

Literature Review on Browsing and Impulse Buying Behavior in Live-Streaming Market

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Abstract

Live-streaming is the new way for people to leisure and kill time. In the past few years, online shopping has become popular and widely accepted by consumers. Prior to making a purchase decision, consumers prefer to check online shopping platforms due to the convenient logistics and various promotional activities. The objective of this paper is to investigate the relationship between impulse buying behaviour and browsing behaviour on live streaming platforms by reviewing existing literature, which aims to analyse the factors that influence impulse buying behaviour and examine how live streaming platforms employ different strategies to impact consumers' purchasing decisions, with a particular focus on impulse buying. This paper conducted a systematic review and analysis of relevant literature, encompassing empirical studies on consumer behaviour on live streaming platforms, theoretical discussions, and research on online impulse buying behaviour. The study found that impulse buying behaviour on live streaming platforms is influenced by a variety of factors that significantly enhance the likelihood of impulse purchases by boosting consumers' sense of participation and trust. Additionally, consumers' browsing behaviour exhibits certain patterns, such as a preference for live streams featuring celebrities and a higher engagement in live streams that include interactive sessions. This study not only provides a deeper understanding of consumer purchasing behaviour on live streaming platforms but also offers a theoretical foundation for e-commerce platforms to develop effective marketing strategies.

Keywords: Impulse Buying, Online Shopping, Live-Streaming, Browsing, E-Commerce

Introduction

Livestreaming, an interactive and dynamic method of delivering online content, has emerged as a prominent and influential medium within the digital landscape. It facilitates the real-time transmission of audio and video content over the internet, providing users with the ability to witness events, engage with creators, and participate in diverse unfolding activities. Livestreaming has transcended its initial association with gaming, evolving into a versatile platform utilized across various domains (Smith et al., 2013). One of its salient features is

immediacy, allowing viewers to access content as it unfolds, fostering a sense of connection and shared experiences (Li et al., 2020).

Moreover, livestreaming's appeal extends beyond passive observation, as audiences actively interact with content creators through live chats, comments, and interactive features (Fei et al., 2021). This bidirectional communication enriches the viewer's experience, creating a virtual space where individuals from diverse locations can come together in real-time. In recent years, livestreaming has permeated sectors beyond entertainment, finding applications in education, business, and social interactions. It has become integral to virtual classrooms, product launches, live Q&A sessions, and cultural events, continually redefining how people consume and interact with digital content (Lu et al., 2018).

The integration of commerce into livestreaming, often referred to as "shoppable livestreams," has revolutionized consumer engagement with products and brands. This seamless convergence of e-commerce and content creation allows viewers the opportunity to make purchases directly while watching a livestream (Xu et al., 2020). As livestreaming continues to shape the digital landscape, its multifaceted nature presents an intriguing subject for academic inquiry. A comprehensive exploration of livestreaming involves understanding its socio-cultural impact, the dynamics of audience engagement, and its evolving role in various domains (Wongkitrungrueng et al., 2019).

According to recent statistics, total number of users of Twitch.tv, the most popular gaming livestreaming platform, with only active gaming viewer reached 2.2 million per month, only until 2018. The live streaming industry in China has experienced remarkable growth, boasting an impressive audience of over 200 million viewers, tuning in nightly across more than 200 live streaming platforms. This surge in popularity has transformed the sector into a substantial market, estimated to be worth a staggering 5 billion dollars in 2017. The sheer scale of participation and the multitude of available platforms underscore the widespread appeal and dynamic nature of live streaming in China, solidifying its position as a major player in the digital entertainment landscape. (Lu et al., 2018). As of 2021, the live streaming market in China boasted a staggering 638 million users, showcasing an impressive surge of 47.2% compared to the user count recorded in 2020. This substantial increase underscores the remarkable growth and escalating popularity of live streaming platforms, a trend particularly accentuated by the global COVID-19 pandemic and the subsequent enforcement of lockdown policies. The surge in live streaming viewership not only reflects an evolving consumer behaviour but also signifies a paradigm shift in online sales models (Zheng et al., 2022). Until 2022, livestreaming commerce sales in China alone surpassed \$514 billion, experiencing a growth rate of 19% and constituting over 17% of the national retail total (Li et al., 2023). This substantial market size underscores the significant impact of livestreaming in the business domain. Globally, there is an increasing acceptance of livestreaming across various sectors, including entertainment, education, and product showcases. This growing acceptance highlights the expanding influence of livestreaming on a global scale, making it a pivotal aspect of contemporary digital experiences also in live-streaming platform are providing more than selling but play games or paid art performance to attract users and encourage the purchase.

