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The Influence of Time Pressure and Promotional Pricing in Tiktok Live Streaming on Impulse Buying Among Generation Z

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ABSTRACT

This study investigates the influence of time pressure and promotional pricing in TikTok live streaming on impulse buying among Generation Z, employing the Stimulus-Organism-Response (S-O-R) framework. The rapid growth of e-commerce and TikTok live streaming has increased impulsive buying behavior among Gen Z consumers, making it important to understand the factors driving such behavior in digital commerce. A quantitative method was utilized, with data collected through an online questionnaire distributed to 232 Gen Z respondents who had previously made purchases via TikTok live streaming. The results indicate that all independent variables collectively influence impulse buying. Both time pressure and promotional pricing significantly affect perceived enjoyment and directly impact impulse buying. Moreover, perceived enjoyment is found to mediate these relationships. The standardized beta coefficient for time pressure is 0.383, while promotional pricing has a coefficient of 0.337, both showing indirect effects through increased perceived enjoyment. These findings highlight the effectiveness of limited-time offers and attractive pricing strategies in stimulating impulse buying behavior among Gen Z consumers on TikTok Live.

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1. INTRODUCTION

In today's digital era, technological advancements have transformed various aspects of life, including consumer behavior patterns. Technology can now be utilized for many other purposes, including shopping activities (Gabryella et al., 2024). The place for shopping online is referred to as Electronic Commerce or E-commerce. According to Databoks, the number of e-commerce users in Indonesia has continued to increase from 2017 to 2023, rising from 140 million to 220 million people. This indicates a very high level of e-commerce usage in Indonesia. One of the most widely used e-commerce platforms that currently dominates the Indonesian market is TikTok Shop, with Indonesia being the country with the second-highest number of TikTok users in the world (Annur, 2023). This large number of users reflects the strong influence of TikTok on consumer behavior, especially among Generation Z, who were born from 1997-2012 (Fitri et al., 2025).

One of the consumer behaviors that has become increasingly common in the digital shopping environment is impulsive buying. Impulsive buying is a phenomenon where consumers make unplanned purchases driven more by sudden desires rather than actual needs (Sambeta et al., 2024). Impulsive buying behavior tends to occur among consumers who watch live streaming. This can be caused by factors such as time pressure and promotional pricing (Cui et al., 2022). In the context of live streaming commerce, time pressure commonly occurs when consumers are exposed to limited-time offers or promotions that are only available during the live broadcast (Zakiah, 2025).

Previous studies have examined the influence of time pressure, promotional pricing, and live streaming interaction on impulsive buying behavior. However, most prior studies focused only on direct relationships between variables and mainly examined general live commerce platforms or specific product categories, such as cosmetics (Omar & Dewar, 2024). In addition, previous research has produced inconsistent findings regarding the influence of time pressure on impulse buying, where some studies found significant effects while others did not (Cui et al., 2022; Omar & Dewar, 2024). Furthermore, limited studies have specifically explored the mediating role of perceived enjoyment within the context of TikTok live streaming among Gen Z in Indonesia. Therefore, there remains a gap in understanding how psychological

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responses such as perceived enjoyment mediate the relationship between marketing stimuli and impulse buying behavior in TikTok live commerce.

This study uses the S-O-R (Stimulus-Organism-Response) theory to examine the influence of time pressure and promotional pricing during live streaming on Gen Z's impulse buying. The S-O-R model is used to study individual perceptions and behaviors in response to external stimuli (Herlina, 2023). In this study, time pressure and promotional pricing are considered as stimuli, perceived enjoyment as the organism, and impulsive buying as the resulting response. The novelty of this study lies in the integration of time pressure and promotional pricing with perceived enjoyment as a mediating variable within the S-O-R framework in the context of TikTok live streaming. Unlike previous studies that mainly focused on direct relationships or different live commerce contexts, this study specifically examines Generation Z consumers in Indonesia. By analyzing both direct and indirect relationships between variables, this study contributes to the development of digital consumer behavior literature and provides deeper insights into the psychological mechanisms underlying impulse buying behavior in TikTok live commerce.

2. LITERATURE REVIEW

2.1 S-O-R (Stimulus-Organism-Response) Theory

The S-O-R (Stimulus-Organism-Response) model is a theory developed by Donovan and Rossiter (1982) to study individual perceptions and behaviors in response to external stimuli within retail psychology and environmental settings (Herlina, 2023). S-O-R was first applied by Donovan and Rossiter to examine the impact of retail environmental atmospherics on consumer purchasing behavior. However, as time and technology have advanced, the S-O-R model has been widely adopted in online retail research (Huang & Suo, 2021). S-O-R is considered effective in explaining behavioral differences caused by various marketing stimuli and cognitive factors (Zhang et al., 2022). One of the strengths of the S-O-R model is its flexibility and potential to examine a wide range of stimuli, both internal and external (Zhang et al., 2022).

