



# Analysis of the Influence of Perceived Enjoyment and Perceived Usefulness on Impulse Buying in Live Streaming on Online Marketplaces

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## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

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## **ABSTRACT**

Impulsive buying behavior in the digital age is rapidly evolving with the emergence of live streaming technology on e-commerce platforms. This technology enables direct real-time interaction between sellers and buyers, often triggering spontaneous purchases. Live streaming features offer an engaging shopping experience by allowing consumers to view product demonstrations and interact directly, supporting impulsive buying behavior. This study analyzes the roles of perceived enjoyment and perceived usefulness influence variables between visual appeal and social presence in influencing impulsive purchases during live streaming sessions on Shopee. Using a quantitative method, data was collected from 241 respondents through a questionnaire and analyzed using Structural Equation Modeling (SEM). The results indicate that live streaming strengthens social

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interaction and visual appeal, enhancing perceived enjoyment and perceived usefulness, which in turn increases the tendency for impulsive buying. This research provides insights for marketers to design effective e-commerce strategies to capitalize on the phenomenon of impulsive buying through interactive and visually appealing live streaming technology, optimizing user experience and sales conversions.

*Keywords: E-commerce; impulsive buying; live streaming; perceived enjoyment; perceived usefulness.*

## 1. INTRODUCTION

The rapid digital transformation has profoundly impacted retail, making e-commerce the primary choice for many consumers, as the availability of the internet and mobile devices has introduced unprecedented convenience to shopping. Innovations such as personalized algorithms and artificial intelligence have revolutionized consumer interactions with products and services, creating new dynamics in purchasing decisions. Notably, these technological advancements have significantly facilitated impulsive buying behaviors, allowing consumers to view, select, and purchase products instantly, often without prior planning. Such features as tailored product recommendations, limited-time offers, and attractive promotions frequently trigger spontaneous and unplanned purchases, thus reinforcing the phenomenon of impulsive buying in the digital era (Wu et al., 2021; Vannisa et al., 2020).

Research indicates that consumer characteristics and specific platform features significantly influence their desire to seek information, watch, and participate in e-commerce activities, especially through live streaming (Abdelsalam et al., 2020 ; Ang et al., 2018). A strong social presence in live streaming sessions has been shown to have a powerful direct effect on impulsive purchase decisions (Li et al., 2022). The interplay of enjoyment and stimulation provided by live streaming content features and interactions with the host affect both cognitive and affective responses of the audience, contributing to impulsive buying (Lo et al., 2022).

Moreover, live streaming commerce integrates streaming technology into online marketplaces, allowing real-time interaction between sellers and buyers, which benefits both by providing deeper product insights and facilitating immediate queries and transactions (Zhu & Vijayan, 2023; Xu et al., 2020). The availability of technology and targeted promotion policies have

also increased impulsive purchases, with a strong social presence enhancing consumer trust and engagement. Understanding the dynamics of impulsive buying is crucial for vendors and e-commerce platforms to use live streaming, flash promotions, and special offers to increase impulsive purchases effectively.

## 2. LITERATURE REVIEW

### 2.1 Visual Appeal

Visual appeal significantly shapes consumer behavior and enhances user experience across digital platforms. Rooted in Uses and Gratifications Theory, visual aesthetics satisfy users' aesthetic and sensory needs by offering not just decorative elements but also fulfilling intrinsic desires that enhance engagement and interaction (Katz et al., 1973). Research indicates that visually appealing designs can reduce cognitive load and make information processing (Hasim & Ishak, 2020); Zhang et al., 2023). Additionally, visual aesthetics influence perceptions of product quality and can affect consumer decisions, particularly in online platforms where the presentation can enhance perceived taste and quality (Califano & Spence, 2024); Prawiro, 2023). Furthermore, in digital environments like e-retailing and e-sports, attractive visuals increase user satisfaction and promote platform loyalty (Wilis & Manik, 2022). In advertising, well-designed visuals play a crucial role in attracting consumer attention and shaping positive brand perceptions, ultimately impacting brand loyalty and engagement (Ramish et al., 2023). This review underscores the importance of integrating sophisticated visual design in digital marketing strategies to optimize consumer interaction and satisfaction.

### 2.2 Social Presence

Social presence significantly enhances the digital user experience and purchasing behavior in e-

commerce by bridging the gap between virtual and face-to-face interactions, thus fostering deeper connections and increasing consumer satisfaction and loyalty (Zhu et al., 2020); Liu et al., 2020; Cummings & Wertz, 2023). As posited by Uses and Gratifications Theory, social presence meets users' needs for engagement and connection (Katz et al., 1973), and technologies like live streaming intensify this presence, improving communication, strengthening relationships, and occasionally triggering impulsive purchases due to enriched social interactions (Ming et al., 2021). By integrating these technologies into e-commerce platforms, companies can enhance shopping experiences, boost consumer trust, and foster long-term relationships, highlighting the importance of human-centric design in digital commerce environments (Andika et al., 2023; Wang et al., 2021). This strategic implementation of social presence not only improves interaction quality but also significantly influences the overall effectiveness of e-commerce strategies.