Impulse buying has been treated as one of the important behaviours that consumer will behave. Impulse buying, considered as a well-established topic in the consumer psychology, it was found out to be the combination of conative, visceral, and cognitive factors (Karim et al., 2021). In comparison to planned purchases, involves unplanned and spontaneous activities with less deliberation and limited comparison with alternative options, driven by self-oriented decisions (Li and Guo, 2021). Impulse buying was divided into four types: pure impulse buying, reminder impulse buying, suggestive impulse buying, and planned impulse buying (Liang et al., 2020; Mandolfo and Lamberti, 2021). In recent years, online impulse buying has gained attention, with studies comparing offline and online contexts (Hussain et al., 2021; Yang et al., 2021). Online shopping, including livestreaming commerce, becomes very popular within the decade, consumer can talk to the host immediately, see the product illustration clearly. Also livestreaming platforms, such as Taobao Live and TikTok Live, offer a unique environment for sellers to get to know the product and provide a better interface, to create a positive psychological atmosphere and increase the purchasing intention (Gong et al., 2020). The most effective factor that drives the impulse buying under the background of livestreaming is the high interactivity and rich-sensory stimuli, due to the different and new way of selling product online, as of the end of December 2020, China had 617 million live streaming users, constituting 62.4% of the total Internet users. Among them, users engaged in live streaming commerce amounted to 388 million, making up 39.2% of the total Internet users. The projected market size for China's live streaming commerce in 2021 is \$305 billion, representing over 15% of e-commerce sales in China for that year and anticipated to exceed 20% by 2022. Based on the data above, the celebrity endorsement in livestreaming is an important part for the marketer, research is focusing on "influencer" on the livestreaming platform, which means the host of the livestreaming are not celebrity but ordinary people but with a large number of followers, which are most discussed in the social media marketing (Vrontis et al., 2021; Campbell and Farrell, 2020). Nonetheless, there is a scarcity of research on the real celebrity as the host of livestreaming. This study focused on the celebrity as a live streamer will help the consumer to purchase impulsively during the livestreaming, which revealed a research gap.

Literature Review

Repeated Exposure

During the research, the exposure is more often associated with the advertising, the exposure means the consumer reach the advertisement in any ways, for example, the same product shows more than once to the consumer in different stages to make the consumer familiar to the product (Simon et al., 2018; Tang et al., 2022). Popular marketing theory shows the consistent and unique positioning are the important step of making a strong successful brand (Becker et al., 2022). Report shows that the advertising exposure can lead to different using behaviour and attitude toward the product (Zheng et al., 2021). Nowadays, the marketers are using the exposure through several ways for example social media and streaming sites (Nordheim et al., 2022).

In the context of livestreaming and short video platform, repeated exposure means the advertising that shows to the many times to the users, this kind of repeat advertising can influence the purchase decisions (Sahuguet, 2011).

