

## **A REVIEW ON ANTECEDENTS OF IMPULSE PURCHASE BEHAVIORS IN LIVE STREAMING COMMERCE**

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### **ABSTRACT**

Online impulse purchasing has been a topic of constant research interest due to the widespread use of e-commerce and social commerce. However, with the rapid advancement of information technology, new forms of e-business, such as live streaming commerce, has emerged. Despite the growing popularity of live streaming commerce, there is a limited research on the impulse purchasing behavior in this context. To consolidate and synthesize current findings on it, this paper reviews publications from 2018 to 2023. The study adopts a stimulus-organism-response framework to classify the influencing factors on the impulse purchasing behavior. The findings suggest that a survey-based research and a stimulus-organism-response theory are among the primary research methodology and theory used in this field. Antecedents are categorized into three main groups: streamer-related, platform-related, and marketing-related stimuli. The paper presents the framework and provides recommendations for future research. This review contributes to the literature on the impulse purchasing behavior in live streaming commerce and provides guidance for practitioners seeking to engage consumers in this context.

### **Keywords:**

*impulse purchase, live streaming commerce, systematic review, stimulus-organism-response*

### **INTRODUCTION**

Impulsive buying behavior refers to the behavior of consumers who, without premeditation, develop strong desires to buy due to certain stimuli, and eventually make purchases (Abdelsalam et al., 2020a). With the rise of live streaming e-commerce, more and more consumers are doing their shopping through the live streaming platforms (Lun et al., 2021). In this context, studying consumers' impulsive buying behavior is of a great significance for the development of live streaming e-commerce. By deeply understanding consumers' impulsive buying behavior, more accurate marketing methods can be provided for the platform, user experience can be optimized, sales efficiency can be improved, and the development of live streaming e-commerce can be promoted (Lou et al., 2022). However, most research on live streaming e-commerce focuses on user participation and viewing, and very few studies have been devoted to studying consumers' impulsive buying behavior (Zuo & Xiao, 2021). The prevalence of the online impulse purchases and the lack of sufficient research attention in the context of live streaming commerce have been reported in the literature ((Lin et al., 2022; Lo et al., 2022; Lou et al., 2022; Zhang et al., 2022). To address the gap, the present study aims to consolidate and synthesize existing literature on the impulse purchase behavior in live streaming commerce, adopting a stimulus-organism-response framework, in an attempt to formulate a framework depicting the antecedents of impulse purchase. It is important to study impulse purchase behavior in this new context to better understand the drivers of the impulse purchases and to develop effective marketing strategies.

The findings of this study provide insights for marketers, brands, businesses, and other stakeholders in live streaming commerce and highlight the need for further research to keep up with the rapid advancement of technology. The study aims to answer the following questions:

- 1) What are the research trends and focuses?
- 2) What are the research methodologies, context and samples?
- 3) What are the antecedents of the impulse purchase in live streaming commerce

## **LITERATURE REVIEW**

### ***Impulse Purchase***

Stern (1962) proposed that impulse purchase refers to a compelling, unplanned and a hedonically complicated purchase. Rook (1987) defines it as a sudden and strong, persistent urge to buy something at the spot. In the early stage, the significant features of impulse purchase are unintended, unreflective and spontaneous (Beatty & Elizabeth Ferrell, 1998; Stern, 1962). Later, scholars extended the definition by claiming that impulse purchase is a result of external stimuli (Chih et al., 2012; Vonkeman et al., 2017). The characteristics of an impulse purchase can be summarized into several categories. First, in contrast with a planned purchase, the impulse purchase behavior is often unplanned. Consumers do not have a pre-determined intention to buy a specific product until they conducted buying behavior. Secondly, the time of decision making is often rapid and swift, oftentimes it is decided on the spot. Thirdly, the impulse purchase does not involve cognitive reaction from a consumer, in other words, it is often unreflective. The consumer rarely considers the reasons of buying or the consequences of purchase. Fourthly, such a behavior accompanies a strong urge to buy products immediately and involve an affective reaction which usually is hedonic. Lastly, the most recent research proposed that the impulse purchase behavior is a result of an extrinsic and intrinsic stimuli in the shopping context.

