JRSSEM 2025, Vol. 05, No. 05,
E-ISSN: 2807 - 6311, P-ISSN: 2807 - 6494

The Effect of Live Streaming Shopping on Purchase Intentions of Electronic Goods Through E-Commerce

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Abstract. The rapid development of digital technology and social media has encouraged the increasing use of live streaming shopping features on e-commerce platforms in Indonesia. This phenomenon presents a new marketing communication pattern that allows direct interaction between streamers and consumers, especially in the category of electronic goods, which is the sector with the highest e-commerce transaction value. This study aims to analyze the influence of live streaming shopping on consumer purchase intentions using the Stimulus–Organism–Response (S-O-R) framework. The research was conducted by means of a survey method through the distribution of questionnaires to respondents who had witnessed live streaming shopping on e-commerce platforms in the past month and resided in the Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) area. The data were analyzed using PLS-SEM. The results showed that product quality, e-commerce promotion, customer trust, and impulsiveness have a significant influence on purchase intentions. In contrast, live streamer interaction had no significant effect on customer trust or impulsiveness, indicating that consumers of electronic goods prioritize functional aspects such as quality and promotion over interpersonal interactions with streamers. Additionally, impulsiveness emerged as the most dominant factor in increasing purchase intentions. These findings strengthen the relevance of S-O-R theory in the context of live streaming shopping while providing practical implications for e-commerce players to enhance credibility, information quality, promotional strategies, and impulsive trigger elements to encourage consumer purchase decisions.

Keywords: Digital technology, Live streaming shopping, S-O-R.

INTRODUCTION

The development of information technology has experienced a significant surge in the last few decades, and most internet platforms today are social media (Kane, 2017; Yamin, 2019). According to research (A. Widjaja et al., 2025), 78% of Indonesians know about shopping through live-streaming shopping, 71% of them have used it, and 56% of live-streaming shopping users have made purchases. Based on the results of a survey conducted by Susenas (National Socio-Economic Survey) in 2023, it shows that 69.21% of the Indonesian population uses the internet. This is evident from data produced by a global creative agency called We Are Social: active social media users have increased to around 5.04 billion (an increase of 5.6% or 266 million from 2023) worldwide, while in Indonesia there are 167 million active social media users. By 2024, the penetration of internet users in Indonesia reached 221.5 million individuals out of a total population of 278.6 million people (Febrianty et al., 2025). Thus, Indonesia has considerable potential in technological development.

The development of technology, the internet, and social media supports various activities, such as communicating with others, searching for information, shopping, watching entertainment, and conducting live video broadcasts known today as live streaming shopping through e-commerce (Adyantari et al., 2025). Based on the results of a survey conducted by BPS (Central Statistics Agency) in 2025, the value of e-commerce sales transactions during 2023 was 1,100.87 trillion rupiah, and 32.74% of the value of e-commerce transactions were sales made through e-commerce. According to the Information System Data Center of the

Ministry of Trade, in 2024, estimated e-commerce expenditure will be dominated by the electronic goods sector, worth 10.71 USD million.

Live streaming shopping in e-commerce has changed online sales, where streamers play an active role in introducing and displaying products to consumers in real-time, rather than consumers actively searching for the product (Hao & Huang, 2024). Live streaming shopping is a form of live streaming that is currently widely integrated in e-commerce applications (Adyantari et al., 2025). Research in China shows that the number of live streaming shopping users increased from 220 million in 2017 to 515 million in 2022, and the market size of live streaming shopping expanded from 196.4 billion Yuan to 3,500 billion Yuan (Hao & Huang, 2024). Between 2019 and 2021, the Alibaba platform generated 65 billion US dollars in gross merchandise value (GMV) (Rungruangjit, W., 2022).

The live streaming shopping format is considered effective because it allows for live demonstrations as well as two-way communication between streamers and viewers. Viewers can ask streamers about products, features, and discounts through live streaming shopping (Adyantari et al., 2025). Then, viewers take advantage of features such as shopping carts, fast payment methods, direct delivery, and consistent app displays as reasons for choosing live streaming shopping (Chandrruangphen et al., 2022).