### **2.3 Perceived Enjoyment**

Perceived enjoyment plays a pivotal role in consumer behavior and digital interactions, significantly influencing decision-making and purchasing tendencies. Rooted in Hedonic Shopping Motivation theory, perceived enjoyment represents the subjective pleasure consumers derive from engaging with technologies and applications, profoundly affecting their loyalty and likelihood of impulsive purchases (Hirschman & Holbrook, 1982). This concept highlights how pleasurable experiences, whether through visual, auditory, or tactile interactions, enhance the attractiveness of e-commerce platforms and mobile apps, prompting users to make spontaneous purchases (Do et al., 2020; Hasim & Ishak, 2020). Research demonstrates that perceived enjoyment not only encourages the adoption of financial technologies, such as e-wallets, but also directly impacts buying behaviors, with consumers more likely to make unplanned purchases when they find the user experience enjoyable (Yong Lee et al., 2021; Lee et al., 2022). Additionally, in educational contexts like MOOCs, perceived enjoyment can significantly boost student engagement and commitment, underscoring its importance beyond commercial applications to include educational platforms (Imlawi, 2018). Enhancing perceived enjoyment through engaging digital experiences can therefore lead

to increased user satisfaction and loyalty, influencing both adoption rates and commercial success.

### **2.4 Perceived Usefulness**

Perceived usefulness is a critical factor that significantly impacts consumer purchasing decisions in digital environments, as highlighted by the Technology Acceptance Model (TAM) developed by Fred Davis in 1989. This concept emphasizes how the effectiveness of a platform in providing relevant and easily accessible information enhances user satisfaction, which in turn boosts purchasing intentions. Research shows that in e-commerce and live streaming platforms, perceived usefulness can directly influence consumer behavior, fostering trust and impulsive buying by enhancing the quality and accessibility of information provided during the shopping experience (Ye et al., 2019; Zuo & Xiao, 2021). Furthermore, studies by Andika et al. (2023) and Lee et al. (2022) demonstrate that high-quality information delivery during live streaming sessions significantly increases perceived usefulness, thereby encouraging impulsive purchases by making the interaction more engaging and informative. This underscores the importance of integrating high-quality, accessible information into digital platforms to leverage perceived usefulness, enhancing consumer trust and purchasing behavior effectively.

### **2.5 Impulsive Buying**

Impulsive buying is a phenomenon influenced by the interplay between consumer psychology, technological integration, and marketing strategies, especially prevalent in digital environments. Grounded in Impulse Buying Theory, this behavior is often triggered by interactive elements that instantaneously stimulate consumer responses. Research indicates that features such as attractive interfaces and streamlined transaction processes, facilitated by technologies like augmented reality and mobile payment systems, enhance impulsive buying tendencies by reducing psychological and physical barriers (Do et al., 2020; Lee et al., 2022). Additionally, emotional engagement during the shopping experience, enriched by interactive online environments such as live streaming, also influences impulsive purchases (Ming et al., 2021). Effective digital marketing strategies exploit these dynamics by delivering

personalized ads and targeted online marketing tactics to provoke impulsive responses. These findings underscore the importance of compelling digital platform design and effective marketing strategies in fostering impulsive buying.

### 3. HYPOTHESIS

#### 3.1 Visual Appeal and Perceived Enjoyment

Research by Lee et al. (2022), Tee et al. (2023), Yong Lee et al. (2021), Zhang et al. (2020), and Sihombing et al. (2020) consistently shows that visual appeal has a significant impact on perceived enjoyment. From financial apps to interactive platforms, attractive visual design enhances user engagement, strengthens positive emotional responses, and encourages impulsive purchases. These findings indicate that rich visual elements not only enhance aesthetics but also bolster user satisfaction and enjoyment, playing a crucial role in enhancing the overall digital experience. This writing states that visual appeal has a significant positive influence on perceived enjoyment.

**Hypothesis 1 (H<sub>1</sub>):** Visual appeal has a positive influence on perceived enjoyment.

#### 3.2 Visual Appeal and Perceived Usefulness

Research by Tee et al. (2023), Chen et al. (2020), Cuong (2023), Lee et al. (2021), and Feng and Zhao (2024) has consistently shown that visual appeal influences perceived usefulness across various digital platforms such as e-commerce and mobile commerce. These studies have found that enhancing visual appeal increases the effectiveness of platforms in presenting attractive and comprehensible product information, speeding up the purchasing process and enhancing user engagement. These findings underscore that attractive visuals not only enrich aesthetics but also strengthen the practical benefits of platforms, facilitating user navigation, and supporting efficient purchasing behaviors. This writing states that visual appeal has a significant positive influence on perceived usefulness.

**Hypothesis 2 (H<sub>2</sub>):** Visual appeal has a positive influence on perceived usefulness.

#### 3.3 Social Presence and Perceived Enjoyment

Research by Liu et al. (2020), Wang and Lee (2020), Ye et al. (2019), Liu (2023), and Huang et al. (2024) has consistently shown that social presence influences perceived enjoyment across various digital interactions such as live streaming, online gaming, and e-commerce shopping. These studies have found that enhancing social presence increases the quality of user interactions, deepening engagement and satisfaction. These findings underscore that a strong sense of interpersonal interaction not only enriches the user experience but also strengthens the emotional connection to the platform, facilitating deeper engagement and potentially influencing purchasing decisions. This writing states that social presence has a significant positive influence on perceived enjoyment.

