The Influence of Live Streaming Shopping Collaboration Tokopedia and Tiktok in Creating E-Impulse Buying

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Abstract. This study examines the effect of the live streaming shopping collaboration between Tokopedia and TikTok on e-impulse buying through hedonic behavior among Tokopedia users. A quantitative approach was employed using descriptive and verification methods. Data were collected from 200 Tokopedia users selected from a population of 9,500 respondents and analyzed using Structural Equation Modeling (SEM). The results indicate that users perceive the Tokopedia–TikTok live streaming shopping collaboration and e-impulse buying at a very high level, while hedonic behavior is rated at a high level. Furthermore, the collaboration has a positive and significant indirect effect on e-impulse buying through hedonic behavior, confirming the mediating role of hedonic motivation. These findings suggest that integrating live streaming shopping into e-commerce platforms can enhance consumers' hedonic experiences and stimulate impulsive purchasing behavior. The study contributes to the growing literature on live commerce by demonstrating the importance of hedonic behavior as a mechanism linking live streaming shopping collaboration and e-impulse buying, while providing practical insights for e-commerce platforms seeking to optimize digital marketing strategies.

Keywords: Live Commerce, E-Commerce, E-Impulse Buying, Hedonic Behavior, Structural Equation Modeling.

1 Introduction

The current rapid development of the internet and the many easily accessible technologies have affected all fields, one of the conveniences is buying and selling activities where transactions are carried out online, namely through e-commerce [1]. This needs to be realized by marketers in e-commerce, so that the strategies set in developing a business are in accordance with the wants and needs of consumers [2]. In recognizing and understanding consumer behavior in this digital era is indeed a challenge for business people, especially if competitors have already understood and implemented the right marketing strategy [3].

This online buying and selling activity also change and shapes consumer behavior that is different from offline activities, one form of change in consumer behavior that

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has a positive impact on the development of e-commerce is impulse buying [4]. With technological advances, people make transactions online and have a tendency to do online impulse buying or so-called e-impulse buying [1]. The convenience of shopping online has led consumers to have e-impulse buying behavior and this has happened a lot to e-commerce consumers [4]. Someone who has an e-impulse buying attitude will more easily trigger the desire to shop or buy if there are attractive offers or discounts for them [5]. Nowadays it is very easy for a marketer to make attractive promotions on the internet, so that to create the onset of e-impulse buying behavior is getting bigger [6].

One study suggests that an estimated 40% of all consumer spending is due to online impulse purchases [7]. The current online shopping environment is more conducive to impulse buying behavior than offline because during online transactions, for example, consumers will not be affected by distant locations, store opening hours, inconvenience of employees or even stores, which may be experienced by consumers when shopping offline [8].

Research on impulse buying was first conducted by Vernon T. Clover in 1950 with the title "Relative Importance of Impulse Buying in Retails Stores" [9]. Research on e-impulse buying has been conducted in various industries, including e-commerce. Previous research on e-commerce shows the findings that product quality and hedonic behavior have a significant impact on impulse purchases, the better and higher the quality of the website, the better and higher the impulse purchases on e-commerce users [10]. Several other studies in the e-commerce industry reveal that the problem of e-impulse buying behavior is generally indicated by declining sales figures, lack of product innovation, and not supporting the shopping experience [11, 12, 10, 13, 14, 15, 16].

Statista Market Insights data, states that the number of online marketplace or e-commerce users in Indonesia will reach 178.94 million people by 2022. This number increased by 12.79% compared to the previous year which amounted to 158.65 million users. Looking at the trend, e-commerce users in Indonesia are observed to continue to increase and the number is projected to reach 196.47 million users by the end of 2023. This indicates that the level of e-commerce users will continue to increase every year, but in contrast to Tokopedia e-commerce which has experienced a decline in the number of visitors.

The number of visitors accessing Tokopedia e-commerce decreased in 2022 by 158,300,000, while in 2023 visits to Tokopedia e-commerce decreased to 107,200,000. E-commerce that has decreased besides Tokopedia is Bukalapak and Lazada. The decline in e-commerce visits occurred because some Indonesians were not actively using e-commerce services. In the Beyond the Digital Frontier research report, KIC estimates that the proportion of active e-commerce users in the country is only 33.4% of the total population. It is indicated that Tokopedia e-commerce is one of the largest platforms in Indonesia that has experienced a decline in the number of visitors. Some of the factors that are thought to be the cause of the decline include increasingly fierce competition in the Indonesian e-commerce industry, changes in consumer preferences and behaviors that are increasingly diverse, and the impact of unfavorable economic conditions in general.