The favourite data can make the APP or the platform record the consumers' preference and continues track the using behaviour to save and optimize the "recommendation list" for the consumer (Liu et al., 2020). In the online shopping platform, there is a recommendation agent which help the consumer browse and select the product, and this kind of system can engage the customer to purchase, also reduce the consideration size then make the better quality of decision (Hallikainen et al., 2022; Nilashi et al., 2021). Recommendation agent refers to "software agent that elicit the interest or preferences of individual users for products, either explicitly or implicitly, and make recommendation accordingly" (Xiao & Benbasat, 2007, p.13). The recommendation agent should collect the user browsing habit first and learn the user preference based on the data then give the accurate recommendation (Zhu et al., 2014). In some ways. The recommendation system can also help sellers enhance the customer loyalty (Hallikainen et al., 2022). Nowadays, recommendation agents have been widely used in the e-commerce context (Zhu et al., 2014). In the livestreaming and short video platform, the recommendation system is a user-level filtering service made for videos and livestreaming so that the platform can improve the accuracy for the video commendation by collecting the user behaviour information and the user similarity (Zhu et al., 2019; Almeida et al., 2022).

Portability

Nowadays the m-commerce is replacing the traditional online shopping because that the increased use of mobile device and the mobile commerce offers a comfortable and brand-new shopping experience, the organizations take advantage of the mobile service to enhance the service quality. Meanwhile, the improvement in many aspects such as wireless Internet and technology which boost the transformation of people lifestyle (Chang et al., 2018). So many companies are making mobile APP for the portable device to interact with consumer, they embraced and prioritized mobile APPs than desktop platforms so that the "mobile-ready" environment are gradually taken over by "mobile-first" environment (Pelet and Taieb, 2022; Ashraf et al., 2021). With the wildly use of mobile phone all over the world, the commercial activity on the mobile device has increased sharply, the mobile phone can access the Internet easily and effectively and users can buy, sell and do the payment on the portable device (Kao and L'Huillier, 2022).

The rise of the m-commerce is mainly supported by the characteristic of portability (Zheng et al., 2019). Studies showed that the feature improvement based on the technology have the effect on the consumers' cognition, affect, and behaviour (Yang et al., 2021; Okazaki and Mendez, 2013). The portability has been viewed as the most important reason for consumers to choose the m-commerce as the shopping channel (Kim et al., 2010; Zheng et al., 2019). Research shows that consumers are paying more attention to the information delivered by the portable device than they receive the information through traditional media channel (Ashraf et al., 2021). "Portability" stands for the consumers can shop anywhere when they want to make the purchase so that they can fulfil their shopping need instantaneously, portability has been seen as an intrinsic characteristic that improve the satisfaction of using a portable device (Yang et al., 2021; Okazaki and Mendez, 2013). The portability and access immediately provide the convenience to the consumers so that the portability has been identified as an obvious benefit of the m-commerce (Ashraf et al., 2021). Also, in the background of mobile learning, the portability of the mobile device brings the convenience of get material, practice and collect data any time they want which is a good way to promote the learning results (Chang et al., 2018). There is another benefit that the portability can

provide is the service quality, the service quality is defined as the difference between what the consumers are looking forward and the service they received in practice. The organizations existed and interested in creating value and provide the excellent experience to their consumers and service quality can be measured only by the service perceived by customers and it was viewed as the predecessor of the satisfaction (Liu and Chen, 2022).

Browsing

Bloch and Richins (1983) classically defined browsing as “the in-store examination of a retailer’s merchandise for informational and/or recreational purposes without an immediate intent to buy”. But in the context of e-commerce, if the consumers want to acquire the information online, the first stage is browsing the website. Browsing is a different activity with shopping (Zheng et al., 2019; Soopramanien & Robertson, 2006). Online browsing is defined as the process consumer searching for the information and make the decision through the Internet (Park et al., 2012; Zheng et al., 2019). Browsing online is the timesaving and effective way to make the product selection process easier and cheerful with less effort and the cost of browsing is much lower than offline (Leong et al., 2017; Soopramanien & Robertson, 2006; Park et al., 2012). On the other hand, shopping online has flaws which is the consumers cannot try-on or touch the product, therefore, browsing is an important step to select the product and helps the online shopping process (Park et al., 2012; Hong, 2015).