**Hypothesis 3 (H<sub>3</sub>):** Social presence has a positive influence on perceived enjoyment

#### 3.4 Social Presence and Perceived Usefulness

Research by Ye et al. (2019), Zuo and Xiao (2021), Chang et al. (2021), Andika et al. (2023), and Walter et al. (2019) has consistently shown that social presence influences perceived usefulness across various digital environments such as accommodations, shopping, sports viewing, and feedback platforms. These studies have found that enhancing social presence increases the effectiveness of platforms in providing relevant information and facilitating ease of use, thereby enhancing user engagement and effectiveness in achieving their goals. These findings underscore that a robust social presence not only enriches the user experience but also strengthens the practical benefits of platforms, fostering deeper user connections and supporting more effective and satisfying interactions. This writing states that social presence has a significant positive influence on perceived usefulness.

**Hypothesis 4 (H<sub>4</sub>):** Social presence has a positive influence on perceived usefulness.

#### 3.5 Perceived Enjoyment and Impulsive Buying

Research by Do et al. (2020), Hasim and Ishak (2020), Yong Lee et al. (2021), Lee et al. (2022),

and Zhang et al. (2020) has consistently shown that perceived enjoyment influences impulsive buying across various digital contexts such as augmented reality in tourism, online shopping, and e-wallet usage. These studies have found that enhancing perceived enjoyment increases the likelihood of impulsive purchases by creating engaging user experiences that evoke positive emotions and greater user involvement. These findings underscore that enjoyable interactions not only enrich the user experience but also strengthen the practical benefits of platforms, facilitating impulsive buying behaviors and supporting more dynamic consumer engagement. This writing states that perceived enjoyment has a significant positive influence on impulsive buying.

**Hypothesis 5 (H<sub>5</sub>):** Perceived enjoyment has a positive influence on impulsive buying.

### 3.6 Perceived Usefulness and Impulsive Buying

Research by Lu et al. (2021), Lee et al. (2021), Lee (2018), Wang and Chapa (2022), and Cuong (2023) has consistently shown that perceived usefulness influences impulsive buying across various digital platforms such as e-commerce and mobile commerce. These studies have found that enhancing perceived usefulness increases the effectiveness of platforms in presenting relevant and easily accessible information, speeding up the purchasing process and enhancing user engagement. These findings underscore that practical utility not only enriches the shopping experience but also strengthens the practical benefits of platforms, facilitating user navigation, and supporting efficient purchasing behaviors. This writing states that perceived usefulness has a significant positive influence on impulsive buying.

**Hypothesis 6 (H<sub>6</sub>):** Perceived usefulness has a positive influence on impulsive buying.

## 4. METHODS

This research was conducted from June to October 2024 across various locations in Indonesia, specifically targeting users of the Shopee e-commerce platform. A structured survey methodology was employed to collect primary data from active users who participate in

live streaming sessions on Shopee. These sessions enhance user interactivity and potential for impulsive purchases. Questionnaires were distributed using Microsoft Forms and were designed to gather detailed information on factors such as visual appeal, social presence, perceived enjoyment, perceived usefulness, and impulsive buying tendencies. This method ensures precise data collection and analysis of how these factors influence online purchasing behavior.

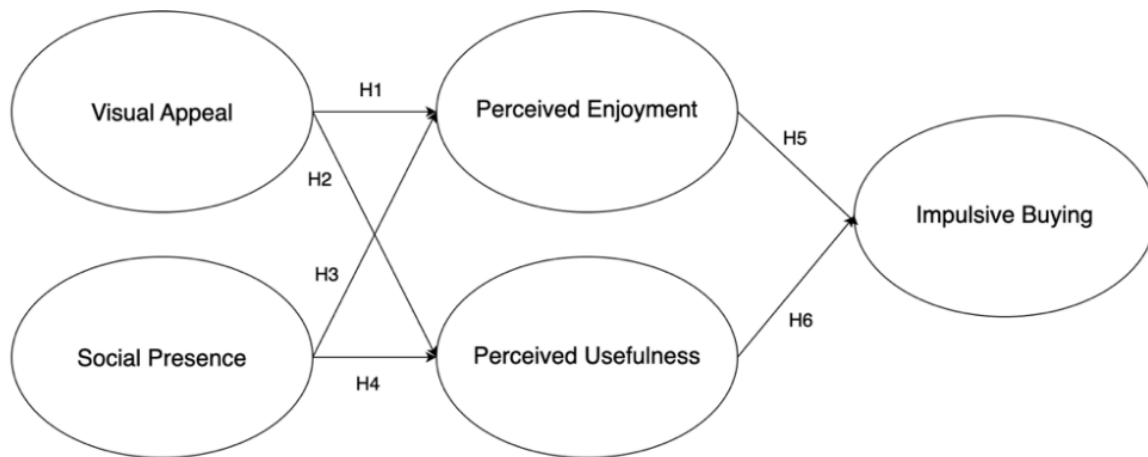
### 4.1 Design Study

The study is designed within a quantitative framework to examine the causal relationships between the designated variables within an e-commerce context. It focuses on developing effective e-commerce strategies and evaluating their impact on fostering impulsive buying behaviors on platforms like Shopee. The comprehensive questionnaire design covers aspects such as demographic background, e-commerce usage experience, and perceptions of factors influencing impulsive purchase decisions, enabling a detailed analysis of consumer behavior in the digital marketplace.

