger certain emotional or cognitive responses, which then produce consumption behaviors that tend to or avoid. As a foreign stimulus factor, the online live shopping situation will also stimulate consumers to produce emotional or cognitive responses, and then produce trend or avoidance consumption behaviors. Therefore, this study believes that SOR theory is also applicable to the study of online live shopping situations.

2.1.2 Situational factors of e-commerce live broadcasting

Belk⁴ studied the process of physical consumption and divided situational factors into five components, namely, physical environment, social environment, time, task definition, and previous state. Han⁵ divided live broadcast situational factors into physical and environmental situations. The author refers to the previous studies of scholars and redefines the
classification for this study:

Physical situation: it refers to consumers’ purchase intention caused by the influence of the broadcast room and the anchor themselves when watching e-commerce live broadcast.

Social situation: It refers to consumers’ purchase intention triggered by other consumers' behaviors in the live broadcast room when they watch live e-commerce.

2.1.3 Flow experience

Flow experience is the optimal form of consumer virtual experience. In recent years, scholars have begun to introduce flow experience into online shopping to explore the mechanism of consumers’ online consumption behavior. In this study, flow experience was introduced into the path model of the influence of e-commerce live broadcast situational factors on consumers’ impulse purchase, and its intrinsic explanatory role was discussed.

2.2 Model proposal

According to SOR theory, external stimuli can influence the body to produce a response, thus affecting its behavior. Physical and social situations, as key situational factors of e-commerce live broadcasting, will undoubtedly affect consumers' reactions and behaviors. Flow experience is a state of mind in which people are completely immersed in an activity and get carried away. Consumers' impulse buying is easily driven by the characteristics of anchors and audience behaviors, so as to generate flow experience and make impulse purchases. Therefore, this paper introduces flow experience, discusses the path model of how situational factors in e-commerce live streaming affect consumers’ impulse buying, and analyzes its intrinsic explanatory role. The preliminary research model is as follows:

![Flow experience model](image)

**Fig. 1. Impulse buying model**

2.3 Make assumptions

2.3.1 Situational factors and impulse buying

In the live broadcast marketing environment, anchors will actively establish contact with users, attract live broadcast users in various ways, and improve the frequency and degree of their interaction. Different situations bring different experiences to consumers, thus affecting consumers’ consumption decisions. Accordingly, the hypothesis is put forward:

H1: Situational factors affect impulse buying behavior of consumers

H2: The physical situation affects the impulse buying behavior of consumers

H3: Social situations affect impulse buying behavior of consumers

2.3.2 The mediating role of flow experience

Positive emotions can improve behavioral performance. In live broadcast, anchors immerse consumers in a variety of ways to generate flow experience and increase impulse purchase intention. Accordingly, the hypothesis is put forward:

H4: Flow experience plays a mediating role in the process of situational factors affecting consumers’ impulsive buying behavior

3. Research design

3.1 Sample and data collection

The survey object of this paper is the user group with experience of watching e-commerce live broadcasting and purchasing commodities in the live broadcasting room, and the data is collected in the form of network questionnaire. The specific way is through WeChat and Credamo platforms to send links and fill in. A total of 297 questionnaires were collected in this survey, among which 246 were valid, with an effective recovery of 82.83%. The effective sample size met the basic requirements of this study.

In terms of gender, 91 were male and 155 were female; In terms of age, there were 3 persons aged 18 and below, 68 persons aged 19-24, 79 persons aged 25-30, 80 persons aged 31-40, and 16 persons aged 41 and above; In terms of education, there are 12 senior high school students or below, 169 undergraduate students and 65 graduate students.

3.2 Variable measurement

In order to ensure the reliability and validity of the questionnaire, this study adopted a mature scale, modified it appropriately according to the theme, and analyzed the collected data with SPSS software. Among them, physical situation (N=4, α =0.613> 0.6), social situation (N=3, α=0.613> 0.6), flow experience (N=5, α=0.756> 0.7), impulse buying behavior (N=4, α=0.704> 0.7), KMO > 0.8, good reliability and validity.

<table>
<thead>
<tr>
<th>Table 1. KMO and Bartlett tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMO sampling appropriateness measure</td>
</tr>
<tr>
<td>Bartlett's sphericity test</td>
</tr>
<tr>
<td>Approximate chi-square</td>
</tr>
<tr>
<td>120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2. Questionnaire item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical situation</strong></td>
</tr>
</tbody>
</table>

[^8]: For example, influenced by the background or lighting of the broadcast room, I have the behavioral intention to purchase, collect, share or place an order.
Influenced by the expressions and actions of anchors and the interaction between anchors, I have the behavioral intention to add, collect, share or place an order.

