

The Role of Social Presence Against Impulse Buying at TikTok Live Streaming Shop Consumers Based on S-O-R Framework

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Abstract

This research aims to explore how social presence in Live streaming influences impulse buying through the emotional states of arousal and pleasure, based on the S-O-R (Stimulus-Organism-Response) framework. The object of this research is TikTok Live streaming Shop consumers aged 18 years and over. The data collection technique used is a questionnaire via google form. The sample used in this research was 200 respondents using the SEM method assisted by AMOS 22 software. The results showed that there was an influence of the social presence of broadcasters, the social presence of Live streaming on arousal and pleasure. While the results of the social presence of viewers on arousal have an effect, but have no effect on pleasure. Then the results of arousal and pleasure affect impulse buying of TikTok Live streaming Shop consumers. The benefit that can be obtained from the results of this research is that it can help TikTok live streamer to increase their sales by applying the concept of social presence and consumer emotional factors. Because it can make sales on Live streaming more attractive and convenient for consumers.

Keywords: *impulse buying, Live streaming, emotional, SOR framework, social presence.*

INTRODUCTION

The internet is currently widely used in various aspects of life, one of which is the use of the internet in the use of applications on mobile phones. The application currently widely used is social media, where social media is an application to connect people over long distances. As time goes by and the rapid development of digital technology is currently making many innovations on social media. Live streaming is one of these innovations that is becoming increasingly popular currently. In live streaming, broadcasters or live streamers can broadcast various programs in real-time, which can be used to broadcast events online, for example, online talk shows, talent shows and many more.

Live streaming, which involves broadcasters with viewers, even fellow viewers, to be able to communicate, has finally made business people, especially online sellers, take advantage of this feature as a means of selling online, namely by displaying and demonstrating products to viewers or potential customers with factual details and prices (Hazrini et al., 2021). Through the Live streaming feature, sellers can immediately show what it would be like if the product were used from a product perspective in a different way. In addition, sellers can also arrange exciting and entertaining live-streaming concepts to encourage consumers to want to buy directly during live-streaming (Lu et al., 2018).

Sales online using live streaming can occur in three types. The first is the Live streaming platform combined with commercial activities (Example: TikTok). The second is market e-commerce sites (Example: Shopee and TokoPedia). And the third is a social networking site that adds a Live streaming feature (Example: Facebook Live) (Lee & Chen, 2021). Of the three types, the platform that has quite a lot of active users in Indonesia is TikTok. Reporting to DataIndonesia.Id, active users of TikTok in Indonesia are now the second largest after the United States as of April 2022, namely 99.1 million users spending time on TikTok as much as 23.1 hours per month. The most active users are those aged 18 and over (Rizaty, 2022).

Trading through live streaming has more significant potential to encourage consumers to make impulse purchases because of high interactivity and reliability. It can make consumers feel as if they are buying products at an offline store. This sense of “on the spot” can be expressed as social presence, which refers to the level of perception of other people's presence and is mediated by computers and other electronic devices, such as mobile phones (Zhang et al., 2022). Meanwhile, impulse buying refers to unplanned purchases, which result from the elaboration of a stimulus that can trigger a decision to buy on the spot (Li et al., 2022). Another factor that is the primary driver of impulse buying behavior is a person's emotional state. Situmorang (2018) states that the results of his research show that positive emotion (pleasure and passion) influences impulsive buying behavior. It is also supported by the research results from Graa & Dani-Elkebir (2012), which states that a person's emotions positively influence impulse buying.

Social presence captures how virtual the experience is in live-streaming e-commerce. Song et al. (2019) stated that the one-dimensional concept of social presence is still too simple in the context of computer-based communication because individuals can communicate with the media and interact with broadcasters and other subscribers who are members of Live streaming. So that the concept of social presence that will be used is the three-dimensional concept, namely the social presence of broadcasters (broadcasters), the social presence of viewers (viewers), and the social presence of Live streaming. This study will use the SOR (Stimulus-Organism-Response) framework to conceptualize the theoretical model to be used because this SOR framework has an understanding that is in accordance with the mechanism of impulse buying through social presence on live streaming (Hu & Chaudhry, 2020). Stimulus is included in the factors beyond the individual's control that affect the organism's internal state. Organisms act to bridge stimulus and behavior and are tasked with regulating the individual's final behavior in response to the stimulus. The response is a factor in responding to the results of the organism (Fiore & Kim, 2007). The SOR framework is an important key in conceptualizing the variables that will be used in this study.