### 4.2 Data Analysis

In this study, data analysis follows a systematic approach to ensure accuracy and reliability of findings. Initially, validity of the data is confirmed using Exploratory Factor Analysis (EFA) to ensure survey items accurately measure the intended constructs. Subsequently, reliability is assessed through Cronbach's Alpha with a threshold of 0.60 to ascertain internal consistency of the scales. After establishing validity and reliability,

Confirmatory Factor Analysis (CFA) is conducted to further validate the factor structures and evaluate model fit. The analysis proceeds with Structural Equation Modeling (SEM), performed using SPSS 27 and AMOS 29 software, to examine the causal relationships among variables. This sequence allows for the analysis of direct, indirect, and mediating effects between independent, intervening, and dependent variables, ensuring a comprehensive understanding of the dynamics influencing impulsive buying behavior in e-commerce settings.



**Fig. 1. Theoretical Framework**

**Description:**

- H1: Visual appeal has a positive and significant impact on perceived enjoyment.
- H2: Visual appeal has a positive and significant impact on perceived usefulness.
- H3: Social presence has a positive and significant impact on perceived enjoyment.
- H4: Social presence has a positive and significant impact on perceived usefulness.
- H5: Perceived enjoyment has a positive and significant impact on impulsive buying.
- H6: Perceived usefulness has a positive and significant impact on impulsive buying.

**5. RESULTS**

Based on the results of collecting online questionnaires from 241 respondents, the following data was found.

**Table 1. Respondent and demographic profile**

	<b>Frequency</b>	<b>Total</b>	<b>Percentage</b>
Gender	Female	145	60%
	Male	96	40%
Age	17-20	21	9%
	21-25	104	43%
	26-30	60	25%
	31-35	38	16%
	36-40	12	5%
	>40	21	9%
	Last Education	< High School	4
High School		79	33%
Diploma		35	15%
Bachelor's Degree		105	44%
Master's Degree		18	7%
Employment Status	Unemployed	66	27%
	Employed	132	55%
	Owns Business	43	18%
Marital Status	Single	134	55,6%
	Married	98	40,7%
	Separated/Divorced	8	3,3%
	Widowed	1	0,4%

After collecting the responses. the researcher will conduct validity and reliability tests. The following are the results.

**Table 2. Validity and reliability test result**

Indicator	Result	Explantion	Reliability (Cronbach's Alpha)
VA4 I like the overall layout of the live streaming room through Shopee.	0.822	Valid	0.860
VA5 I am impressed by the way the streamers introduce products during live streaming through Shopee.	0.816	Valid	
VA2 The way the streamers introduce the products is very attractive during live streaming through Shopee.	0.799	Valid	
VA1 Streamers make a clear presentation of the products for sale during live streaming through Shopee.	0.788	Valid	
VA3 The visual appearance of the live streaming room through Shopee is very satisfying.	0.781	Valid	
SP5 While watching live streaming through Shopee, I can feel a sense of enthusiasm.	0.800	Valid	0.838
SP3 I can feel the product information shared by other viewers in the live streaming through Shopee.	0.798	Valid	
SP2 I can sense the presence of other viewers during the live streaming session through Shopee.	0.787	Valid	
SP1 I am aware of other viewers in the live streaming through Shopee who are interested in the product.	0.770	Valid	
SP4 I can feel that other viewers in the live streaming through Shopee have bought the product.	0.741	Valid	
PE1 Shopping through live streaming on Shopee is very exciting.	0.807	Valid	0.831
PE4 Shopping through live streaming on Shopee stimulates my curiosity.	0.777	Valid	
PE5 Shopping through live streaming on Shopee leads me to continuously search and discover new things.	0.773	Valid	
PE3 I find shopping via live streaming on Shopee a good way to relieve boredom.	0.763	Valid	
PE2 Shopping through live streaming on Shopee is very enjoyable.	0.742	Valid	
PU3 The prices of products during live streaming on Shopee are affordable, making me feel I am getting good value for money.	0.805	Valid	0.837
PU2 I can always rely on the accuracy and reliability of the information provided during live streaming on Shopee.	0.800	Valid	
PU5 Using live streaming on Shopee, I become more productive in shopping because I can quickly find and buy what I need without wasting time.	0.783	Valid	
PU1 Using live streaming on Shopee, I can quickly find and buy the items I want.	0.780	Valid	
PU4 I often find that the products offered during the live streaming session on Shopee are truly useful and meet my needs.	0.721	Valid	
IB5 I end up spending more money than planned when shopping through live streaming on Shopee.	0.799	Valid	0.831
IB2 When watching live streaming on Shopee, I sometimes find it hard to suppress the strong desire to buy products.	0.790	Valid	
IB3 When participating in live streaming on Shopee, I sometimes feel the urge to buy items that do not align with my original shopping goals.	0.776	Valid	
IB4 I frequently experience sudden urges to buy something while shopping through live streaming on Shopee.	0.760	Valid	
IB1 While watching a live streaming shopping session on Shopee, I often buy items impulsively without thinking first.	0.737	Valid	

Table 2 presents the outcomes of the validity test for each indicator. According to the results displayed in the table, all indicators for each variable are considered valid as they possess loading factor values greater than 0.05. The reliability test is considered satisfactory if it achieves a Cronbach's alpha > 0.60. According to the results shown in, all four variables exceed this threshold, confirming their reliability.