The most widely acknowledge types of the impulse purchase include pure impulse buying, reminder impulse buying, suggestion impulse buying and planned impulse buying (Stern, 2012). Pure impulse buying takes place when consumers making a purchase solely based on emotional turbulence instead of exposure to stimulus. For instance, when a consumer attempts to try some novel products or he/she wants to break a shopping pattern. This reminder impulse purchase happens when a consumer is being exposed to advertisements in a store and recalls the need to buy the product, perhaps because of low stock of that product. This group is often observed with sales promotion. The third type is the suggestion impulse buying. An individual may purchase products that recommended by friends or salesperson, although with no prior shopping intention, but the recommendation can trigger consumer's awareness of developing needs. The last type is planned impulse buying. Here, buyers often have a pre-determined shopping list before entering the store, but due to the random promotion campaign and other in-store stimuli, consumers purchased more than expected and planned.

### **Stimulus-Organism-Response Theory**

Stimulus-Organism-Response (SOR) theory posits that an individual's cognitive and affective reaction are determined by external and internal environmental factors, further influencing a person's response towards such cues (Y. Y. Lee & Gan, 2020). Stimulus refers to factors that induce consumer's to buy a product or service, which yield significant influence on a person's cognitive state (normative evaluation, perceived usefulness, interactivity) and affective state (enjoyment, pleasure, trust etc.), resulting avoidance or acceptance behavior. SOR framework is adopted for several reasons. Firstly, the model has been applied to analyze consumer's behavior in retailing for a long time. Secondly, impulse purchase behavior occurs due to the presence of situational factors. In live streaming commerce, these triggers have multiplied due to the application of new technology and new elements, such as streaming technology and streamers. Therefore, the selection of SOR theory has been justified.

## **RESEARCH METHODOLOGY**

The purpose of the study is to review papers which help to gain insights into the consumer's impulse purchase behavior in live streaming commerce. Hence, to ensure the relevance of the reviewed paper, we selected English journal papers and conference proceedings between 2018 to 2023, the selection of the time duration is justified because live streaming commerce emerged in 2016 and have gained popularity since, the term live streaming commerce first appeared in literature in 2018 (Cai & Wohn, 2019). Keywords searching is employed to identify relevant publications in major academic databases including Google Scholar, ResearchGate, Web of Science, Scopus etc. To incorporate more literatures and ensure the accuracy of review article, different phrases of similar meaning are used, namely "impulse purchase, impulsive purchase, impulse buying, online impulse buying, live streaming shopping, live streaming commerce, live stream commerce." The selection involves inclusion and exclusion criteria, only studies with empirical results can be incorporated. Sample size should be more representative to improve the reliability of the study (Xiaoxuan & Kian, 2021). However, since the studies pertaining to impulse purchase in live streaming commerce are still scarce, only thirteen full-text English paper with empirical findings are identified and selected.

## **DISCUSSIONS**

The study reviews an extensive of the impulse purchase literature in the context of live streaming commerce from the following aspects. The first part discusses the general trends and focus on the impulse purchase studies. Secondly, the research methodology is examined. Thirdly, the research context and sample are sorted accordingly. Lastly, the antecedents of the impulse purchase are categorized in a systematic manner.

### **Overview of Research Trends and Focus**

In general, the number of studies on the impulse purchase has been growing steadily recently. With the development of information technology and communication, the merge of e-commerce and social commerce has driven the increase of studies on online impulse purchase behaviors. However, despite the growing interests, the field of live streaming has been overlooked until recently. A noticeable trend has been detected that digital celebrity relationship with impulse purchase has begun to draw academic research attention (Zhou et al., 2022).

### **Overview of research methodology, context and sample**

The primary research methodology employed by extant literature pertaining to the impulse purchase involve quantitative research. Live streaming consumers are selected and surveyed via questionnaires. Most research on impulse purchase in live streaming commerce do not stress the specific product context, unlike most online impulse purchase in other research context, which may suggest a future research gap. In terms of the sample, it is noticed that the primary source of sample is from Asia region, and majority of the study sample are selected from the China context. It could be due to the surge of live streaming platforms in China, and the fast development of live streaming commerce, especially during the phase of covid-19 pandemic. Diverse samples from different culture and background are called for to gain a more holistic understanding in impulse purchase domine. It was found that the prevalent theories are stimulus-organism-response (90%), other popular theories include social presence theory (J. Chen et al., 2021; Ming et al., 2021; Zhang et al., 2022), parasocial interaction theory (T. Y. Chen et al., 2021), flow experience theory (Vazquez et al., 2020), cognitive emotional theory, affordance theory and motivational theory. (Sun et al., 2019; Xie & Luo, 2021a).