This research will discuss the relationship between the Live streaming phenomenon on the TikTok platform and social presence, which then will affect emotional factors (fun and passion) to cause impulse buying, based on the SOR framework (Stimulus-Organism-Response). The results of this research will later be able to contribute to TikTok live streamers to help increase sales by taking into account the concept of social presence and

consumer emotional factors. They can make sales activities on TikTok live streaming more attractive, convenient for consumers.

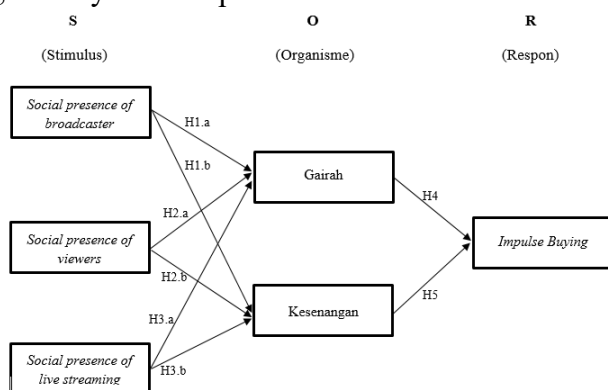
METHOD

This study used a type of quantitative research method with a descriptive analysis approach, which is data analysis by describing and describing the data that has been collected (Sugiyono, 2015: 207). Related to the analysis technique used is SEM (Structural Equation Modeling), which will be assisted by AMOS 22 software. Malhotra (2010) states that SEM is a procedure for estimating a series of dependency relationships between a set of concepts represented by several variables and included in an integrated model. The population in this study are consumers of the TikTok Live streaming shop. Then the method of taking samples is using purposive sampling, a random sampling technique with certain considerations (Sugiyono 2016). The number of samples for this study is based on calculations from Hair et al. (2010), so the number of samples to be used is 200 respondents, which includes the minimum sample size category for the SEM technique. There are three data tests for SEM in this study, the first is the measurement model test which is obtained through validity and reliability tests. The validity test will be obtained from convergent validity and discriminant validity, while the reliability test will be obtained from composite reliability. Convergent validity test will be obtained from Confirmatory Factor Analysis (CFA). Tests on convergent validity can be declared valid if the value of the loading factor is > 0.5 (Hair et al., 2010), then if the discriminant validity test can be seen from the square root AVE of each construct is higher than the correlation between constructs. All correlations must be significantly smaller than the square root of AVE (Li et al., 2022). Next is the reliability test obtained from Composite reliability, aimed at assessing the internal consistency of items obtained from the Alpha Cronbach formula. Composite reliability is acceptable if the value is > 0.7 (Malhotra, 2010).

The second is the data quality test, in this test there will be a normality test and an outlier test. Normality testing can use the Critical Ratio (CR) value at the AMOS output. If the CR is ± 2.58 , the data can be declared normally distributed (Ghozali, 2011). Multivariate outliers are detected by considering the value of the mahalonobis distance. Data is declared an outlier if it has a significant distance from the center of observation at a significance level of < 0.001 with the degrees of freedom of several constructs used in the study (Ghozali, 2011). The third is the structural model test, in the structural model test there will be two tests, namely goodness of fit analysis using the fit criteria of X^2 / DF , GFI, RMSEA, CFI, NFI, and NNFI. Then continued with hypothesis testing, hypothesis testing aims to see whether exogenous latent variables affect endogenous latent variables. If the p-value < 0.05 then the hypothesis is accepted, but if the p-value > 0.05 then the hypothesis is rejected (Malhotra, 2010).

Figure 1. is an image of the research model used in this study. This research model is obtained from the description of the phenomena described earlier, and is compiled based on the SOR (Stimulus-Organism-Response) framework, which is the function of

the SOR framework, namely to conceptualize between one variable with another variable.



