

Promoting Sales in E-commerce Live Streaming: How Streamer Credibility, Attractiveness, and Time Pressure Drive Purchase Decisions

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ABSTRACT

This study examines the factors influencing consumer purchase decisions within the rapidly expanding e-commerce live streaming landscape. Drawing on source credibility theory and perceived value theory, it examines the direct effects of host credibility (encompassing trust, expertise, and attractiveness) and product attractiveness on purchase decisions. Furthermore, it uniquely explores the critical moderating role of time pressure, a defining characteristic of live streaming environments. Empirical analysis confirms that both host credibility and product attractiveness significantly and positively influence viewers' purchase decision. Crucially, the study reveals that time pressure acts as a significant moderator, strengthening the positive relationships between (a) host credibility and purchase decision, and (b) product attractiveness and purchase decision. These findings challenge the assumption of purely rational decision-making in e-commerce, highlighting the potent influence of real-time urgency and product perceptions in interactive, time-constrained live streaming. The research contributes theoretically by integrating temporal pressure into the digital persuasion framework of live commerce and offers practical insights for platforms, brands, and hosts to optimize live streaming strategies. Specifically, it underscores the importance of selecting credible hosts, enhancing product visual appeal, and strategically leveraging time-limited promotions to amplify persuasive impact and drive sales conversion.

Keywords: E-commerce live streaming, Purchase Decision, Credibility, Product Attractiveness, Time Pressure

INTRODUCTION

E-commerce live streaming offers consumers a more immersive and interactive shopping experience compared to traditional e-commerce platforms, while simultaneously establishing an innovative, real-time communication channel between sellers and buyers. The rapid integration of live streaming with various internet-based industries has given rise to the global "live streaming plus" economy, with China emerging as a major hub. As live streaming becomes increasingly mainstream, many online marketers are leveraging it to drive sales (Lu et al., 2021). According to the 2024 Douyin E-commerce Small and Medium-sized Merchants Live Broadcast Development Report, China's live streaming e-commerce market is projected to surpass 4 trillion RMB in 2024, reaching over 600 million users and achieving a penetration rate above 40%. According to Qing & Jin (2022), the future stage of the development of the worldwide market is anticipated to be significantly influenced by China. A steady increase in app adoption rates and a growing variety of product formats and features are indicators of the live streaming e-commerce industry's explosive expansion. The constant rise in live streaming users might also be attributed to improved online communication. As a result,

businesses are required to carry out extensive studies on e-commerce live streaming if they intend to increase sales through it.

In live streaming scenarios, viewers' decisions are influenced by a combination of multiple factors. Host credibility is a critical determinant of effectiveness in e-commerce live streaming, encompassing three key dimensions: trust, expertise, and attractiveness. Trust reflects the perceived honesty and sincerity of the host, influencing the audience's acceptance of both the individual and their message (Ohanian, 1990). Expertise enhances persuasive power, as individuals with domain-specific knowledge are generally more convincing (Smith et al., 2013). Attractiveness, meanwhile, exceeds physical appearance to include the host's social appeal, shaping viewers' willingness to engage and form parasocial connections (McCroskey et al., 2006). These dimensions form the foundation of a credible and influential live streaming presence.

To be effective, live streaming must capture consumers' attention, stimulate their interest, and sustain their engagement by leaving a positive and lasting impression (Ji et al., 2023). Because live streaming is a visual medium, it relies heavily on the attractiveness of the products to draw in viewers. Based on the research by Xu et al. (2024), visually appealing product presentations greatly increase viewers' desire to interact and investigate the content. As stated by Van der Heijden et al. (2003), consumers frequently rely on their assessments of products on perceived utility, usability, and trust in the online retailer. In support of this, Cai et al. (2018) found that consumer engagement with live streaming platforms like Amazon Live, Facebook Live, and YouTube Live is driven by utilitarian motivations, specifically the need for product demonstrations and detailed information, based on a survey of English-speaking users. When considered as a whole, these results underscore the significance of product attractiveness in fostering consumer interest and confidence in the live streaming industry.