Because of the improvement of the online shopping, browsing is widely researched by the scholars (Zheng et al., 2019; Leong et al., 2017; Tan and Wei., 2006). Zheng et al., (2019) found out that the website design and the visual appeal affects the browsing behaviour, a website with good quality and ease of use, can bring the entertainment to the consumers and make the shopping more effective by eliminate the information asymmetry. The purpose of browsing can be divided into two types called “browsing to obtain information” and “browsing for reaction”, the scholars defined them as utilitarian browsing and hedonic browsing (Zheng et al., 2019). Meanwhile, the dimension of utilitarian and hedonic are ubiquitous in any form of buying behaviour and it affects people on doing the certain behaviours. (Setyani et al., 2019; Zheng et al., 2019). Utilitarian browsing is the browsing behaviour that obtain the product or information with the heuristics, goal-oriented behaviours, risk reduction strategies, and the goals of searching the information while hedonic browsing focus on the process of the shopping no matter the purchase happen or not, the pleasure and entertainment is the important aspect in the whole shopping process. (Park et al., 2012; Zheng et al., 2019).

Research found out that the utilitarian and hedonic can affect the shopping decision and behaviour (Zheng et al., 2019). Hedonic browsing has the positive influence on the impulse buying behaviour of the consumer, because it focuses on the fun and pleasure in the process of shopping, the shopping decision can be influenced by the emotional feeling (Zheng et al., 2019; Setyani et al., 2019). However, the consumer who will do the utilitarian browsing is focusing on finding the content that they look for (Sharma et al., 2010) but the characteristic of the impulse buying is when consumer purchase impulsively, they make the purchase decision spontaneously (Li et al., 2020; Marion et al., 2020; Liang et al., 2020; Zafar et al., 2019). So based on the research, utilitarian browsing has no significant influence on the impulse buying behaviours. Because consumer will go through the content first and make the purchase decision following (Zheng et al., 2019).

In livestreaming commerce, the streamer can demonstrate the product vividly in a visual way to allure and retain the consumer (Fei et al., 2020). Nowadays the livestreaming platform are trying to increase the using time and browsing time by various ways (Zhou et al., 2018; Bai et al., 2021). For example, during the COVID-19 pandemic crisis, the lock-down make people are only allowed to go outside for essential work or buy daily needed item, so people have more time stay at home and spend time on the internet. In this background, Suning.com seized this opportunity as a breakthrough to earn more customers in the online streaming service, they operate the livestreaming 12 hours non-stop to increase the browsing time of the majority livestreaming service users so that the website can attract more new customers, which means the browsing time can lead to a bigger customer base (Wang et al., 2020).

Online Impulse Buying Behaviour

Impulse buying, in contrast to planned buying, is characterized by unplanned, spontaneous purchasing with minimal deliberation, limited comparison of alternatives, and decisions driven primarily by self-interest (Li et al., 2021; Marion et al., 2020; Liang et al., 2020; Zafar et al., 2019). According to the classical definition by Stern (1962), impulse buying is described as “any purchase which a shopper makes but has not planned in advance” (p.59). Stern's study further categorizes impulse buying into four distinct types: pure impulse buying, reminder impulse buying, suggestive impulse buying, and planned impulse buying (Stern, 1962). As outlined in Table 1, numerous researchers have provided in-depth insights into these four types. Pure impulse buying involves consumers making a completely new purchase decision on the spur of the moment (Lee et al., 2010; Bossuyt et al., 2016; Stern, 1962). Reminder impulse buying occurs when consumers notice a specific product in-store, which prompts them to recall their low stock at home or a related advertisement (Liao et al., 2009; Katakam et al., 2020; Stern, 1962). Suggestive impulse buying arises when consumers realize a need for a product upon seeing a recommendation (Zafar et al., 2020; Wu et al., 2015; Stern, 1962). Lastly, planned impulse buying takes place when consumers, despite having a shopping list, are prepared for spontaneous purchases influenced by discounts and promotional activities (Chan et al., 2016; Stern, 1962).