Although shopping through live streaming shopping has emerged as one of the quick and easy purchasing methods for viewers, it has also quickly evolved into a marketing strategy that allows shopping in physical stores without viewers having to leave their homes (Zhang et al., 2023). Streamers must have the ability to explain the product to the audience to increase relationships and purchase intent (Chandrruangphen et al., 2022). However, the choice of streamers by sellers needs to be considered; in live streaming shopping, the compatibility of streamers and products has more effect on trust than attraction (Rungruangjit, W., 2022).

During live streaming shopping, e-commerce provides a relevant emotional and psychological experience for potential buyers, which makes it not just a means of transaction (Zhang E., 2024). When a streamer is considered to have in-depth knowledge of electronic products being demonstrated in live shopping and is considered honest in conveying electronic product information, it increases viewers' trust in live streaming shopping e-commerce and ultimately influences purchase intent (Chandrruangphen et al., 2022). In the study of Ni, S., & Ueichi, H. (2024), to increase purchase intention, companies need to pay attention to shopping experience strategies that delight consumers during live streaming. This study aims to find out what factors consumers consider in conducting online transactions on e-commerce platforms.

Thus, this study focuses on the relationship between live streaming interaction, product quality, e-commerce promotion, customer trust, and impulsiveness, which is interesting to explore further. This related relationship ultimately increases purchase intention because consumers feel confident in the product and the party who recommends it (Weismueller et al., 2020). The research method was conducted with the Stimulus-Organism-Response (SOR) framework to find out: (1) the influence of live streaming shopping in e-commerce on the intention to buy electronic goods, (2) the factors that affect the purchase intention of electronic goods in live streaming shopping, and (3) how these factors affect the purchase intention.

Based on the outlined background, this study specifically aims to examine and analyze the influence of live streaming shopping features on e-commerce platforms on consumer purchase intentions, particularly within the electronic goods category. This aim is further

detailed to investigate stimulus factors—such as streamer interaction, product quality, and e-commerce promotion—and how organism factors, namely consumer trust and impulsiveness, mediate the relationship leading to the response of purchase intention. By employing the Stimulus-Organism-Response (S-O-R) model, this research seeks to map the underlying influence mechanisms more comprehensively. The benefits of this study are expected to be twofold. Theoretically, the findings can enrich and test the validity of the S-O-R framework within the dynamic context of digital marketing, specifically the live streaming shopping phenomenon in Indonesia, while adding to the academic understanding of the determinants of purchase intention in the social commerce era. Practically, the results can serve as valuable insights for e-commerce players, streamers, and digital marketers to design more effective content, promotional, and interaction strategies. These strategies can help build trust, manage impulsiveness, and ultimately enhance the purchase interest of live streaming viewers.

MATERIALS AND METHOD

This study was conducted to test the influence of live streaming shopping marketing in e-commerce on the purchase intention of consumers of electronic goods in the Jakarta, Bogor, Depok, Tangerang and Bekasi areas. This study uses a quantitative approach by distributing an online questionnaire with a closed statement to consumers in the region who have watched live streaming shopping on e-commerce for a period of 1 month so that it affects purchase intention. According to A.Widjaja et al., in 2025 the statistics of live streaming shopping users of the Shopee e-commerce platform will be 83.4%, Tokopedia will be 30.4% and Lazada will be 20.5%. Then, according to (Adyantari et al 2025) the most used e-commerce platform Tiktok Shop with 125 million active users in February 2024. Therefore, this platform was chosen as a widely known online marketplace. This research is limited to electronic products, because according to the Information System Data Center of the Ministry of Trade, in 2024, the estimated e-commerce expenditure on consumer goods in Indonesia by the electronic goods sector worth 10.71 million USD is the highest when compared to the food and fashion sectors.