## **ANTECEDENTS OF IMPULSE PURCHASE BEHAVIORS**

### **Streamer-related stimulus**

Streamer-related stimulus remains a hot research topic among impulse purchase behaviors. Studies have proposed that characteristics of streamer or hosts can positively affect consumer's impulse purchase (T. Y. Chen et al., 2021). For instance, physical features such as attractiveness can positively influence viewer's impulse buying (C. H. Lee & Chen, 2021). The extent to which consumers place trust towards the streamer's expertise is positively related to impulsive purchase. In addition, many studies stress the relationship formed between streamers and viewers, such as interpersonal relationship (Huang & Suo, 2021a), para-social interaction relationship (Li et al., 2021), attachment towards streamers, presence of streamers in a streaming event, which are found positively related to impulse purchase behaviors.

### **Platform-related stimulus**

Platform-related stimulus refers to features of live streaming commerce operators that influence buyer's impulse purchase. With the proliferation of live streaming commerce platforms, e-retailors are constantly modifying platform features to improve consumer's shopping experiences, for instance, visibility, visual appeal, telepresence, purchase convenience can trigger impulse purchase directly or indirectly in live streaming shopping. Visibility is positively associated with impulse purchase (Xie & Luo, 2021 ; Li et al., 2021). In the context of live streaming commerce, shopping via real time video can be regarded as a social activity accompanied with virtual community. The streaming technology allows viewers to post, read simultaneously other viewer's comments and remarks, which often carry their opinion regarding the recommended products by the streamer. Therefore, the presence of viewer can have positive influence on impulse purchase intention (Ming et al., 2021).

### **Marketing-related stimulus**

Traditional marketing strategies are widely used and are found equally effective in promoting consumer's impulse purchase intention. Product availability, scarcity, vicarious expression, and aesthetic appeal are found to trigger impulse purchases. (Abdelsalam et al., 2020a). Y. Chen et al. (2019) insert that product-related signals, namely vicarious expression and aesthetic appeal can affect consumer's impulse buying indirectly via trust and affection. When consumers are exposed to the marketing related stimulus in a live streaming event, for instance, or when sellers offer price promotion in a limited quantity of time, consumers are likely to buy recommended products out of their impulsive urges (Li et al., 2023a, 2023b). Akram et al., (2018) posit that when consumers are offered with a limited amount of products and time, consumers are more inclined to purchase impulsively.

### **Mediating factors of impulse purchase behaviors**

It is imperative to study the direct correlation between two variables, but it is also necessary to look into the mediating mechanism of any variable correlation. The impulse buying behavior can be influenced by various mediating factors, including perceived usefulness, perceived enjoyment (C. H. Lee & Chen, 2021), perceived risk (Wu et al., 2020), utilitarian motivation and hedonic motivation (Zheng et al., 2019), trust (Wongkitrungrueng & Assarut, 2020). Perceived usefulness refers to the degree to which a consumer believes that using a particular product or service will enhance their performance or productivity. Perceived enjoyment refers to the degree to which a consumer enjoys the buying process. Research has indicated that perceived usefulness and enjoyment has a positive impact on impulse buying behavior (C. H. Lee & Chen, 2021; Zuo & Xiao, 2021).

Hedonic motivation refers to the desire to achieve emotional or sensory pleasure through a purchase decision. Utilitarian motivation refers to the desire to achieve practical or functional goals through a purchase decision (Zheng et al., 2019). Trust denotes the belief that a seller is reliable, competent, and has the consumer's best interests at heart (Yan et al., 2022). Perceived risk is characterized by the uncertainty and potential negative consequences associated with a purchase decision (Huang & Suo, 2021b). It has been found to have a negative impact on impulse buying behavior.