In the realm of online shopping, all four types of impulse buying are prevalent. This is due to the higher likelihood of impulse buying occurring in the online context (Danish Habib & Qayyum, 2018; Kimiagari & Malafe, 2021). Consumers often spend more time browsing rather than purchasing when using digital shopping applications (Zheng et al., 2019; Melovic et al., 2021). The extended browsing increases the chances of encountering stimuli on web pages or mobile applications, which can lead to pure and reminder impulse buying (Huang, 2015; Leong et al., 2017). Recommendation impulse buying is facilitated by the recommendation systems of shopping websites, which suggest products and services based on browsing history and preferences (Kwon & Chung, 2010; Yoon et al., 2012). Finally, online shopping platforms frequently offer various promotional activities, such as Alibaba's “Double Eleven” sales event on November 11th, which encourages planned impulse buying through significant promotions (Zhang et al., 2020; Lo et al., 2016). Shopping carts also allow consumers to prepare shopping lists and wait for promotional events (Close & Kukar-Kinney, 2009).

Due to its complex nature, impulse buying has been a subject of fascination for researchers (Kimiagari & Malafe, 2021; Liu et al., 2013; Zhang et al., 2020). The three key features of impulse buying include: 1) the unplanned nature of the purchase, 2) consumer exposure to

external or internal stimuli, and 3) decisions made “on the spot” (Liu et al., 2013). Unplanned purchases occur when consumers, influenced by external stimuli, make spontaneous decisions upon entering a store. Impulsiveness is a human trait that varies from person to person (Sohn and Ko, 2020; Kato and Hoshino, 2020). Previous studies have shown that store discounts increase the likelihood of unplanned purchases (Sohn & Ko, 2020; Bandyopadhyay et al., 2021). For instance, online stores use casino-like games to distribute coupons, encouraging consumers to make unplanned purchases, similar to how casino customers tend to spend their winnings in nearby luxury stores (Kim & Tanford, 2021). Some researchers emphasize that impulse buying is often triggered by external factors such as environmental cues, sounds, smells, and the display location of products (Liang et al., 2020; Chan et al., 2016; Ronan et al., 2009). Positive in-store experiences can enhance customer moods and encourage impulse buying (Lee and Kim, 2012; Kimiagari & Malafe, 2021). For example, playing French music in a French wine store has been shown to boost sales (Liu et al., 2013). High consumer density can also prompt indecisive shoppers to make impulsive decisions (Liang et al., 2020; Ferreira et al., 2017). Other studies suggest that impulse buying is more of an emotional decision rather than a rational one, driven by internal factors such as pleasure and arousal (Ronan et al., 2009; Djafarova & Bowes, 2020). Some consumers enjoy the process of shopping and make purchase decisions based on that enjoyment, which can be amplified by mobile app usage that prompts satisfaction and impulse buying behavior (Do et al., 2020). The final characteristic of impulse buying is that it occurs “on the spot” because it does not follow the regular sequence of buying and happens swiftly and without hesitation (Kimiagari & Malafe, 2021). Kim (2003) noted that impulse buying often starts with unplanned browsing, with stimuli triggering the urge to make an impulsive purchase decision on the spot.

While impulse buying has been extensively studied by scholars in recent years, some studies have continued to explore it in the context of online shopping (Kimiagari & Malafe, 2021; Chan et al., 2016). The advancement of technology and evolving consumer needs have allowed online shopping to grow significantly, driven by improvements in information technology and logistics (Kimiagari & Malafe, 2020). Online impulse buying is defined as unexpected and direct online purchase behavior without prior shopping intention (Chan et al., 2016; Vonkeman et al., 2017). Recent research indicates that impulse buying occurs more frequently in online environments, including shopping websites and social media platforms (Kimiagari & Malafe, 2021). Comparing offline and online impulse buying, similar factors include: 1) uncontrollable impulsive buying, 2) less control over buying behavior, and 3) continuous impulsive buying regardless of consequences (Zheng et al., 2019; Wu et al., 2020). However, online impulse buying typically involves consumers with spontaneous behaviors and less control over online store stimuli (Wu et al., 2020). Several factors enhance the likelihood of online impulse buying: online stores are open 24 hours a day (Zheng et al., 2019), online shopping removes many constraints found in physical stores (Chan et al., 2016; Wu et al., 2020), and better website quality, clear advertisements, and promotions provide a superior shopping experience (Vonkeman et al., 2017; Zheng et al., 2019).