Unlike traditional e-commerce, live streaming inherently imposes time constraints, requiring consumers to make purchase decisions within a limited window, often before the stream concludes or product links expire (Kong & Zhu, 2023). In recent years, this element of time pressure has emerged as a key factor influencing consumer behavior in live commerce. According to Aminilari and Pakath (2005), higher perceived opportunity costs intensify time pressure, triggering emotions such as urgency, anxiety, and fear of missing out or regret. To cope with these feelings, consumers tend to rely on intuitive decision-making, which increases the likelihood of impulsive purchases. Building on this foundation, the study uses time pressure as a moderator to investigate how it shapes the dynamics between host credibility and consumers' purchase decisions, as well as between product attractiveness and purchasing behavior. By examining these pathways under conditions of urgency, the research aims to uncover how temporal constraints amplify or alter consumer responses in the fast-paced environment of e-commerce live streaming.

This study positions host credibility and product attractiveness as the primary independent variables, with a particular focus on the moderating effect of time pressure within e-commerce live streaming contexts on viewers' purchase decisions. It highlights the tripartite interplay among credibility, product attractiveness, and time pressure, challenging the traditional e-commerce assumption of purely rational consumer decision-making. By offering a theoretical framework for understanding purchase behavior in live streaming environments, the findings contribute to the optimization of live streaming operational strategies and inform the design and refinement of live commerce workflows, ultimately enhancing the overall viewer experience.

Study Objectives

Here are the key objectives of this study:

1. To examine the relationship between host credibility and purchase decision.
2. To examine the relationship between product attractiveness and purchase decision.
3. To examine the moderation effect of time pressure on credibility and purchase decision.
4. To examine the moderation effect of time pressure on product attractiveness and purchase decision.

Problem Statement

Much of the existing research centers on source credibility in live streaming, defined as the extent to which a source is perceived as knowledgeable, communicative, and capable of providing objective and reliable information (Goldsmith et al., 2020). Rungruangjit (2022) further conceptualizes source credibility as a multidimensional construct comprising the perceived attractiveness, trustworthiness, and expertise of celebrity endorsers, each playing a core role in shaping their credibility. Moreover, previous studies also focus more on the anchors' attractiveness in live streaming and how it affects viewers' behavior (Shang et al., 2023; Jin et al., 2023; Cui et al., 2024). However, few studies have combined the credibility of hosts and the attractiveness of products to study their impact on viewers' purchasing behavior. This study fills the gap in the dynamic relationship between live streaming consumption behavior by helping to demonstrate the correlation and influence between hosts and products.

Chen and Yang (2023) provide substantial evidence indicating that streamer credibility significantly influences consumers' purchase intentions in online shopping contexts. However, they also note the presence of additional factors that may further strengthen this relationship. Similarly, Ji et al. (2023) found that while product attractiveness positively impacts purchase intention, this effect can be moderated by product-self fit. Moreover, their findings suggest that certain contextual elements within the live streaming environment also serve as moderators, further shaping consumer behavior. Thus, it is reasonable to find a moderating variable from live streaming features to enhance the relationships.

LITERATURE REVIEW

Source Credibility Theory

According to the theory of source credibility, which has its origins in the research of Hovland and Weiss (1952), people are more likely to be persuaded by sources they believe to be reliable. The extensive use of source credibility theory in fields like media, technology, consumer behavior, and information distribution is supported by an expanding corpus of research (Serman & Sims, 2023). For example, Schouten et al. (2020) underline that in order for social media users to view online celebrities as credible, they need to exhibit both competence and dependability. Ismagilova et al. (2020) discovered that source credibility characteristics have a substantial impact on consumers' judgments of the usefulness and credibility of information, which in consequence affects their propensity to accept the information and their intention to buy.

Perceived Value Theory

Perceived value refers to the consumer's overall assessment of a product or service based on the trade-off between perceived benefits and costs (Zeithaml, 1988). Building on this concept, Sheth et al. (1991) developed a comprehensive framework that categorizes perceived value into five dimensions: functional, emotional, social, epistemic, and conditional value. This multidimensional approach has gained widespread application due to its alignment with consumer perspectives (Biswas & Roy, 2015). In the context of live streaming, viewers assess both the price and functional utility of products, with dynamic, real-time product demonstrations enhancing perceptions of product attractiveness.

Host Credibility and Purchase Decision

As an integral factor that increases the perceived worth of influencers, influencer credibility is essential to improving the efficacy of social media marketing (Tsen et al., 2021). In a study by Luwie and Pasaribu (2021), consumers' purchasing decisions are significantly influenced by their perception of credibility. In a similar aspect, the perceived reliability of reviewers in the context of online evaluations not only affects personal choices but also serves as a tactical advantage for service providers (Thomas et al., 2019). As marketers become more aware of live streaming's ability to influence consumer behavior and encourage purchases, presenter credibility has drawn more attention in recent years.