The number of samples to the measurement of population parameters according to (Gu.et al 2024) used 20 samples per 1 variable, taking into account the large population in China, then multiplied by 1.5, while the study conducted by A.Widjaja et al., 2025 used a 5:1 ratio based on the number of items on the questionnaire. So by considering 35 statements, 175 respondents are needed in this study, this number is larger than the study of Chandrruangphen et al (2022). with a minimum number of 10 times the construct so that the total is at least 60 respondents. However, before the questionnaire is disseminated, a pretest of 50 respondents will be carried out to test the validity and reliability of the research instrument.

The questionnaire was measured based on previous journal research on a scale of 1-5 Likeart (with 1= strongly disagree and 5= strongly agree). Stimulus Steamer Interaction factor statement questionnaire from the journals Xia et.al (2024) and Chandrruangphen et al., (2022). Product quality from the journals Meng et al (2023) and (Chandrruangphen et al., 2022). and e-commerce promotion from the journal Andyantari et al (2025). Statement of the questionnaire variables Consumer Trust Organism from the journal Widjaja et al (2025) and impulsiveness from the research journals Xueli Wang et al., (2022), Oktaviani & Keni, (2024) and Andyantari et al (2025). The statement of the response factor of the buying intention variable refers to the journals Xueli Wang et al (2022) and Chandrruangphen et al (2022).

This study uses PLS version 4.0 Structural Equation Modeling (SEM) to evaluate the suitability of the research model and test the validity of the hypothesis, because SEM is able to assess the significance of moderators and mediators simultaneously in a single equation. According to Hair et al. (2019), PLS-SEM is an approach in structural equation modeling that focuses on estimating relationships between latent constructs based on variance, with the goal of maximizing the model's predictive capabilities and developing existing theories. The approach is carried out for research with complex theoretical models, small sample sizes, or data that do not meet the assumption of normality, because it is able to produce stable, accurate, and high statistical estimates.

RESULTS AND DISCUSSION

Respondent Characteristics

Table 1. Respondent Profile

Demographic Conditions	Criterion Category	Sum
Age	16 years to 25 years old	35
	26 years to 35 years old	54
	36 years to 45 years old	77
	46 years to 55 years old	10
	Over 56 years old	3
Gender	Man	80
	Woman	99
Domicile Region	Jakarta	83
	Bogor (Regency/City)	21
	Depok	23
	Bekasi (Regency/City)	26
	Tangerang Raya	26
Final Education	High School/Vocational School	6
	Diploma (D1 s/d D3)	13
	Loss 1	137
	Masters and Postgraduate (S2/S3)	23
Work	Students and Colleges	3
	Civil Servant	7
	Private Employees	128
	Self employed	19
	Housewives	9
	Other	13
Frequency of Live Shopping Viewing	More than 1 time a month	111
	1 time in 1–3 months	49
	1 time in 4–6 months	19
Frequently Used Platforms	TikTok	70
	Shopee	93
	Tokopedia	15
	Loop	1

Source: Primary data processed, 2025

Filling was carried out by 237 respondents, then after screening data according to the criteria, as many as 179 respondents were analyzed for data. As per table 1, this study is dominated by women aged 36-45 years and domiciled in Jakarta, Bachelor of Strata 1

education, work as a private employee with a frequency of watching live streaming more than 1 time in 1 month.

Discriminating Validity Test

Data analysis in this study was carried out using the Partial Least Square – Structural Equation Modeling (PLS-SEM) method with the help of the SmartPLS application. The analysis stage begins with the evaluation process of the outer model to ensure that the indicators used are able to represent each construct. At this stage, convergent validity testing is performed, which aims to ascertain whether each indicator has a correlation with the constructed being measured. This test was carried out with a factor loading value of ≥ 0.708 and an Average Variance Extracted (AVE) of ≥ 0.5. Then, discriminant validity testing was carried out, to ensure that each construct in the model was completely different from each other and did not overlap was tested using a Heterotrait–Monotrait Ratio (HTMT) with a limit of ≤ 0.85 (Widjaja et al 2025). All of these criteria are used to see if the relationships between constructs remain within reasonable limits. If all of these criteria are met, then the constructs in the model can be declared valid and reliable, so that the analysis can be continued with internal model evaluation and hypothesis testing.