In attracting consumer interest, every e-commerce platform always updates its existing features, one of which is the live streaming feature. Similar to the number of visitors, Tokopedia e-commerce is still below Shopee in the number of purchases through the live streaming feature. E-commerce Tokopedia is still far from its competitors, which means that Tokopedia's live streaming feature is still lacking in attracting consumers, both in terms of live streaming quality, the flexibility of a streamer, discount promos that are still lacking or even there are still many consumers who don't know that Tokopedia e-commerce has a live streaming feature for shopping [17].

The lack of use of the live streaming feature for shopping on Tokopedia e-commerce consumers affects the transactions that occur. Although e-commerce live streaming has become an increasingly popular trend in Indonesia, Tokopedia as one of the main players in this industry still faces challenges related to the low average transaction generated through this feature. Based on available data, the average transaction value per live streaming on Tokopedia is relatively low compared to other e-commerce platforms that implement similar features.

The low transactions that occur in the live streaming shopping feature also have an impact on the decline in the transaction value obtained by Tokopedia e-commerce. PT GoTo Gojek Tokopedia Tbk posted a total gross transaction value (GTV) of 443.5 trillion from the beginning of the year to the end of the third quarter of 2023. As for January-September 2023, the transaction value of GoTo's e-commerce business segment, Tokopedia, was recorded to have decreased by 9.31% to Rp. 183.5 trillion. The decline in Tokopedia's e-commerce transaction value was caused by a decrease in incentives and product marketing which resulted in a decrease in the number of consumers [18]. The declining value of e-commerce transactions can be caused by several factors, one of which is the absence of consumer impulse purchases [19].

The approach used to solve the problem of e-impulse buying is the theory and concept of consumer behavior from Schiffman & Wisenblit [20]. Live streaming shopping is contained in persuading consumers, which discusses the ability to influence and persuade consumers in the purchasing decision process [20]. Features such as the ability to communicate directly with the seller, see real-time product demonstrations, and interact with fellow consumers, allow consumers to engage more deeply with the shopping process [21]. Through live streaming shopping, it can increase consumer trust in products and brands [22].

Previous research states that another factor that can influence e-impulse buying is hedonic, customers fulfill hedonic needs which influence impulse buying tendencies [23]. Other previous research states that impulse buying can also be influenced by live streaming shopping where it is triggered by consumer confidence and current conditions when real-time interaction between streamers and consumers is running. Based on these studies, there are several factors to increase impulse buying, one of the factors that must be optimized in increasing e-impulse buying is live streaming shopping [24].

E-commerce Tokopedia has focused on implementing live streaming shopping in supporting the creation of e-impulse buying. Tokopedia currently has a live streaming shopping feature called Tokopedia Play [25]. Through this feature, sellers can broadcast

live in the form of videos for product promotion to potential buyers on Tokopedia. In addition, Tokopedia e-commerce collaborates or collaborates with Tiktok. The collaboration between Tokopedia and Tiktok represents a blend of technological innovation and e-commerce. Tiktok as a popular social media platform, utilizes the power of short video content or live streaming to create a more dynamic shopping experience.

Digital Marketing is a phenomenon that continues to grow and continues to spread its influence into the processes that have been undertaken by organizations for decades [26]. In this modern era, digital marketing is a mainstay or prima donna in the world of marketing, this is evidenced by the use of internet media as a marketing medium that is no longer unstoppable [27]. Digital marketing is part of every stage in a business, starting from the decision stage of product development, pricing, public relations or public relations to recruitment [26].

Consumer behavior is a middle theory which is a science that discusses the processes involved when individuals or groups choose, buy, use or dispose of products, services, ideas or experiences to satisfy needs and wants [20, digital consumer behavior is defined as the study of how consumers make decisions to buy products online [28]. Consumer behavior discusses consumer decision making which includes 3 stages, namely input, process, and output [20]. Inputs from consumer decision making such as marketing mix (product, promotion, price, and distribution) and sociocultural influences (reference groups, family, social class, culture and subculture). The process stage in consumer decision making is about the communication sources used, such as advertising, word of mouth, and social media. The last stage in consumer decision making is the output which includes purchase behavior, consuming the product, and post-purchase evaluation. One form of purchase behavior is e-impulse buying or impulse buying behavior [20].

The study of consumer behavior is persuading consumers, which is related to communication [20]. A communication can be interpreted in an image, writing, spokesperson, and with persuasive appeal. In marketing, a seller can choose between various persuasive appeals when the seller sends a message between various persuasive appeals when the seller sends a message in the form of advertising to consumers. There are two models of communication media, namely broadcasting and narrowcasting. The term broadcasting is related to one of the features that is favored by many people today, namely live streaming shopping.