**Figure 1 Research Model
(Processed by Researchers, 2023)**

RESULTS AND DISCUSSION

The characteristics of the respondents were categorized in the description of characteristics based on age, gender, frequency of watching live streaming, and frequency of shopping on live streaming. The characteristics of the respondents were obtained from distributing questionnaires that 240 respondents had filled in, but only 200 respondent data matched the criteria and could be processed. The following is Table 1. Which shows the characteristics of the respondents:

Table 1 Respondent Characteristics

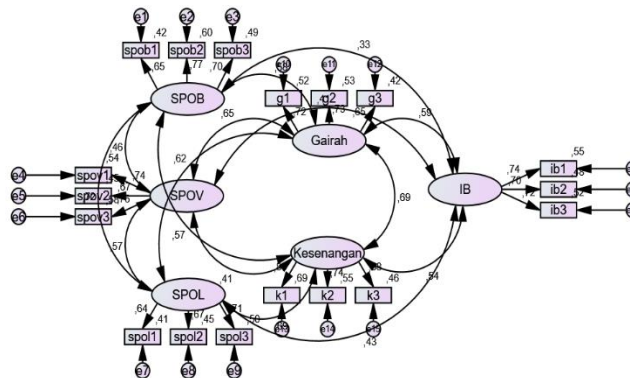
Variabel	Indikator	Presentase
Usia	18 – 22 tahun	79,5%
	23 – 27 tahun	12,5%
	28 – 32 tahun	2,5%
	> 32 tahun	5,5%
Jenis kelamin	Laki – laki	22%
	Perempuan	78%
Frekuensi Menonton Shop Per Hari	1 kali	9,5%
	2 – 5 kali	38%
	> 5 kali	37,5%
	Tidak Tentu	37,5%
Intensitas Pembelian dalam 1 Bulan	1 kali	21,5%
	2 – 5 kali	36,5%
	> 5 kali	6,5%
	Tidak Tentu	35,5%

(Processed by Researchers, 2023)

Data processing and hypothesis testing in this study were carried out using the Structural Equation Modeling (SEM) analysis technique assisted by AMOS software. The stages carried out in the SEM analysis are (1) Testing the measurement model, then (2)

Testing the quality of the data, and (3) Testing the structural model.

In this research, the measurement model analysis uses Confirmatory Factor Analysis (CFA) to see whether a measurement model is valid. CFA also aims to test reliability and validity. Reliability testing can be seen from the results of the CR values found in CFA, which are declared reliable if $CR > 0.7$ (Ghozali, 2018). Meanwhile, for testing convergent validity, it can be seen from the value of the loading factor. It is declared valid if the value of the loading factor is > 0.5 (Hair et al., 2010).



**Figure 2 Measurement Model
 (Processed by Researchers, 2023)**

Table 2 CFA

	SPOB	SPOV	SPOL	G	K	IB
SPOB	0,708					
SPOV	0,213	0,723				
SPOL	0,526	0,326	0,671			
G	0,333	0,424	0,389	0,7		
K	0,331	0,169	0,48	0,472	0,753	
IB	0,111	0,17	0,181	0,353	0,288	0,719

(Processed by Researchers, 2023)

It can be seen in Table 2. that the CR values for all variables and indicators have a value > 0.7 . So it can be stated that all items in this study are reliable. Next is the convergent validity test, convergent validity is fulfilled if the loading factor value is > 0.5 (Hair et al., 2010). Based on the CFA table above, states that all loading factor values for each variable exceed > 0.5 . So the convergent validity test with CFA in this study is valid.

Table 3 Discriminant Validity

Variabel	Indikator	Factor Loading	CR	AVE
SPOB	spob1	0,649	0,751194552	0,502862
	spob2	0,772		
	spob3	0,701		
SPOV	spov1	0,737	0,766878435	0,52373
	spov2	0,67		
	spov3	0,761		
SPOL	spol1	0,637	0,711784214	0,451977667
	spol2	0,67		
	spol3	0,708		
Gairah	g1	0,721	0,742494835	0,490673667
	g2	0,726		
	g3	0,652		
Kesenangan	k1	0,832	0,796902685	0,568396
	k2	0,742		
	k3	0,68		
<i>Impulse buying</i>	ib1	0,744	0,763006186	0,517840667
	ib2	0,695		
	ib3	0,719		

(Processed by Researchers, 2023)

Next is the discriminant validity test stage. In this discriminant validity test, it can be seen that the AVE square root of each construct is higher than the correlation between constructs, and all correlations must be smaller than the AVE square root (Li et al., 2022). It can be seen in Table 2. which is the result of the discriminant validity test. In the diagonal matrix printed in bold the square root of AVE, the value of the square root of AVE in each variable is greater than the correlation value of that variable with the others. So the measurement model in this study has fulfilled discriminant validity.