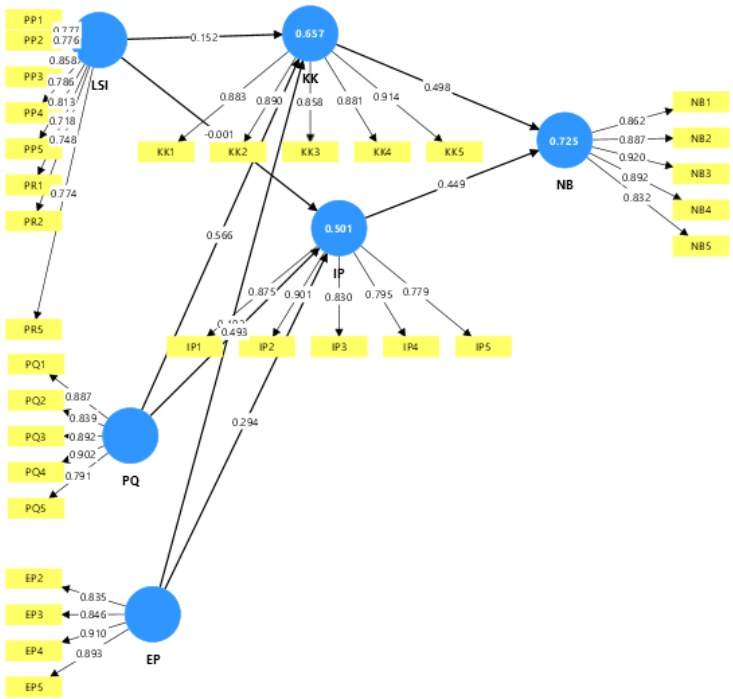

Figure 1. PLS-SEM Model

Source: Primary data processed, 2025

Description: LSI (Live Streamer Interaction (PP (Perceived Personalization, PR (Perceived Responsiveness), PQ (Product Quality), EP (E-commerce Promotion), KK (Consumer Trust), IP (Impulsiveness), NB (Purchase Intention).

Tabel 2. Convergent Validity and Reliability

Construct	Indicator	Mean	Factor Loading	AVE	Composite Reliability	Cronbach's Alpha

Live Streaming Interaction	PP1	3.989	0.777	0.612	0.926	0.910
	PP2	4.017	0.776			
	PP3	3.693	0.858			
	PP4	3.793	0.786			
	PP5	3.737	0.813			
	PR1	4.017	0.718			
	PR2	3.844	0.748			
	PR5	3.899	0.774			
Product Quality	PQ1	3.425	0.887	0.745	0.936	0.914
	PQ2	3.642	0.839			
	PQ3	3.648	0.892			
	PQ4	3.609	0.902			
	PQ5	3.860	0.791			
E-Commerce Promotion	EP2	3.966	0.835	0.760	0.927	0.894
	EP3	3.793	0.846			
	EP4	4.128	0.910			
	EP5	4.134	0.893			
Consumer Trust	KK1	3.810	0.883	0.784	0.948	0.931
	KK2	3.721	0.890			
	KK3	3.514	0.858			
	KK4	3.888	0.881			
	KK5	3.782	0.914			
Impulsiveness	IP1	3.156	0.875	0.701	0.921	0.893
	IP2	3.184	0.901			
	IP3	2.883	0.830			
	IP4	3.464	0.795			
	IP5	3.061	0.779			
Nat Beli	NB1	3.592	0.862	0.773	0.944	0.926
	NB2	3.570	0.887			
	NB3	3.425	0.920			
	NB4	3.536	0.892			
	NB5	3.810	0.832			