Another study of consumer behavior is motivation and personality, which is related to psychological and personality factors that encourage individuals to make an action or purchase. Motivation can be intrinsic or extrinsic, such as encouragement from the social environment or sales promotions. Meanwhile, consumer personality refers to the unique characteristics that distinguish one individual from another, such as introverted or extroverted nature, frugality or extravagance, and so on. Hedonic is one of the traits or personalities of individuals in making a purchase action.

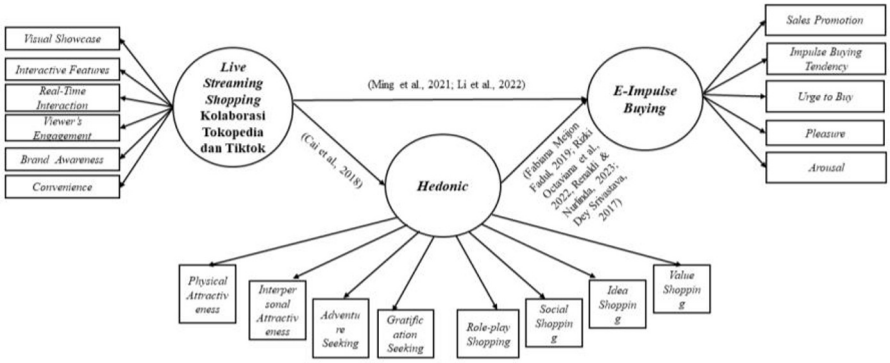

Fig. 1. Research Framework

A hypothesis is defined as a tentative statement that will be verified, so the premises that the researcher formulated in this research are:

1.1 Live Streaming Shopping Collaboration Tokopedia and Tiktok on E-Impulse Buying

Based on the theory adopted from research [20, 29], which states that the technology used in e-commerce and makes it easier for users in social commerce will increase the experience acceptance process. Research conducted by Li at al. and Ming et al. [30, 24] states that live streaming shopping has a positive and significant effect on consumer confidence and current conditions, thereby triggering consumer impulse buying behavior.

1.2 Live Streaming Shopping Collaboration Tokopedia and Tiktok on Hedonic

Digital marketing is now growing, this development occurs because more and more businesses are aware of the use of digital media in terms of marketing research [31] which found that live streaming shopping can fulfill consumers' social needs. Direct interaction with sellers and fellow buyers creates a sense of connectedness that contributes to consumers' hedonic behavior. Consumers feel more engaged and entertained during the shopping process. Other research reveals that interactive and personalized features in live streaming shopping also play an important role in increasing hedonic behavior. Consumers feel more impressed and engaged with the platform's ability to customize content and interactions based on consumers' individual preferences [32].

1.3 Hedonic on E-Impulse Buying

Based on the theory adopted from Schiffman & Wisenblit [20], research conducted by Rizki Octaviana [33] revealed findings stating that hedonic has a positive and significant effect on impulse buying. This is supported by research conducted by [34] which states that hedonic has a positive effect on impulse buying through positive emotion where it means that if hedonic increases, it will have an impact on increasing impulse buying. Shopping in e-commerce provides convenience to consumers, by being able to use smartphones freely so that when they have free time, consumers can do shopping activities and with this free time that causes them to shop spontaneously or unplanned.

Based on the problem, framework, and premise of previous research, the hypotheses that researchers formulate in this study are:

1. There is an influence of live streaming shopping collaboration Tokopedia and Tiktok in creating e-impulse buying through hedonic.
2. There is an influence of live streaming shopping collaboration between Tokopedia and TikTok on e-impulse buying.
3. There is an influence of live streaming shopping collaboration between Tokopedia and TikTok on hedonic.
4. There is an influence of hedonic on e-impulse buying.

2 Research Methods

This research utilizes a combination of descriptive and verification methodologies, employing a quantitative approach to investigate the specified phenomenon. The study's population encompasses a substantial 9.500 individuals, from which a sample of 200 respondents, active users of e-commerce Tokopedia and members of the Tokopedia Indonesia Community, was drawn using the random sampling technique. To rigorously analyze the collected data and assess the proposed relationships, the researchers employ the advanced Structural Equation Modeling (SEM) technique, which offers a comprehensive framework for assessing complex interactions and latent variables within the context of the research model.

3 Result and Discussion

Tokopedia, founded on August 17, 2009, is a prominent e-commerce platform in Indonesia, with a vision of creating an ecosystem where anyone can start and invent anything and a mission to digital economic equalization in Indonesia.