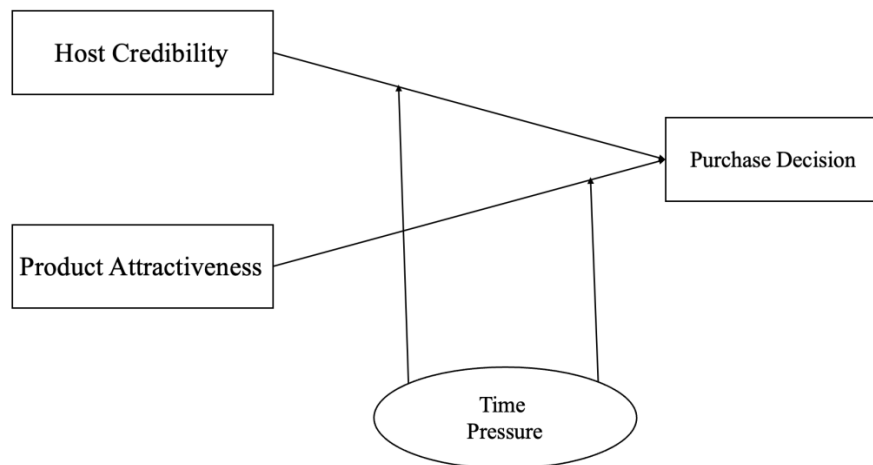
Product Attractiveness and Purchase Decision

Customers often assess a particular product's attractiveness by comparing it directly to the products around it, rather than to more general contextual components like the website or marketing (Schnurr et al., 2017). Numerous studies in psychology and marketing have examined consumer reactions and purchase intentions closely, providing insights into how product features influence perceptions and purchasing behavior (Soler-Anguiano et al., 2023). Interestingly, some research suggests that product attractiveness may also have unintended or reverse effects on customer behavior (Van Ooijen et al., 2016), suggesting a more nuanced and multifaceted function in the purchase decision. Therefore, businesses may leverage product attractiveness within the live streaming context to influence and shape consumers' purchase decisions.

The Moderating Role of Time Pressure

Time pressure is defined as a heightened emotional state of anxiety experienced when individuals feel they lack sufficient time to complete tasks within a given deadline (Svenson & Edland, 1987). Under such conditions, consumers are prone to cognitive biases, often overestimating the benefits of a product, overlooking potential risks, and selectively attending to information that confirms their preexisting beliefs while disregarding contradictory evidence (Zhang, 2023). Limited time also restricts consumers' ability to process comprehensive information, leading them to rely primarily on the product presentation and make rapid, often impulsive, purchase decisions. As Zhao et al. (2019) suggest, greater time pressure is associated with shorter decision-making durations and increased impulsivity in buying behavior. In tourism live streaming, this effect is further intensified by merchants who strategically induce urgency and scarcity through time-limited offers and restricted inventory (Lv et al., 2022). Thus, it is reasonable to explore the effect of time pressure as a moderator.

Conceptual Framework



METHODOLOGY

This study aims to advance theory and provide beneficial implications for businesses engaged in live streaming e-commerce by leveraging recent research and empirical data. It seeks to offer practical guidance for academic researchers, e-commerce companies, and marketing experts in overcoming the difficulties of a market that is growing increasingly competitive.

FINDINGS AND DISCUSSIONS

Host Credibility and Purchase Decision

The findings validate that host credibility has a significant impact on purchase decisions, consistent with the assertion by Sesar et al. (2022) that greater influencer credibility enhances purchase intention in social media contexts. Similar to this, Singh and Banerjeethe (2018) noted that purchase decision is used to gauge the

impact of brand and advertising attitudes based on celebrity credibility. The findings expand traditional source credibility theory by validating its applicability within real-time, interactive e-commerce environments. Based on this, it is recommended that e-commerce platforms and brands prioritize streamers who exhibit strong credibility, including honesty, product knowledge, and professional communication. Implementing targeted training programs can further enhance these qualities. When selecting hosts, brands should emphasize authenticity and reliability over mere popularity, as a credible image is more effective in converting viewer trust into purchase decisions. Additionally, platforms may benefit from integrating credibility-based metrics into their recommendation systems to increase the visibility of trustworthy hosts, thereby improving viewer confidence and satisfaction while reducing perceived risk.