Overall, the literature highlights the complex and interdependent relationships between perceived usefulness, perceived risk, utilitarian motivation, trust, perceived enjoyment, and hedonic motivation with impulse buying behavior. These factors give impacts on the impulse buying behavior and may be moderated by each other and other contextual factors, such as the buying environment, product characteristics, and consumer demographics. Future research is needed to gain a better understanding of the underlying mechanisms of these relationships and develop effective strategies for managing impulse buying behavior.

### Measurement of impulse purchase behaviors

Urge to buy impulsively, impulse purchase behavior, impulse buying decision, and impulse purchase intention are some of the key concepts used to measure impulsive buying behavior. Urge to buy impulsively refers to the sudden desire or impulse to make an unplanned purchase (C. H. Lee & Chen, 2021). It is a state of mind that triggers the impulse buying behavior. Impulse purchase behavior, on the other hand, refers to the act of purchasing a product spontaneously without any prior planning or intention (Abdelsalam et al., 2020b). The impulse buying decision is the cognitive process that follows the urge to buy impulsively and results in the actual purchase (Huang & Suo, 2021b). Finally, impulse purchase intention refers to the intention to purchase a product impulsively (Xie & Luo, 2021a).

Overall, the study of urge to buy impulsively, impulse purchase behavior, impulse buying decision, and impulse purchase intention is important for understanding consumer behavior and marketing strategies. By understanding the factors that influence these concepts, marketers can design effective strategies to encourage impulsive buying behavior and increase sales. Figure 1 presents the summary of antecedents and mediating factors of impulse purchase studies in the context of live streaming commerce.

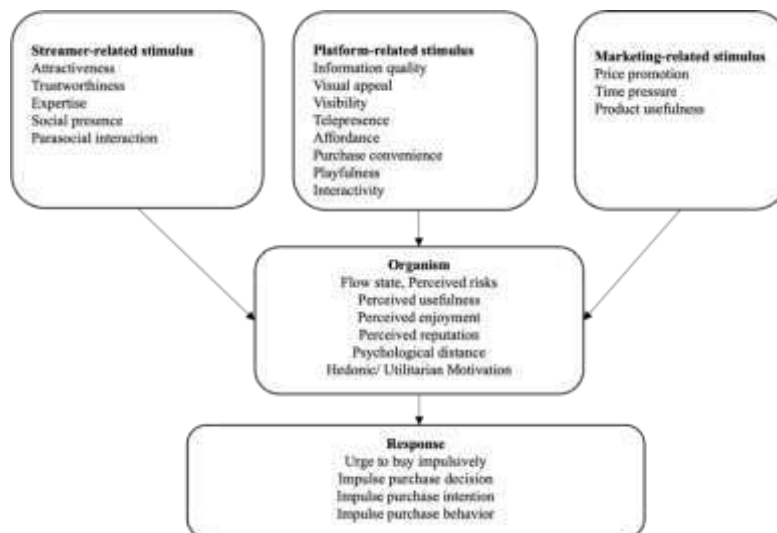


Figure 1 : Overview of Influencing Factors on Impulse Purchase in LSC

## **CONCLUSIONS AND LIMITATIONS**

The study aims to provide a holistic review of a study pertaining to the impulse purchase behavior in the context of live streaming commerce, which has received insufficient research interests due to the fast advancement of a new telecommunication technology. Through a systematic review of thirteen relevant journal papers, the study constructed a framework of antecedents of impulse purchase behavior in live streaming commerce based on the Stimulus-Organism-Response framework. Findings suggest that streamer-related, marketing-related, platform-related external stimulus can directly or indirectly lead to consumer's propensity of impulse purchase. Some actors can mediate the relationship between the abovementioned stimuli and impulse purchase behavior. The primary methodology employed in impulse purchase literature is a survey questionnaire. Based on the conclusions, consumer behavior in live streaming commerce has gained popularity, however, there is a lack of empirical studies regarding the new way of shopping. Future studies may consider conducting more empirical research. Secondly, despite the growing interest in the impulse purchase behavior, the mechanism of how streamer-related situational factors affect consumer's impulse purchase remains underdeveloped. Moreover, more diverse perspectives are called for to examine impulse purchase behavior in live streaming commerce. The study's insights can assist live-streaming e-commerce operators and other business stakeholders in developing effective marketing strategies.

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