3.1 Respondent Overview

Table 1. Description of Respondent Characters

Variables	Description	Amount	Percentage (%)
Age	<21	16	8%
	21-25	105	52,5%
	26-30	48	24%
	31-35	26	13%
	>35	5	2,5%
Gender	Male	89	44,5%
	Female	111	55,5%
Education Level	Junior High School	4	2%
	Senior High School	86	43%
	Diploma	32	16%
	Bachelor's Degree	68	34%
	Master's Degree	10	5%
Profession	Entrepreneur	34	17%
	Civil Servant	18	9%
	Private Sector Employee	76	38%
	Housewife	13	6,5%
	Student	57	28,5%
	Others	2	1%
Income	IDR <Rp 500.000	8	4%
	IDR 500.000 – IDR 1.500.000	27	13,5%
	IDR 1.500.000 – IDR 3.000.000	19	9,5%
	IDR 3.000.000 – IDR 5.000.000	57	28,5%
	IDR 5.000.000 – IDR 10.000.000	56	28%
	IDR 10.000.000 – IDR 15.000.000	23	11,5%
	IDR >Rp 15.000.000	10	5%

The majority of respondents were in the 21-25 age range, accounting for 52.5% of the total sample. This shows that this research is targeting a young age group. This finding is in line with research [35] found that young consumers tend to be more impulsive in making online purchases. Based on gender, respondents were dominated by women, reaching 55.5%. This finding is in line with research from Zhang et al. [36] which states that women are more prone to impulse buying than men. In terms of the latest education, respondents are dominated by high school/equivalent graduates (43%). This finding is in line with previous research which states that consumers with middle and higher education levels have better access and ability to use technology, making them more susceptible to online impulse buying behavior [37]. Job characteristics show that the majority of respondents are private employees (76%), while in terms of income or pocket money/month, respondents are dominated by groups with an income of Rp. 3,000,000 - Rp. 5,000,000 (28.5%), this relatively high level of income can be a driving factor in online impulse buying, in accordance with the findings [38]. which state that consumers with higher incomes tend to be more impulsive in online shopping.

Data can be considered normally distributed if it meets the criteria where the skewness c.r. and kurtosis c.r. values fall within the range of -2.58 to +2.58 [39]. The

results of the data normality test are presented in Table 2 Data Normality Test Results below.

Table 2. Data Normality Test Results

Variable	Min	Max	Skew	c.r	Kurtosis	c.r
Arousal	4.000	7.000	-,276	-1,591	-,482	-1,392
Pleasure	4.500	7.000	-,534	-3,085	-,018	-,052
Urge to Buy	4.500	7.000	-,479	-2,766	,197	,569
Impulse Buying Tendency	4.500	7.000	-,773	-4,462	,314	,907
Sales Promotion	5.000	7.000	-,462	-2,668	-,425	-,1,227
Physical Attractiveness	3.000	7.000	-,574	-3,315	-,430	-1,242
Interpersonal Attractiveness	4.000	7.000	-,478	-2,758	-,345	-,996
Adventure Seeking	4.000	7.000	-,262	-1,511	-,767	-2,214
Gratification Seeking	4.000	7.000	-,150	-,866	-,821	-2,371
Role-play Shopping	4.000	7.000	-,342	-1,975	-,805	-2,325
Social Shopping	5.000	7.000	-,074	-,426	-,926	-2,675
Idea Shopping	5.000	7.000	-,466	-2,690	-,523	-1,510
Value Shopping	5.000	7.000	-,303	-1,751	-,805	-2,325
Visual Showcase	4.500	7.000	-,423	-2,444	-,610	-1,760
Interactive Features	4.000	7.000	-,272	-1,568	-,640	-1,848
Real Time Interaction	4.500	7.000	-,326	-1,880	-,480	-1,385
Viewer's Engagement	4.333	7.000	-,851	-4,916	-,582	1,679
Brand Awareness	4.500	7.000	-,450	-2,599	-,234	-,675
Convenience	5.000	7.000	-,480	-2,771	-,422	-1,218
Multivariate					**,117**	**,029**

Based on Table 2 Data Normality Test Results, the results of data processing using the IBM SPSS AMOS version 24.0 program show that the critical ratio skewness value of almost all indicators shows a normal distribution because it has a value range of -2.58 to +2.58, except for pleasure (P), urge to buy (UB), impulse buying tendency (IBT), sales promotion (SP), physical attractiveness (PA), interpersonal attractiveness (IA), idea shopping (IS), viewer's engagement (VE), brand awareness (BA), and convenience (C). However, this can still be tolerated as the critical ratio kurtosis remains within the acceptable range of -2.58 to +2.58, with a multivariate value is 0.117. This indicates that the data is normally distributed, and the data used can proceed to the next stage of assumption testing.