Product Attractiveness and Purchase Decision

This study affirms that product attractiveness positively influences purchase decision in e-commerce live streaming. These findings align with Soler-Anguiano et al. (2023), who identified product attractiveness as a key variable in explaining consumer purchasing behavior. Similarly, Ji et al. (2023), through an eye-tracking experiment, demonstrated that visually appealing products capture more viewer attention and are more likely to result in a purchase decision. This study underscores the role of product attractiveness as a perceptual shortcut that can immediately elevate perceived value, even without in-depth cognitive processing. Departing from conventional perspectives that treat perceived value as a mediating factor, the findings position product attractiveness as a direct and influential driver of purchase intention. In the visually oriented environment of live streaming, such attractiveness plays a crucial role in shaping first impressions that significantly impact consumer decisions. Therefore, brands and sellers should invest in appealing product design elements, such as color, packaging, and overall styling, to enhance visual impact. To maximize effectiveness, marketers should carefully curate products for live promotion, prioritizing those with strong aesthetic appeal, as these are more likely to engage viewers and translate into successful purchases in video-driven commerce settings.

Time Pressure between Host Credibility and Purchase Decision

The findings indicate that time pressure moderates the relationship between host credibility and purchase decisions in the context of e-commerce live streaming. This aligns with the results of Peng et al. (2019), who also identified a positive moderating effect of time pressure on the relationship between source credibility and consumer behavioral attitudes. By recognizing time pressure as a crucial situational moderator, the study adds to the expanding volume of research on consumer behavior in interactive digital settings, especially e-commerce live streaming. It emphasizes how situational awareness is essential to comprehending how digital persuasion functions in real-time commerce. Employing reputable and experienced hosts is crucial in high-pressure sales situations since their impact on purchase intention is increased in time-sensitive situations. Hosts should highlight both verbal and nonverbal indicators of trust, such as transparent pricing, genuine endorsements, and clear product demonstrations, during urgent or time-sensitive campaigns. When customers are making quick decisions, these activities have a greater impact.

Time Pressure between Host Product Attractiveness and Purchase Decision

The results reveal that time pressure serves as a moderating factor in the relationship between product attractiveness and purchase decision within e-commerce live streaming. This is consistent with the findings of Van Steenburg and Naderi (2020), Lv et al. (2022), and Zhang (2023), who reported that time pressure within online fields significantly influences consumers' purchasing behavior. Although product attractiveness has been extensively examined in traditional and online retail contexts, this study situates it within the live streaming environment, highlighting how real-time urgency can significantly alter its influence on consumer behavior. By accounting for the temporal and interactive characteristics of digital shopping, the findings offer a more nuanced understanding of how aesthetic appeal operates under time-constrained conditions. To leverage this effect, e-commerce platforms and sellers are encouraged to combine visually appealing products with time-sensitive promotions, such as flash sales or countdown deals, thereby amplifying their persuasive impact. For products with strong visual or emotional appeal, strategically implementing limited-time campaigns can be particularly effective, as these items tend to benefit more from the interaction between attractiveness and urgency compared to purely utilitarian or function-driven products.

CONCLUSION

In the ever-changing world of e-commerce live streaming, this study clarifies the intricate interactions between environmental and psychological elements that influence consumer purchase decisions. Through the integration of source credibility theory and perceived value theory, it confirms that purchase behavior is driven by both product attractiveness, which is defined by visual and utilitarian appeal, and host credibility, which includes trustworthiness, expertise, and social appeal. Notably, under critical circumstances, time pressure becomes an invaluable moderator that increases the impact of both attractiveness and credibility. The premise of fully rational decision-making in digital commerce is challenged by these findings, which show that when presented with limited-time offers or countdown promotions, live streaming viewers depend more heavily on heuristic cues and impulsive reactions.

LIMITATIONS AND FUTURE RESEARCH

There are still limitations. Cross-cultural validations are necessary because the study focuses on Chinese markets. Future studies should examine how time-sensitive behaviors are mitigated or exacerbated by interactive elements like chatbots and live polls, longitudinal effects, or emotional drivers. This work increases knowledge of consumer psychology in hyper-real-time scenarios and prepares industry actors to handle the changing needs of digital customers by revealing the complex dynamics of live streaming business.

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