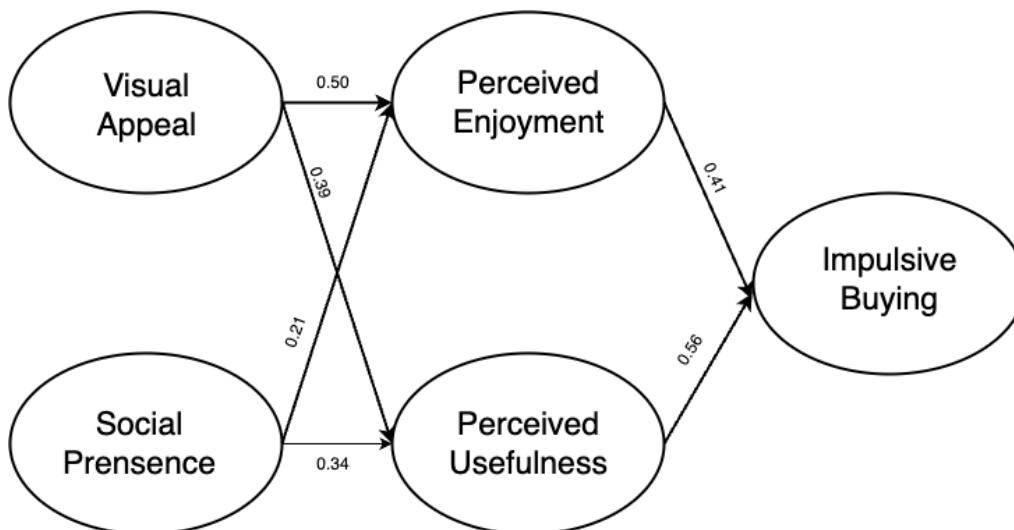
Based on the evaluation of the goodness of fit indices presented, the model demonstrates a robust fit to the data. The Probability index shows a value of 0.172, well above the acceptable threshold of 0.05, indicating a good fit. The CMIN/DF ratio is recorded at 1.099, comfortably under the critical value of 2, suggesting a satisfactory model fit. The GFI and AGFI values, at 0.928 and 0.907 respectively, exceed the minimum criterion of 0.90, affirming the model's adequacy. Additionally, the CFI and IFI both report a high value of 0.992, with the TLI (NNFI)

close behind at 0.990, all surpassing the required 0.90 threshold, which underscores the structural integrity of the model. The RMSEA value stands impressively low at 0.020, significantly beneath the upper limit of 0.08, reinforcing the model's fit. Collectively, these metrics confirm the model's validity, making it an excellent representation of the underlying data structure, thereby supporting the hypotheses tested in this study.

Following the completion of the Structural Equation Modeling (SEM) process using AMOS to test the hypotheses, the data obtained is presented in the table below, illustrating the relationships and path coefficients between the various variables as indicated in the model. This detailed table provides a clear breakdown of the impacts and associations that have been statistically analyzed to assess the validity of the proposed hypotheses within the research framework.

**Table 3. Recapitulation of goodness of fit index analysis results**

Goodness of fit index	Value	Cut off Value	Decision Criteria
Probability	0.172	> 0.05	Good Fit
CMIN/DF	1.099	< 2	Good Fit
GFI	0.928	≥ 0.90	Good Fit
AGFI	0.907	≥ 0.90	Good Fit
CFI	0.992	≥ 0.90	Good Fit
TLI atau NNFI	0.990	≥ 0.90	Good Fit
NFI	0.915	≥ 0.90	Good Fit
IFI	0.992	≥ 0.90	Good Fit
RMSEA	0.020	≤ 0.08	Good Fit



**Fig. 2. Research model hypotheses tested**



**Table 4. Recapitulation of hypotheses tested**

<b>Hypothesis</b>	<b>Variabel</b>	<b>Estimate</b>	<b>S.E.</b>	<b>C.R.</b>	<b>P</b>	<b>Label</b>
H <sub>1</sub>	<i>Visual Appeal → Perceived Enjoyment</i>	0.496	0.092	5.417	***	Accepted
H <sub>2</sub>	<i>Visual Appeal → Perceived Usefulness</i>	0.385	0.077	4.984	***	Accepted
H <sub>3</sub>	<i>Social Presence → Perceived Enjoyment</i>	0.207	0.082	2.522	0.012	Accepted
H <sub>4</sub>	<i>Social Presence → Perceived Usefulness</i>	0.339	0.077	4.407	***	Accepted
H <sub>5</sub>	<i>Perceived Enjoyment → Impulsive buying</i>	0.412	0.114	3.616	***	Accepted
H <sub>6</sub>	<i>Perceived Usefulness → Impulsive buying</i>	0.561	0.116	4.844	***	Accepted

The hypothesis testing was conducted using the AMOS version 29.0 software. The results of this testing are presented in the AMOS 29.0 output, specifically in the critical ratio (CR) column. If the critical ratio (CR) exceeds 1.96, it indicates that the hypothesis has a statistically significant effect. The significance of a hypothesis can also be assessed based on its probability value. A hypothesis is considered statistically significant if its P-value is less than 0.05, and considered not significant if it is greater.