Normality testing through the determinant of the sample covariance matrix aims to identify whether there is multicollinearity within specific variable combinations. Multicollinearity indicates a condition where there is a perfect linear relationship among the variables, meaning they are exactly predicted or exhibit singularity. This assumption requires that if the determinant of the sample correlation matrix is 1

(perfect) or exceeds 0.90, it indicates the presence of multicollinearity in the research. Figure 2 presents data regarding the sample correlation matrix.

	A	P	UB	IBT	SP	PA	IA	AS	GS	RS	SS	IS	VAS	VS	IF	RTI	VE	BA	C
A	1,000																		
P	,316	1,000																	
UB	,540	,176	1,000																
IBT	,217	,344	,287	1,000															
SP	,246	,344	,377	,354	1,000														
PA	,084	,130	,085	,183	,144	1,000													
IA	,073	,187	,047	,134	,139	,429	1,000												
AS	,164	,232	,025	,169	,071	,294	,256	1,000											
GS	,285	,217	,234	,245	,187	,174	,170	,323	1,000										
RS	,065	,095	-,010	,099	,075	,227	,198	,340	,305	1,000									
SS	,228	,138	,101	,190	,191	,341	,360	,204	,354	,249	1,000								
IS	,137	,077	,094	,111	,173	,248	,329	,294	,373	,350	,411	1,000							
VAS	,160	,126	,072	,105	,156	,289	,330	,274	,282	,328	,307	,391	1,000						
VS	,113	,094	,051	,155	,132	,190	,201	,243	,120	,187	,149	,119	,113	1,000					
IF	,143	,191	,138	,054	,111	,103	,119	,202	,084	,132	,059	,054	,055	,410	1,000				
RTI	,186	,256	,259	,106	,172	,073	,051	,164	,224	,219	,137	-,019	,061	,215	,362	1,000			
VE	,120	,029	,019	,138	,113	,110	,081	,270	,192	,219	,244	,178	,191	,326	,261	,313	1,000		
BA	,184	,101	,091	,109	,118	,101	,082	,236	,232	,151	,136	,180	,125	,230	,206	,353	,445	1,000	
C	,129	,228	,042	,202	,170	,108	,069	,305	,188	,048	,147	,147	,064	,379	,310	,270	,285	,440	1,000

Fig. 2. Sample Correlation Matrix

Figure 2 shows the sample correlation matrix based on the research data shows the highest correlation value between variables is 0.540. It can be concluded that there is no multicollinearity among the observed variables in this study, and therefore, the data can be used for the research.

The estimation method used is determined based on the characteristics of the variables being analyzed. Given the sample size of 210 respondents for this study, maximum likelihood estimation was applied. The results were obtained from the standardized regression weights in the output of the model tests conducted with IBM SPSS AMOS version 24.0 for Windows. Dimensions and constructs are deemed valid if they have a loading factor exceeding 0.50 [40]. Table 3 Measurement Model Estimation Test Results show the standardized regression weights values which state the estimated values between latent variables and manifest variables.

Table 3. Measurement Model Estimation Test Results

			Estimate
Hedonic	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.452
E-Impulse Buying	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.255
E-Impulse Buying	←	Hedonic	.305
Convenience	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.603
Brand Awareness	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.614
Viewer's Engagement	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.587

Real-Time Interaction	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.532
Interactive Features	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.516
Visual Showcase	←	Live Streaming Shopping Collaboration Between Tokopedia and Tiktok	.543
Value Shopping	←	Hedonic	.565
Idea Shopping	←	Hedonic	.626
Social Shopping	←	Hedonic	.593
Role-play Shopping	←	Hedonic	.510
Gratification Seeking	←	Hedonic	.547
Adventure Seeking	←	Hedonic	.523
Interpersonal Attractiveness	←	Hedonic	.525
Physical Attractiveness	←	Hedonic	.505
Sales Promotion	←	E-Impulse Buying	.572
Impulse Buying Tendency	←	E-Impulse Buying	.511
Urge to Buy	←	E-Impulse Buying	.625
Pleasure	←	E-Impulse Buying	.503
Arousal	←	E-Impulse Buying	.623

It is known that all indicators and constructs that form each other in this research model can be said to be valid and must have loading factor results with a value of > 0.5. The highest loading factor, 0.626 is observed for engagement rate in forming brand image, while the lowest loading factor is 0.503 for the dimension of empowerment in forming user-generated content on Instastory. These results indicate that all dimensions and constructs are valid, allowing the research to proceed to the next stage, which is model fit testing. The overall model fit test aims to evaluate the degree of fit or goodness of fit (GOF) model.