Research Methodology

The literature review is a systematic method that involves selecting a specific topic, summarizing the current research status based on prior studies, and reviewing a large amount of reference information (Snyder, 2019). This process includes analysing the information and writing academic papers to reflect the latest progress and academic opinions on significant

topics within a particular field (Denney and Tewksbury, 2013). This study specifically focuses on papers and journals published in English between 2000 and 2020, available in the ScienceDirect Journal database. The reason for this period of time is from 2000 to 2020, the rapid development of Internet technology and e-commerce platforms has significantly transformed live streaming platforms and associated consumer behaviours. During this period, technological advancements such as high-bandwidth Internet and the widespread adoption of smartphones have made live streaming a feasible and popular shopping method. Papers from this era can effectively capture the influence of these technological advancements on consumer behaviour. Simultaneously, consumer behaviour patterns and shopping habits have undergone significant changes. Early e-commerce primarily centred around traditional online shopping. However, in later years, particularly with the advent of social media and live streaming platforms, consumer behaviour has evolved to become more complex and diverse. After 2000, the development and application of relevant technologies have led to an increase in empirical studies, resulting in a substantial amount of valuable data. Selecting literature from this period allows for better access to and utilization of this data.

The ScienceDirect Journal database, managed by Elsevier—the world’s largest publisher—offers access to over 1,500 full-text journals, with publications available since 1995. which offers extensive coverage and includes a vast number of publishers, making it a premier source for indexing scientific articles and providing access to an extensive range of papers from around the world (Tripathy et al., 2024). “Impulse buying behaviour”, “online shopping”, “live-streaming platform” these keywords were used for searching articles. The review processes are shown in Table 1. Considering the rigor of the methodology analysis, Literature that merely mentioned relevant keywords without providing sufficient details or a clear connection to the research topic was excluded. Such articles may lack the necessary information to offer substantive support for the research; Articles with weak research methods, insufficient data, or ambiguous conclusions were excluded. Such articles may not provide reliable information and could compromise the accuracy of the research. Also, Book chapter and case study are excluded because books have a lengthy publishing cycle, meaning the information in their chapters may be outdated by the time of publication and may not reflect the latest research advancements and technological changes, the limited length of book chapters often restricts them from providing detailed research processes and comprehensive data analysis, thereby limiting the potential for in-depth analysis. Likewise, case studies often concentrate on specific situations or events and may not be generalizable to different contexts or environments, thereby limiting the applicability of their conclusions.

Table 1

Literature Review Process

Steps		
Determine problem	research	Specify the search terms and the area of research
Article search		Use the database to search with the keywords “Impulse buying behaviour”, “online shopping”, and “live-streaming platform”.
Exclusion		Book chapter and case study are excluded.
Inclusion		Ensure that the articles include the keywords “Impulse buying behaviour,” “online shopping,” and “live-streaming platform” in their titles, abstracts, and backgrounds, and that these keywords are also integral to the theoretical framework proposed by the authors.

Results and Discussions*Repeated Exposure*

Under the background of livestreaming in the short video platform, the short video is recommended based on the user preference with an entrance button on the profile of the video maker, the figure is an example on short video platform “tik tok” which viewed as the biggest short video platform with a large amount of user base in China, while using the Tik Tok app, the APP will recommend the video based on the user preference without any operation, users can scroll down the screen to switch to another video recommended, and on the right side of the user interface, there is a circle with the profile picture of the video maker, and when the video maker are livestreaming, the profile picture will have a sparkling pink circle with is the entrance button, in this situation, if the users are interested in the context of the short video, then there are more chance the user can click on the entrance button and browse the livestreaming.