## 6. DISCUSSION

The results of hypothesis testing using structural equation modeling with AMOS 29 provided robust statistical support for the significant influence of key visual and social factors on consumer behavior in digital environments. The testing revealed that Visual Appeal significantly impacts Perceived Enjoyment (Estimate = 0.496, C.R. = 5.417,  $p < 0.001$ ) and Perceived Usefulness (Estimate = 0.385, C.R. = 4.984,  $p < 0.001$ ), suggesting that aesthetically pleasing interfaces enhance both the enjoyment and utility perceived by users. This underscores the critical role of design in digital platforms, where visual stimuli directly affect user satisfaction and perceived functionality of the platform.

In a similar vein, Social Presence was shown to positively affect Perceived Enjoyment (Estimate = 0.207, C.R. = 2.522,  $p = 0.012$ ) and Perceived Usefulness (Estimate = 0.339, C.R. = 4.407,  $p < 0.001$ ), reinforcing the idea that social interactions within digital platforms can substantially enrich the user experience and contribute to perceived value. Further, the link between Perceived Enjoyment and Impulsive Buying (Estimate = 0.412, C.R. = 3.616,  $p < 0.001$ ), as well as between Perceived Usefulness and Impulsive Buying (Estimate = 0.561, C.R. = 4.844,  $p < 0.001$ ), indicates a strong predictive relationship where positive user experiences and utility perceptions drive spontaneous purchase decisions. These findings highlight the importance of integrating engaging visual and interactive elements to foster an environment that encourages both immediate satisfaction and enhanced utility, ultimately driving purchasing behavior on digital platforms.

## 7. CONCLUSION

From the research and discussions within the study "Analysis of the Influence of Perceived Enjoyment and Perceived Usefulness on Impulse

Buying in Live Streaming on Online Marketplaces," the following conclusions can be deduced:

The influence of visual appeal and social presence on e-commerce platforms reveals substantial impacts on user perceptions of enjoyment and usefulness, as well as on impulsive buying behaviors. Research indicates that visual appeal significantly enhances perceived enjoyment with a Critical Ratio (C.R.) of 5.417, indicating that attractive visual aesthetics greatly enhance user enjoyment, aligning with Lee et al. (2022) who noted that such appeal is an indicator of an enriched user experience and positive emotional response towards technology. Additionally, visual appeal also affects perceived usefulness significantly (C.R. of 4.984), suggesting that aesthetically pleasing designs are not only enjoyable but also more useful, as posited by Tee et al. (2023) for social media platforms.

Social presence also plays a critical role, showing a notable though slightly weaker positive influence on perceived enjoyment (C.R. of 2.522), underscoring that social interactions and personal elements can enrich the shopping experience, as supported by Liu (2023). Moreover, social presence significantly strengthens perceived usefulness (C.R. of 4.407), enhancing the platform's utilitarian value through community support and interaction, which Zuo and Xiao (2021) argue enhances platform effectiveness in providing relevant information and facilitating use.

Furthermore, perceived enjoyment positively influences impulsive buying (C.R. of 3.616), affirming that enjoyment can decrease psychological barriers and increase the likelihood of impulsive purchases, with positive emotions acting as triggers for spontaneous buying decisions, a phenomenon supported by Yong Lee et al. (2021). Finally, perceived usefulness also significantly promotes impulsive buying (C.R. of 4.844), illustrating that beyond emotional responses, the rational assessment of the platform's utility influences spontaneous purchasing decisions. This suggests that improvements in a platform's utility functions are crucial in driving impulsive purchases, as noted by Lee et al. (2021). These findings highlight the intertwined roles of aesthetic, emotional, and functional elements in shaping consumer behavior on e-commerce platforms.

## 8. IMPLICATION

Based on the research results that have been conducted, several aspects requiring improvement and subsequent action steps that need to be implemented have been identified. The details of these are as follows:

### 8.1 Theoretical

To enhance understanding of user behavior on digital platforms, conducting detailed qualitative research is highly recommended. This approach aims to identify key indicators that impact the dynamics between social presence, perceived usefulness, perceived enjoyment, and impulse buying on these platforms. By adopting an in-depth methodology, the study will explore the intricate ways social interactions influence users' perceived usefulness and satisfaction levels. Such research is crucial as it would provide insights into the direct and indirect effects of social dynamics on consumer behavior in digital environments.