Hypothesis testing is carried out using the t-value with a significance of 0.05 (5%) and degrees of freedom as large as the sample (n). The t-value in the IBM SPSS AMOS version 24.0 program is the critical ratio (CR) value. CR value ≥ t-table (1.96). If the CR value is ≥ 1.967 or P- value < 0.05, then H0 is rejected or means the research hypothesis is accepted. To further analyze the influence of live streaming shopping collaboration Tokopedia and Tiktok regarding e-impulse buying through hedonic among e-commerce Tokopedia users, can be seen in Table 4 Full Model Hypothesis Test Analysis as follows.

Table 4. Full Model Hypothesis Test Analysis

Model			**Estimate**		**S.E.**	**C.R.**	**P**
			RW	**SRW**			
Hedonic	←	Live Streaming Shopping KTT	0,591	0,452	0,148	3,994	***

E-Impulse Buying	←	Live Streaming Shopping KTT	0,210	0,255	0,097	2,176	0,030
E-Impulse Buying	←	Hedonic	0,192	0,305	0,076	2,523	0,012
C	←	Live Streaming Shopping KTT	1,000	0,603			
BA	←	Live Streaming Shopping KTT	1,133	0,614	0,180	6,305	***
VE	←	Live Streaming Shopping KTT	1,144	0,587	0,198	5,786	***
RTI	←	Live Streaming Shopping KTT	1,114	0,532	0,204	5,464	***
IF	←	Live Streaming Shopping KTT	1,454	0,516	0,268	5,415	***
VS	←	Live Streaming Shopping KTT	1,151	0,543	0,200	5,750	***
VAS	←	Hedonic	1,000	0,565			
IS	←	Hedonic	0,822	0,626	0,129	6,350	***
SS	←	Hedonic	1,091	0,593	0,182	5,990	***
RS	←	Hedonic	1,202	0,510	0,218	5,510	***
GS	←	Hedonic	1,283	0,547	0,227	5,650	***
AS	←	Hedonic	1,152	0,523	0,210	5,495	***
IA	←	Hedonic	1,142	0,525	0,204	5,598	***
PA	←	Hedonic	1,250	0,505	0,232	5,398	***
SP	←	E-Impulse Buying	1,000	0,572			
IBT	←	E-Impulse Buying	1,205	0,511	0,228	5,281	***
UB	←	E-Impulse Buying	1,297	0,625	0,248	5,221	***
P	←	E-Impulse Buying	1,118	0,503	0,218	5,128	***
A	←	E-Impulse Buying	1,775	0,623	0,360	4,937	***

The criteria for acceptance and rejection of the main hypothesis in this research are as follows:

H0 cr ≤ 1.96, meaning that there is no statistical influence between the two variables

H1 cr ≥ 1.96, meaning that there is a statistical influence between the two variables

The overall model fit test aims to evaluate the degree of fit or goodness of fit (GOF) model.

Table 5. Goodness of Fit

No	Goodness of Fit Measure	Cut of Value	Hasil	Evaluasi Model
		Absolute Fit Measure		
1.	Statistic Chi Square (X^2) (df=9)	X^2 hit < X^2 Tabel (x^2 tabel = 15,086)	243,827	Not Fit
2.	Goodness of Fit Index (GFI)	GFI ≥ 0,90 good fit, 0,80 ≤ GFI < 0,90 marginal fit	0,888	Marginal Fit

3.	Root Mean Square Error of Approximation (RMSEA)	≤0,08	0,057	Good Fit
	Incremental Fit Measure			
4.	Tracker Lewis Index (TLI)	TLI ≥ 0,90 good fit, 0,80 ≤ TLI < 0,90 marginal fit	0,854	Marginal Fit
5.	Adjust Goodness of Fit (AGFI)	≥0,90	0,857	Not Fit
6.	Comparative Fit Index (CFI)	CFI ≥ 0,90 good fit, 0,80 ≤ CFI < 0,90 marginal fit	0,873	Marginal Fit
	Prsimonious Fit Measure			
7.	Parsimonious Goodness of Fit Index (PGFI)	PGFI < GFI	0,696	Good Fit
8.	Parsimonious Normed of Fit Index (PNFI)	Semakin tinggi semakin baik	0,640	Good Fit

The evaluation results of the Goodness of Fit for the full model, measuring the relationship between live streaming shopping collaboration Tokopedia and Tiktok and e-impulse buying through hedonic, indicates that the model does not completely satisfy the assumptions of goodness of fit. Although not all Goodness-of-Fit measures align with recommendations and exceed the cut-off values, it can still be concluded that the overall model is fit.

According to (Malhotra, 2010), it is advised to use at least 1 absolute good fit measure (eg, GFI, AGFI), 1 absolute poor fit measure (eg, Chi-Squares, RMSR, SRMR, RMSEA), and 1 comparative measure (eg, NFI, NNFI, CFI, TLI, RNI). All Goodness of Fit measures were observed to be larger than the cut-off values, leading to the conclusion that the research model using Structural Equation Modeling (SEM) is indeed deemed fit.