On platforms like TikTok, the integration of short video content with live streaming features highlights a crucial driver of user engagement and impulse buying behaviour. Convenient access, personalized recommendations, and an immersive live streaming environment collectively create a setting conducive to impulsive interactions and purchases. By leveraging these insights, companies can refine their marketing strategies to foster a more engaging and profitable live streaming market.

Portability

For the traditional service quality, the consumers evaluate the service quality based on the three primary dimensions: (1) interaction service quality, (2) physical quality, and (3) outcome quality (Kaatz, 2020). The social interaction can influence the consumer before they purchase by reducing the perceived risk and let the consumer make the better purchase decision, offline interactions can provide more reliable information to the consumer by the face-to-face method (Kim et al., 2019; Ramirez & Wang, 2008). As for the physical quality, it always stands for the physical environment among the consumers and the tangible factors of the

offline store. Chatzoglou et al. (2022) found out that all physical and tangible factors in the offline store can affect the consumers' decision-making process and effect the consumers' emotion during the shopping process. Moreover, the outcome quality is combination of the shopper satisfaction, patronage intentions and positive WOM, these are helping the consumer to evaluate the store better (Elmashhara & Soares, 2022). These three dimensions works together to make sure the consumers get the good service quality in the traditional shopping channel.

With all that, the portable provides advantage of convenience and better service quality which make consumers to use the portable way of purchasing and watching and buy the product during watching the livestreaming. Portable purchasing methods, such as buying products and watching live-streaming through mobile phones, offer significant convenience and higher service quality. These methods allow consumers to make instant purchases while engaging with live-streaming. The convenience of portable purchasing significantly reduces consumers' time and effort, improves the overall user experience, and enhances the immediacy and impulsiveness of their purchasing behaviour. Moreover, through interactive and shopping experiences on live streaming platforms, consumers can quickly achieve satisfaction, establish intentions to return, and generate positive word-of-mouth. The immediate shopping experience and interactive feedback help consumers form a favourable evaluation of both the platform and the merchants.

Browsing

Browsing is a way for consumers to access the product and service information on the online shopping platform they need (Park et al., 2011; Zheng et al., 2019). For example, while consumers are browsing Tik Tok or some other livestreaming platform apps, consumers are receiving information and attention from both endogenous and exogenous (Fei et al., 2020). Endogenous attention which means the attention need to attend voluntarily and put in effort to get the stimuli, it is goal-driven, and susceptible to distraction (Wagovich et al., 2020; Fei et al., 2020), whereas Exogenous attention is the involuntary attention attracted by the abruptly stimuli, it is automatic, stimulus-driven and resistant to the distraction (Fei et al., 2020; Meyer et al., 2018).

Under the background of livestreaming commerce, the streamers are showing the product function and attribute in real time, this is the necessary part of the livestreaming that can fit the goal of viewers to stay in the livestreaming room and make the purchase decision so that the browsing attention of the streamer and the product is the endogenous attention (Fei et al., 2020). The exogenous attention in the livestreaming e-commerce is the herding message which shows how many people are purchasing now and the chat box or "Danmaku" which include the interaction of the viewers, and the feedback message shared from consumers who have used the product (Fei et al., 2020; Li et al., 2021; Zhou et al., 2018).

During the live-streaming, the streamer provides a detailed showcase of the product, capturing the audience's intrinsic attention, which makes them focus more on the product's characteristics, enhances trust, and boosts their willingness to buy. Additionally, by leveraging the "herd effect" and engaging with the audience, the external attention is stimulated, intensifying the activity and interaction in the live-streaming room. This creates an engaging shopping atmosphere and further stimulates impulse buying behaviour.