Future studies should therefore consider incorporating a broad set of variables into a comprehensive analytical framework. This would allow researchers to develop better strategies aimed at enhancing user engagement and overall satisfaction on digital platforms. The incorporation of additional relevant variables is anticipated to provide a deeper understanding and yield more comprehensive results, revealing nuanced aspects that influence the phenomena under study. Expanding the scope of research in this way will offer a broader and more detailed perspective on user interactions and their effects on platform utility and enjoyment.

### 8.2 Practical

From a practical standpoint, it is essential for digital platforms to innovate continuously by enhancing interactive features within their live streaming services. Introducing options such as polling, live chat, and real-time reactions can significantly improve user engagement. These features foster an environment of authentic social interaction, making the user experience more dynamic and enjoyable. By enabling users to interact in real-time, platforms can create a more immersive and interactive experience that resonates with the audience.

Additionally, the quality of streaming content must be a primary focus. High-quality, engaging,

and informative content presented in a professional manner is crucial in shaping user perceptions of a platform's utility and value. Content that is well-curated and skillfully delivered can attract more users and keep them engaged for longer periods. Platforms that succeed in delivering content that meets these standards are likely to see enhanced user satisfaction and loyalty. Ensuring content quality not only supports the perceived usefulness of the platform but also enhances the overall user experience, encouraging continued and deeper engagement with the platform.

## 9. LIMITATION

One of the main limitations of this study is the use of data self-reported by respondents, which can lead to biases such as the respondents' desire to appear favorable or memory errors, potentially affecting the accuracy of the results. Additionally, the research method used only collects data at a specific point in time, making it difficult to determine whether certain features of the platform actually lead to increased user satisfaction or engagement. Future research would benefit from using a longitudinal method, which observes changes in user behavior over time, to gain a better understanding of the impact of digital platform features on user behavior. Another limitation is that this study focuses only on a specific user group, which may not reflect all users of other platforms, so the results may not be applicable to all types of users. To overcome these limitations, future research should involve a broader variety of participants and use techniques that can reduce reporting errors from respondents.

### DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of this manuscript.

### CONSENT

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

### COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

- Abdelsalam, S., Salim, N., Alias, R. A., & Husain, O. (2020). Understanding Online Impulse Buying Behavior in Social Commerce: A Systematic Literature Review. *IEEE Access*, 8, 89041–89058. Available: <https://doi.org/10.1109/ACCESS.2020.2993671>
- Andika, Anisah, T. N., Najmudin, M., & Sardi, A. E. (2023). From Interaction to Transaction: Analyzing the Influence of Social Presence on Impulsive Purchasing in Live Streaming Commerce. *Jurnal Manajemen Teori Dan Terapan| Journal of Theory and Applied Management*, 16(3), 454–472. Available: <https://doi.org/10.20473/jmtt.v16i3.49490>
- Ang, T., Wei, S., & Anaza, N. A. (2018). Livestreaming vs pre-recorded. *European Journal of Marketing*, 52(9/10), 2075–2104. Available: <https://doi.org/10.1108/EJM-09-2017-0576>
- Califano, G., & Spence, C. (2024). Assessing the visual appeal of real/AI-generated food images. *Food Quality and Preference*, 116. Available: <https://doi.org/10.1016/j.foodqual.2024.105149>
- Cummings, J. J., & Wertz, E. E. (2023). Capturing social presence: Concept explication through an empirical analysis of social presence measures. *Journal of Computer-Mediated Communication*, 28(1). Available: <https://doi.org/10.1093/jcmc/zmac027>
- Do, H. N., Shih, W., & Ha, Q. A. (2020). Effects of mobile augmented reality apps on impulse buying behavior: An investigation in the tourism field. *Heliyon*, 6(8). Available: <https://doi.org/10.1016/j.heliyon.2020.e04667>
- Hasim, M. A., & Ishak, M. F. (2020). Factors Influencing Gen-Y in Malaysia to Purchase Impulsively: A Mediating Effect of Perceived Enjoyment. [www.ijcc.net](http://www.ijcc.net)
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic Consumption: Emerging Concepts, Methods and Propositions. In *Source: Journal of Marketing*, Summer (Vol. 46, Issue 3).
- Imlawi, J. M. (2018). Social Presence Antecedents and Consequences in Massive Open Online Courses. *International Business Research*, 11(4), 32. Available: <https://doi.org/10.5539/ibr.v11n4.p32>
- Katz, E., Blumler, J. G., & Gurevitch, M. (1973). Uses and Gratifications Research. In *Source (Vol. 37, Issue 4). The Public Opinion Quarterly*, Winter.
- Lee, K.-C., Chang, I.-H., Wu, T.-J., & Chen, R.-S. (2022). The Moderating Role of Perceived Interactivity in the Relationship between Online Customer Experience and Behavioral Intentions to Use Parenting Apps for Taiwanese Preschool Parents. *SAGE Open*, 12(1), 215824402210821. Available: <https://doi.org/10.1177/21582440221082136>
- Lee, Y. Y., Gan, C. L., & Liew, T. W. (2022). The Impacts of Mobile Wallet App Characteristics on Online Impulse Buying: A Moderated Mediation Model. *Human Behavior and Emerging Technologies*, 2022. Available: <https://doi.org/10.1155/2022/2767735>
- Li, M., Wang, Q., & Cao, Y. (2022). Understanding Consumer Online Impulse Buying in Live Streaming E-Commerce: A Stimulus-Organism-Response Framework. *International Journal of Environmental Research and Public Health*, 19(7), 4378. Available: <https://doi.org/10.3390/ijerph19074378>
- Liu, Z., Yang, J., & Ling, L. (2020). Exploring the influence of live streaming in mobile commerce on adoption intention from a social presence perspective. *International Journal of Mobile Human Computer Interaction*, 12(2), 53–71. Available: <https://doi.org/10.4018/IJMHCI.2020040104>
- Lo, P.-S., Dwivedi, Y. K., Wei-Han Tan, G., Ooi, K.-B., Cheng-Xi Aw, E., & Metri, B. (2022). Why do consumers buy impulsively during live streaming? A deep learning-based dual-stage SEM-ANN analysis. *Journal of Business Research*, 147, 325–337. Available: <https://doi.org/10.1016/j.jbusres.2022.04.013>
- Ming, J., Jianqiu, Z., Bilal, M., Akram, U., & Fan, M. (2021). How social presence influences impulse buying behavior in live streaming commerce? The role of S-O-R theory. *International Journal of Web Information Systems*, 17(4), 300–320.