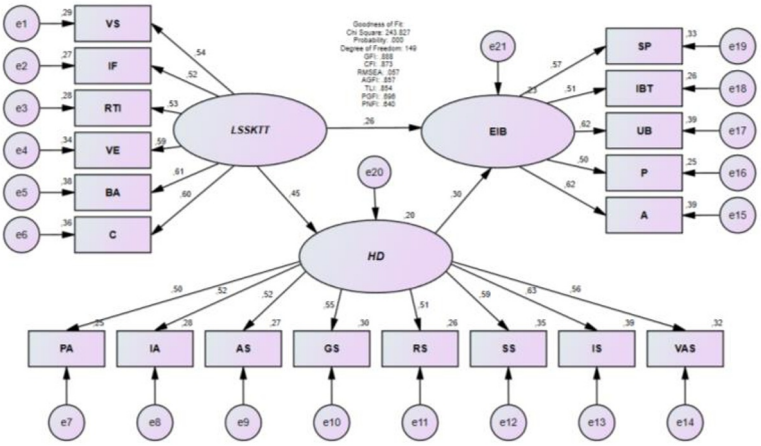

Fig. 3. Research Results

The empirical findings indicate that both live streaming shopping collaboration Tokopedia and Tiktok and hedonic have a direct positive impact on e-impulse buying. Additionally, live streaming shopping collaboration Tokopedia and Tiktok indirectly affects e-impulse buying through hedonic mediation. These results underscore the crucial role of hedonic in mediating the relationship between live streaming shopping collaboration Tokopedia and Tiktok and e-impulse buying, highlighting the importance of live streaming shopping in shaping strong hedonic behavior for e-impulse buying.

3.2 Discussion of the Influence of Live Streaming Shopping Collaboration Tokopedia and Tiktok in Creating E-Impulse Buying

The results of data processing show the C.R value between the Tokopedia and Tiktok collaboration live streaming shopping variables and hedonic on e-impulse buying of 2.176 and 2.523, this value is ≥ t-table (1.96) so that H0 is rejected, so it can be said that there is an influence between live streaming shopping collaboration Tokopedia and Tiktok and hedonic on e-impulse buying. The indirect effect (mediation) of live streaming shopping collaboration between Tokopedia and Tiktok on e-impulse buying through hedonic, which is 0.138, can be seen in the standardized indirect effect output. This means that due to the indirect effect of live streaming shopping collaboration between Tokopedia and Tiktok on e-impulse buying, when live streaming shopping collaboration between Tokopedia and Tiktok increases by 1 standard deviation, e-impulse buying also increases by 0.138 standard deviations. If interpreted, increasing the overall perception of live streaming shopping collaboration between Tokopedia and Tiktok can have a positive impact on fostering stronger e-impulse buying through hedonic in consumers, while the value of the influence obtained is declared significant as seen in the results of the bootstrap two tailed significance (BC) of 0.005.

This significant effect is in line with research by [41] which found that live streaming shopping can increase consumers' hedonic behaviors, such as pleasure, emotional involvement, and sensory stimulation. Furthermore, this increased hedonic behavior significantly drives consumer impulse buying behavior in a live streaming environment. Other studies have shown similar results, where direct interaction with streamers, the ability to provide feedback, and a pleasant atmosphere in live streaming, can increase consumer hedonic behavior. This increase in hedonic behavior then has implications for the high tendency of consumer impulse purchases during the live streaming shopping process [42].

The results of data processing also show that the live streaming shopping collaboration between Tokopedia and Tiktok which has the greatest contribution to forming e-impulse buying is the brand awareness dimension which correlates with the urge to buy dimension of 0.151, while the dimension of live streaming shopping collaboration between Tokopedia and Tiktok which has the least contribution to forming e-impulse buying is the interactive features dimension which correlates with the pleasure dimension of 0.102. The hedonic factor that forms the largest e-impulse buying is the idea shopping dimension correlated to form arousal of 0.164, while the hedonic factor that forms the smallest e-impulse buying is the physical attractiveness dimension correlated with the pleasure dimension of 0.102. The biggest hedonic factor

shaping e-impulse buying is the idea shopping dimension correlated to form arousal of 0.164, while the smallest hedonic factor shaping e-impulse buying is the physical attractiveness dimension correlated to form the pleasure dimension of 0.107.