Online Impulse Buying Behaviour

Recent studies have categorized impulse buying into three distinct types: offline store shopping, shopping on websites, and purchasing through social media platforms (Kimiagari & Malafe, 2021). As online shopping gains traction among consumers, a novel form of buying has emerged—livestreaming commerce on social media platforms (Fei et al., 2020). Livestreaming involves streamers sharing video and audio content online with viewers in real-time (Li & Guo, 2021; Gros et al., 2017). Those who only watch streams are called viewers, whereas individuals who both watch and create streams are known as streamers (Gros et al., 2017). Originally, streamers were primarily video gamers who shared recorded gameplay highlights on video-sharing platforms before transitioning to live broadcasts of their gameplay, engaging with viewers and other gamers as they played (Li & Guo, 2021). In recent years, consumers have shown a keen interest in shopping on livestreaming platforms like Taobao Live, TikTok Live, and Weibo Live (Li et al., 2021; Kang et al., 2020). Compared to standard e-commerce sites such as Taobao, livestreaming commerce offers real-time social interaction, allowing viewers to obtain immediate product information directly from the streamer and other viewers through chat (Cai & Wohn, 2019). The live product demonstrations provided by streamers offer instant visual feedback, creating an experience where viewers feel as though they are shopping alongside the streamer rather than just watching a screen (Wang & Wu, 2019).

Today, a large number of sellers are utilizing social networks and e-commerce platforms like Facebook, TikTok, and Taobao, which have successively introduced live video streaming capabilities (Wongkitrungrueng & Assarut, 2020; Fei et al., 2020). One major drawback of online shopping is that consumers cannot see or examine products until they arrive, and there is a lack of in-person interaction (Hong, 2015; Kim et al., 2017). However, on livestreaming platforms, sellers can showcase products and their functions in real time, making the selection process more transparent. Feedback from other viewers in the chat can also provide valuable recommendations (Chen et al., 2019). Due to the low barriers to entry, an increasing number of individuals are transitioning from regular users to streamers, selling products through livestreams (Chen et al., 2019). Moreover, shopping on these platforms is advantageous due to their ease of use, allowing viewers to make purchase decisions while watching livestreams from any location, often at little or no cost (Li et al., 2020; Singh et al., 2020; Zheng et al., 2019). Additionally, livestreaming platforms often feature a reward system where streamers can earn profits through gifts given by viewers (Zhou et al., 2018). Viewers can reward streamers in two ways: by sending virtual gifts or simply by spending time watching the livestream, as time is a valuable resource that supports the streamer (Gros et al., 2017). The more time viewers spend in a livestream chat room, the more they are exposed to information and promotional activities from the streamer and other viewers (Zhou et al., 2018). When viewers encounter impulse stimuli such as price reductions, it can trigger a spontaneous urge to purchase impulsively (Bandyopadhyay et al., 2021).

These studies underscore the importance of understanding browsing and impulse purchase behaviours in the live-streaming market. Live shopping, characterized by real-time interaction, instant feedback, and low barriers to entry, has created a highly interactive and convenient shopping environment. This enhances consumers' sense of participation and trust, thereby encouraging impulse purchases. Enterprises can leverage these insights to optimize their live-

streaming content and marketing strategies, improving user experience, boosting sales conversion rates, and gain a competitive advantage in the marketplace.

Conclusions

This paper reviews the factors that promote impulse buying in the contexts of offline shopping, online shopping, and the emerging domain of live-streaming shopping. It highlights the diverse and dynamic nature of the triggers for impulse buying, which can vary significantly among people from different backgrounds. However, the role of celebrities on live-streaming platforms is often overlooked. Individuals who desire more interaction and connection with celebrities are more likely to make impulsive purchases. For future research, examining the impact of celebrity endorsements on impulse buying could provide valuable insights. Platforms can leverage this by enhancing celebrity engagement to attract more viewers and capture a larger market share in the competitive landscape of live-streaming services.

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