- Available:<https://doi.org/10.1108/IJWIS-02-2021-0012>
- Prawiro, J. S. (2023). Impact Of Visual Appeal And Portability Towards Online Purchase Intention Of Online Mobile Game Content In Indonesia. In Indonesian Interdisciplinary Journal of Sharia Economics (IJSE) (Vol. 6, Issue 2).
- Ramish, M. S., Zia, M. Q., Saraih, U. N., Suanda, J., & Ansari, J. (2023). Does Visual Appeal Moderates The Impact Of Attitude Towards Advertising On Brand Attitude, Attachment And Loyalty? *Revista Brasileira de Marketing*, 22(3), 1250–1275. Available:<https://doi.org/10.5585/remark.v22i3.22160>
- Vannisa, D., Fansuri, A., & Ambon, I. M. (2020). The effect of flash sale program on shopping enjoyment and impulse buying on flash sale on C2C E-commerce. *International Journal of Scientific and Technology Research*, 9(4), 2534– 2539.
- Wang, H., Ding, J., Akram, U., Yue, X., & Chen, Y. (2021). An empirical study on the impact of e-commerce live features on consumers' purchase intention: From the perspective of flow experience and social presence. *Information (Switzerland)*, 12(8). Available:<https://doi.org/10.3390/info12080324>
- Wilis, N., & Manik, L. P. (2022). The Effect of Visual Appeal, Social Interaction, Enjoyment, And Competition on Mobile Esports Acceptance By Urban Citizens. *Interdisciplinary Journal of Information, Knowledge, and Management*, 17, 601–624. Available:<https://doi.org/10.28945/5045>
- Wu, Y., Xin, L., Li, D., Yu, J., & Guo, J. (2021). How does scarcity promotion lead to impulse purchase in the online market? A field experiment. *Information & Management*, 58(1), 103283. Available:<https://doi.org/10.1016/j.im.2020.103283>
- Xu, X., Wu, J.-H., & Li, Q. (2020). What Drives Consumer Shopping Behavior In Live Streaming Commerce?
- Ye, S., Ying, T., Zhou, L., & Wang, T. (2019). Enhancing customer trust in peer-to-peer accommodation: A “soft” strategy via social presence. *International Journal of Hospitality Management*, 79, 1–10. Available:<https://doi.org/10.1016/j.ijhm.2018.11.017>
- Yong Lee, Y., Lay Gan, C., & Wei Liew, T. (2021). Impulse Buying's Antecedents and Consequences: Malaysian E-wallet Users Perceptions. *ACM International Conference Proceeding Series*, 45–50. Available:<https://doi.org/10.1145/3507485.3507493>
- Zhang, W., Leng, X., & Liu, S. (2023). Research on mobile impulse purchase intention in the perspective of system users during COVID-19. Available:<https://doi.org/10.1007/s00779-020-01460-w/Published>
- Zhu, L., Li, H., Wang, F. K., He, W., & Tian, Z. (2020). How online reviews affect purchase intention: a new model based on the stimulus-organism-response (S-O-R) framework. *Aslib Journal of Information Management*, 72(4), 463–488. Available:<https://doi.org/10.1108/AJIM-11-2019-0308>
- Zhu, X., & Vijayan, S. K. (2023). Determinants of Consumer Impulse Purchase in Live Streaming Commerce in China: A Conceptual Analysis. *International Journal of Academic Research in Business and Social Sciences*, 13(1). Available:<https://doi.org/10.6007/IJARBS/v13-i1/16126>
- Zuo, R., & Xiao, J. (2021). Exploring Consumers' Impulse Buying Behavior in Live Streaming Shopping (pp. 610–622). Available:[https://doi.org/10.1007/978-3-030-79203-9\\_47](https://doi.org/10.1007/978-3-030-79203-9_47)

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