I like the layout, display and style of the broadcast room, so as to generate the behavioral intention of buying, collecting, sharing or placing orders.

I received heated discussions and feedbacks from other consumers in the comment section of the broadcast room, resulting in the behavioral intention to purchase, collect, share or place an order.

I will buy, collect, share or place an order because of the transaction record.

4. Analysis of empirical results

4.1 Inspection result

4.1.1 Situational factors and impulse buying

<table>
<thead>
<tr>
<th>Social situation</th>
<th>Impulse buying behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical situation</td>
<td>I was affected by the warm buying atmosphere of other consumers in the broadcast room, and the behavioral intention of adding, collecting, sharing or placing an order was generated. I received heated discussions and feedbacks from other consumers in the comment section of the broadcast room, resulting in the behavioral intention to purchase, collect, share or place an order.</td>
</tr>
<tr>
<td>Flow experience</td>
<td>The process of watching live will arouse my curiosity. I often immerse myself in it. I felt that time passed very quickly. I am often unaware of my surroundings. I felt very happy.</td>
</tr>
<tr>
<td>Impulse buying behavior</td>
<td>I will buy some unplanned products. I will find some products that are not planned but want to buy. I will buy without thinking. I will suddenly have the impulse to buy unnecessary goods. I will be affected by the mood at that time and buy.</td>
</tr>
</tbody>
</table>

4.1.2 Physical situations and impulse buying

<table>
<thead>
<tr>
<th>Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
<th>Effect ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect effect</td>
<td>0.40</td>
<td>0.09</td>
<td>0.31</td>
<td>0.67</td>
</tr>
<tr>
<td>Direct effect</td>
<td>0.36</td>
<td>0.36</td>
<td>0.17</td>
<td>0.55</td>
</tr>
<tr>
<td>Total effect</td>
<td>0.76</td>
<td>0.07</td>
<td>0.63</td>
<td>0.89</td>
</tr>
</tbody>
</table>

4.1.3 Social situations and impulse buying

<table>
<thead>
<tr>
<th>Effect</th>
<th>SE</th>
<th>LLCI</th>
<th>ULCI</th>
<th>Effect ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect effect</td>
<td>0.35</td>
<td>0.06</td>
<td>0.25</td>
<td>0.47</td>
</tr>
<tr>
<td>Direct effect</td>
<td>0.31</td>
<td>0.09</td>
<td>0.14</td>
<td>0.48</td>
</tr>
<tr>
<td>Total effect</td>
<td>0.66</td>
<td>0.06</td>
<td>0.54</td>
<td>0.79</td>
</tr>
</tbody>
</table>

4.2 Model evaluation

Through the analysis of the above data, it is known that this model can explain the influence of situational factors on impulse purchase (P < 0.01, BootLLCI and BootULCI are both greater than 0), among which, physical situation has a significant influence on impulse purchase (P < 0.01,
BootLLCI and BootULCI are both greater than 0). The effect of social context on impulse buying is basically significant (\(P < 0.05\), BootLLCI and BootULCI are both greater than 0). Therefore, H1, H2 and H3 are verified. In addition, the mediating effect of flow experience was significant (BootLLCI and BootULCI were both greater than 0, and the effect ratio was both greater than 50%), and H4 was verified.

5. Conclusion

This study focuses on the question of why consumers make impulsive purchases in e-commerce broadcasting, and studies the mechanism of how situational factors influence consumers' impulsive buying behavior under the mediating effect of flow experience, and draws the following conclusions\(^{[10]}\).

The intensity of promotion is an important factor affecting consumers' impulse purchase. When the discount offered by anchors is large enough, consumers will have a strong impulse to buy.

Situational factors will encourage consumers to make unplanned purchases. In the virtual environment of a broadcast room, situational factors have an important impact on consumers' emotions, so they will have stronger impulse and make unplanned purchase behavior.

The more active the broadcast room is, the more likely it is to cause impulse consumption. The atmosphere in which consumers watch live broadcasts together is a very strong social influence.

This study explores the mechanism of situational factors on consumers' impulse purchase intention in the context of live-streaming e-commerce, aiming to provide references and suggestions for live-streaming e-commerce operators and consumers, and highlight the application value of the theory. However, this study also has limitations. Consumers' impulsive buying behavior is a complex process. Besides the influence of situational factors, there are other possible reasons that may affect the accuracy of the research conclusion. Therefore, the research methods can be optimized in the future to further analyze the influence and role of other factors.

References