3.3 Discussion of the Influence of Live Streaming Shopping Collaboration Tokopedia and TikTok on E-Impulse Buying

The results of data processing show that the critical ratio C.R value of the live streaming shopping variable on e-impulse buying is 2.176, so the CR value ≥ 1.967, it is stated that H0 is rejected or means that this research hypothesis is accepted and it is said that live streaming shopping collaboration between Tokopedia and TikTok has an influence on e-impulse buying. The amount of influence measured from live streaming shopping collaboration between Tokopedia and TikTok on e-impulse buying is 0.393 which can be seen in the standardized total effect output, if interpreted, the influence caused is considered quite strong, so it can be indicated that there is a positive and significant influence between live streaming shopping collaboration between Tokopedia and TikTok on e-impulse buying.

The results of testing this hypothesis are in accordance with research [30] which found that live streaming shopping can increase consumers' feelings of pleasure and emotional attachment, which in turn trigger impulse purchases. Features such as direct interaction with the seller, the ability to ask questions and obtain real-time feedback, as well as an atmosphere that resembles an offline shopping experience, are considered key factors that influence consumers' decision-making process. Other research suggests that live streaming shopping can also influence social norms and group pressure, which can influence impulse buying behavior. Consumers tend to be influenced by the actions and reactions of others in live streaming, which can encourage consumers to make unplanned purchases [24].

3.4 Discussion of the Influence of Live Streaming Shopping Collaboration Tokopedia and Tiktok on Hedonic

The results of data processing show that the critical ratio C.R value of the live streaming shopping variable of the Tokopedia and Tiktok collaboration on hedonic is 3.994, so the CR value ≥ 1.967, it is stated that H0 is rejected or means that this research hypothesis is accepted, and it is said that live streaming shopping collaboration between Tokopedia and Tiktok has an influence on hedonic. The amount of influence measured from live streaming shopping collaboration between Tokopedia and Tiktok on hedonic is 0.452 which can be seen in the standardized total effect output, if interpreted, the influence generated is considered quite strong, so it can be indicated that there is a positive and significant influence between live streaming shopping collaboration between Tokopedia and Tiktok on hedonic.

The results of testing this hypothesis are in accordance with research [31] which found that live streaming shopping can fulfill consumers' social needs. Direct interaction with sellers and fellow shoppers creates a sense of connectedness that contributes to consumers' hedonic behavior. Consumers feel more engaged and

entertained during the shopping process. Other research reveals that interactive and personalized features in live streaming shopping also play an important role in enhancing hedonic behavior. Consumers feel more impressed and engaged with the platform's ability to customize content and interactions based on consumers' individual preferences [32].

3.5 Discussion of the Influence of Hedonic on E-Impulse Buying

The results of data processing show that the critical ratio C.R value of the hedonic variable on e-impulse buying is 2.523, so the CR value ≥ 1.967, it is stated that H0 is rejected or means that this research hypothesis is accepted, it is also said that hedonic has a partial influence on e-impulse buying. The measured effect of hedonic on e-impulse buying is 0.305 which can be seen in the standardized total effect output, if interpreted, the effect caused is considered quite strong, so it can be indicated that there is a positive and significant influence between hedonic on e-impulse buying.

The results of testing this hypothesis are in accordance with a study conducted [43] found that hedonic behavior, characterized by a desire for pleasure, satisfaction, and interesting experiences, has a significant positive impact on online impulse purchases. Consumers who have hedonic tendencies tend to be more easily influenced by online marketing stimuli, such as discounts, promotions, or attractive product displays, thus encouraging consumers to make purchases without prior planning. Similar findings were revealed [44] who found that hedonic behavior towards e-impulse buying is getting stronger along with the development of technology and innovation in the field of e-commerce. Consumers who have hedonic tendencies are more sensitive to visual and emotional stimuli provided by e-commerce sites, making it easier to be driven to purchase without planning. In addition, there are other previous studies that suggest a positive and significant influence between hedonic on e-impulse buying [23, 34, 33].

4 Conclusion

This study demonstrates that the live streaming shopping collaboration between Tokopedia and TikTok has a positive and significant effect on e-impulse buying among Tokopedia users, both directly and indirectly through hedonic behavior. The findings confirm that hedonic behavior serves as a significant mediating variable, indicating that an engaging and enjoyable shopping experience strengthens consumers' tendency to make impulsive purchases. Among the dimensions examined, brand awareness exhibited the strongest contribution to e-impulse buying through its association with the urge to buy, while idea shopping emerged as the most influential dimension of hedonic behavior through its relationship with arousal. These results suggest that integrating live streaming shopping features with interactive and immersive consumer experiences can effectively enhance hedonic motivation and stimulate impulsive purchasing behavior. Therefore, e-commerce platforms should optimize live commerce strategies by strengthening brand awareness, enriching interactive content, and creating

enjoyable shopping experiences to increase consumer engagement and purchasing outcomes.

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