Source: Primary data processed, 2025

The results of the outer model test on each construct in this study show that the instrument used has met all criteria for convergent validity and reliability of the construct based on the recommendations by excluding 3 invalid indicators in the Live Streaming Interaction construct, namely PR 3 and PR4, then the E-commerce Promotion construct, namely EP1. First, the loading factor value of all indicators is in the range of 0.718 to 0.920. Second, the AVE value in each variable, namely Live Streaming Interaction (0.612), Product Quality (0.745), E-Commerce Promotion (0.760), Consumer Trust (0.784), Impulsiveness (0.701), and Purchase Intention (0.773) all have a value of ≥ 0.5. Third, the reliability aspect also showed strong results. The Composite Reliability (CR) value is in the range of 0.921 to 0.948, all variables have very high internal consistency and are reliable for use in model testing. The entire value of Cronbach's Alpha ≥ 0.7, with variable test results in the range of 0.893–0.931, indicating that the indicator has consistent measurement results. Overall, 32 test result indicators meet the requirements of adequate measurement quality, so that the entire construct is suitable for further analysis at the hypothesis testing stage in the structural model.

Tabel 3. Discriminant Validity

Variable	EP	IP	KK	LSI	NB	PQ
EP						
IP	0.641					
KK	0.679	0.668				
LSI	0.667	0.526	0.678			
NB	0.702	0.816	0.831	0.660		
PQ	0.656	0.735	0.842	0.700	0.775	

Source: Primary data processed, 2025

Based on the results in Table 3, the square root value of AVE for each test variable is proven to be higher than the correlation value between constructs in the same row and column. Each variable test does not intersect with the research carried out so that the research instrument is suitable for the analysis and hypothesis test stage.

Table 4. Hypothesis Test Results

Hypothesis	Path	Path Coefficients	t-value	P values	Conclusion
H1	EP -> IP	0.294	3.862	0.000	Significant
H2	EP -> KK	0.192	2.582	0.005	Significant
H3	IP -> NB	0.449	9.078	0.000	Significant
H4	KK -> NB	0.498	9.426	0.000	Significant
H5	LSI -> IP	-0.001	0.007	0.497	Insignificant
H6	LSI -> KK	0.152	1.946	0.026	Significant
H7	PQ -> IP	0.493	7.073	0.000	Significant
H8	PQ -> KK	0.566	8.969	0.000	Significant

Source: Primary data processed, 2025

Most hypothesis testing is significantly proven. EP has a significant positive effect on the IP and KK variables, showing that the higher the consumer expectations for the price offered, the greater the impulsive impulse and the higher the level of consumer confidence felt. IP and KK have a positive effect on NB, this shows that factors in the audience's personal life affect the response. Then, PQ has also been proven to have a significant effect on IP and KK, so that product quality affects in shaping impulsiveness and consumer trust. LSI has a significant positive effect on KK, but not significantly on IP. For this condition, interaction in live streaming is able to increase trust, but not strong enough to encourage impulsiveness.

If it is related to the purpose of the study, first to examine the effect of live streaming shopping on consumer purchase intentions, it is not confirmed in the form of a direct influence on purchase intention. Live streaming interactions increase trust which then drives purchase intent. Thus, live streaming shopping influences purchase intent through the mechanism of increasing consumer trust and audience impulsiveness. Second, other factors that affect the purchase intention of electronic goods, were also achieved, the stimulus factors of EP, PQ, and LSI affect IP and KK as organisms, and the response of purchase intent. Third, to find out how these variables affect buying intention. This can be seen through the relationship pattern, namely, EP and PQ form IP and KK, while LSI strengthens consumer trust and ultimately becomes a factor in the intention to buy electronic goods during the live shopping session.

CONCLUSION

The hypothesis test analysis revealed that e-commerce promotion (EP), product quality (PQ), customer trust (KK), and impulsiveness exert a strong significant influence on purchase intention (IP) during live streaming shopping sessions, with PQ and EP emerging as the primary stimuli driving audience behavior. In contrast, live streaming interaction (LSI) showed no significant direct effect on IP, indicating that streamer interactions alone are insufficient to trigger impulsiveness, though LSI significantly bolsters consumer trust. Among consumers in the Greater Jakarta area, functional factors like product quality and promotions outweigh streamer interactions, positioning live streaming primarily as a channel for delivering honest, clear product information alongside direct promotional benefits. For future research, scholars could explore contextual moderators such as streamer expertise or cultural differences across Indonesian regions to determine if LSI's role strengthens in niche markets or with high-value electronic goods.

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