The second test is to test the data quality in the research carried out using the normality and outlier tests. The following is Table 4 and Table 5, which shows the results of the normality and outlier tests.

Table 4 Normality Test

Variabel	min	max	skew	c.r.	kurtosis	c.r.
ib1	2,000	5,000	-,119	-,685	-,588	-1,697
ib2	2,000	5,000	-,083	-,477	-,623	-1,799
ib3	3,000	5,000	,071	,410	-,883	-2,550
k1	2,000	5,000	,281	1,620	-,991	-2,861

k2	3,000	5,000	,167	,965	-,943	-2,723
k3	3,000	5,000	,207	1,194	-,912	-2,634
g1	3,000	5,000	,015	,088	-1,113	-3,212
g2	3,000	5,000	,156	,898	-1,106	-3,192
g3	2,000	5,000	,084	,483	-,641	-1,850
spol1	3,000	5,000	,068	,393	-,838	-2,421
spol2	3,000	5,000	-,029	-,165	-,616	-1,779
spol3	3,000	5,000	-,066	-,381	-,907	-2,619
spov1	3,000	5,000	-,053	-,305	-1,090	-3,147
spov2	3,000	5,000	-,182	-	-,819	-2,364
spov3	3,000	5,000	,079	,456	-,903	-2,607
spob1	3,000	5,000	-,040	-,229	-,913	-2,636
spob2	2,000	5,000	-,202	-	-,959	-2,770
spob3	3,000	5,000	,269	1,555	-,980	-2,828
<i>Multivariate</i>					5,982	1,576

(Processed by Researchers, 2023)

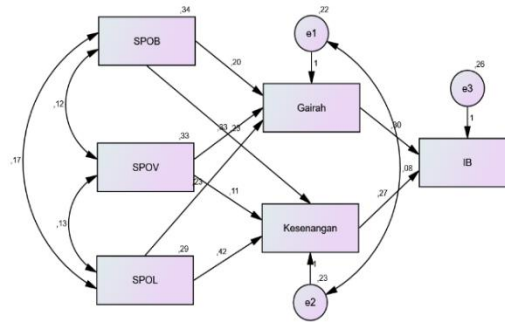
Table 5 Outlier Test

Observation number	Mahalanobis d-squared	p1	p2
93	35,823	,007	,775
52	33,088	,016	,838
132	32,663	,018	,711
71	31,774	,023	,690
...
...
47	26,933	,080	,255
69	26,846	,082	,207

(Processed by Researchers, 2023)

The normality test results can be seen from the critical ratio values for skewness and kurtosis, which are in the range of ± 2.58 , so it can be concluded that the data used in this study were normally distributed multivariate. As for the outlier test, it can be seen that the highest distance d-squared value is 35.823, which is less than 42.312 ($35.823 < 42.312$). So it can be stated that the data in this study did not occur as multivariate outliers.

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**Figure 3 Structural Model
 (Processed by Researchers, 2023)**

Then in Table 6. This the result of the goodness of fit value that has met the value limits of predetermined criteria. So that the model can be continued to the next stage, namely hypothesis testing. Testing this hypothesis can be accepted when the value of CR > 1.96, or it can also be seen in the p-value which is <0.05. The following Table 6. is the result of the Goodness of Fit analysis:

Table 6 Goodness of Fit Result

	Hipotesis	CR	P	Influence
SPOB	→ Gairah	2,962	0,003	Yes
SPOB	→ Kesenangan	3,241	0,001	Yes
SPOV	→ Gairah	5,107	***	Yes
SPOV	→ Kesenangan	1,635	0,102	No
SPOL	→ Gairah	2,951	0,003	Yes
SPOL	→ Kesenangan	5,271	***	Yes
Gairah	→ IB	4,033	***	Yes
Kesenangan	→ IB	3,796	***	Yes

(Processed by Researchers, 2023)

It can be seen in Table 6. that the results of the goodness of fit values have met the limit values of the criteria that have been set. So that the model can be continued to the next step, namely hypothesis testing. Testing this hypothesis can be accepted when the value of CR > 1.96, or it can also be seen in the p-value which is <0.05. Hypothesis testing was carried out to determine the effect between variables. The following is Table 7. which is the result of hypothesis testing:

Table 7 Hypothesis Result

<i>Goodness of fit Index</i>	<i>Cut-off Value</i>	Hasil	Keterangan
CMIN/DF	$\leq 2,0$	0,587	<i>Good Fit</i>
GFI	$\geq 0,90$	0,997	<i>Good Fit</i>
RMSEA	$\leq 0,08$	0,001	<i>Good Fit</i>
CFI	$\geq 0,95$	1	<i>Good Fit</i>
NFI	$\geq 0,95$	0,995	<i>Good Fit</i>
NNFI	$\geq 0,95$	1,018	<i>Good Fit</i>

(Processed by Researchers, 2023)

The results of the analysis of the social presence of broadcasters on the passion and pleasure of consumers on the TikTok Live streaming shop have an influence, this means that broadcasters in Live streaming TikTok have succeeded in increasing the emotional state of joy and excitement when the audience is watching their Live streaming. This happens because the broadcasters on the TikTok Live streaming shop have competence and good ways of communicating with the audience. As stated in research by Guo Y et al. (2021), the characteristics of broadcasters such as attractiveness, competence and communication are important points in live streaming to increase consumers' intention to watch live streaming. Then the study results show that there is an influence of the social presence of viewers on arousal, but shows no effect of the social presence of viewers on pleasure.

The results of the influence of the social presence of Live streaming on passion and pleasure have an impact. This means that Live streaming TikTok can indeed make viewers feel human contact, warmth, and friendliness as said by Lu & Chen (2021). Furthermore, the results of this study show that arousal influences impulsive purchases. This means that viewers on live streaming tend to have high passion, so when the passion gets more robust, it will cause impulse buying. Finally, the result of the pleasure variable influences impulse buying for TikTok Live streaming consumers. Because of the emergence of pleasure in the individual that makes impulsive purchases occur.

CONCLUSION

The conclusion that can be conveyed in this study is that every hypothesis which is almost every hypothesis that exists in this study has an influence, this shows that the

model and the phenomena that occur are suspected to be true. The social presence of the broadcaster variable in this study can increase the passion and pleasure of consumers in the TikTok Live streaming shop, this is because the broadcasters in Live streaming TikTok have succeeded in increasing the emotional state of being happy and excited when the audience is watching their Live streaming. These results also prove that the social presence of broadcasters has succeeded in stimulating changes in emotional conditions, passion and pleasure.

Furthermore, the social presence of viewers can increase consumer arousal, this is because when viewers are watching live streaming and then know the presence of other viewers, it can make the emotional state of consumer arousal increase. However, this is different from the results of research which show that the social presence of viewers does not increase consumer pleasure, which means that the social presence of viewers cannot represent the state of individual pleasure in live streaming. The social presence of viewers can stimulate emotional arousal, but cannot stimulate an individual's emotional state of pleasure. Then the social presence of Live streaming can increase consumer passion and pleasure. The ability of live streaming TikTok has been able to bridge and make viewers feel the warmth and friendliness in live streaming. The results of this study prove that the social presence of Live streaming can stimulate the emotional state of consumer passion and pleasure.

The results show that passion is also capable of causing impulsive buying behaviour, this is because consumers feel a strong urge to buy when they watch live streaming. So that when the passion gets more robust, it will cause impulse buying. These results also prove that when a social presence has stimulated an organism and there is a change in the emotional state of individual arousal, a response will arise, namely impulsive buying. Then the pleasure individuals feel can make impulse buying behaviour occur on TikTok Live streaming. This is because consumers feel pleasure when they watch live streaming. So as a result of the emergence of pleasure in the individual, impulsive purchases occur. The results of the current research also prove that when the organism has been stimulated, it will eventually cause a change in the emotional state of the individual's increased pleasure, resulting in a response, namely impulsive buying.

All current research results can provide positive benefits to sellers on TikTok Live streaming, such as how to communicate warmly, how to provide detailed and precise product information, pay attention to spatial planning when live streaming, and must have good presentation techniques when selling live streams. For future researchers, further research can be carried out using other live streaming platform research objects to compare consumer behaviour towards impulse buying if there are different platforms. Then, the research being conducted at this time is still general and does not focus on one shop. So that there are new prospects for future researchers by conducting research that focuses on only one store, so that they can find out how the level of impulse buying of the audience or consumers is if there is only one store characteristic.

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