S-O-R consists of three main components: stimulus, organism, and response (Li et al., 2022). The stimulus refers to external factors that influence an individual's internal state when exposed to outside triggers (Herlina, 2023). According to Lee & Chen (2021), a stimulus is a trigger that initiates individual perception and subsequently influences the individual's response. The organism represents the internal processes that link external stimuli to final responses. At this stage, external stimuli are processed into information that serves as the foundation for subsequent behavior (Huang & Suo, 2021). Additionally, Herlina (2023) notes that the organism reflects an individual's internal state, represented by affective and cognitive conditions. The final component in the S-O-R model is the response, which refers to the resulting behavior of either approaching or avoiding the stimulus object. This includes both psychological and behavioral responses (Huang & Suo, 2021). Responses encompass the decisions made by consumers after processing information (Zhang et al., 2022).

In this study, the S-O-R model is used to explain how time pressure and promotional pricing act as stimuli, with perceived enjoyment serving as the mediating organism, and impulsive buying as the resulting response. The S-O-R framework provides a suitable perspective for understanding the mechanisms of impulsive buying through live streaming (Li et al., 2022). Thus, this theoretical foundation offers an appropriate analytical framework to address the research question: the influence of time pressure and promotional pricing during live streaming on impulsive buying behavior among Gen Z.

2.2 Hypotheses development

2.2.1 Time Pressure to Perceived Enjoyment and Impulse Buying

In previous studies, there has been a positive relationship between time pressure and perceived enjoyment in TikTok live streaming. According to Sun et al. (2023), consumers experience time pressure due to limited-time promotions conducted by sellers. This has sparked growing academic interest in exploring the relationship between time pressure and impulsive buying behavior. In the study by Cui et al. (2022), time pressure was found to directly influence the desire to make impulsive purchases. However, research by Omar & Dewar (2024) found that time pressure did not have a significant effect on impulsive buying behavior during live streaming. Therefore, this study aims to examine how time pressure affects perceived enjoyment in TikTok live streaming. Based on this explanation, the following hypothesis are proposed.

$H_{1a.}$ Time pressure has an effect on perceived enjoyment in TikTok live streaming.
$H_{1b.}$ Time pressure has an effect on impulse buying in TikTok live streaming.

2.2.2 Promotional Pricing to Perceived Enjoyment and Impulse Buying

Promotional pricing is one of the factors that has a positive effect on perceived enjoyment during TikTok live streaming. In the study by Omar & Dewar (2024), it was found that promotional pricing influenced Gen Z's impulsive buying behavior. This statement is supported by Sanjaya et al. (2023), who stated in their research that promotional pricing and time-limited offers have a positive and significant effect on impulsive buying. Based on these previous studies, this research will re-examine how promotional pricing influences perceived enjoyment in TikTok live streaming. Based on this explanation, the following hypothesis are proposed.

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$H_{2a.}$ Promotional pricing has an effect on perceived enjoyment in TikTok live streaming.
$H_{2b.}$ Promotional pricing has an effect on impulse buying in TikTok live streaming.

2.2.3 Perceived Enjoyment and Impulse Buying

In prior research, perceived enjoyment has shown a positive influence on impulse buying. A study by Herlina (2023) indicated a positive impact of perceived enjoyment on impulsive buying behavior. As positive emotions increase when using online platforms, the likelihood of consumers making impulsive purchases also rises (Herlina, 2023). These findings are supported by Lee & Chen (2021), who also found a positive relationship between perceived enjoyment and impulsive buying. Therefore, this study aims to examine the influence of perceived enjoyment in TikTok live streaming on impulse buying. Based on this explanation, the following hypothesis is proposed.

$H_{3.}$ Perceived enjoyment has an effect on impulse buying in TikTok live streaming.

2.2.4 Time Pressure and Promotional Pricing to Impulse Buying Through Perceived Enjoyment

Time pressure on consumers comes from the limited duration of promotional offers and the perceived opportunity cost (Sun et al., 2023). Moreover, according to Sanjaya et al. (2023), consumers have limited time to make a purchase decision due to time limit in live streaming selling, therefore promotion time limit is linked to time pressure. Perceived enjoyment refers to customer's level of satisfaction during shopping online. According to Cui et al. (2022), time pressure can directly influence impulse buying, although it was also stated that other possible mediators need to be explored, such as perceived enjoyment. Research by Omar & Dewar (2024) found that perceived enjoyment mediates a relationship between promotional pricing and impulse buying, although it was also discovered that promotional pricing can influence impulse buying directly. In prior research by Herlina (2023), it was discovered that there is positive influence of perceived enjoyment toward impulse buying. Therefore, the following hypothesis are proposed.

$H_{4a.}$ *Perceived enjoyment meditates the relationship between time pressure and impulse buying.*
$H_{4a.}$ *Perceived enjoyment meditates the relationship between promotional pricing and impulse buying.*

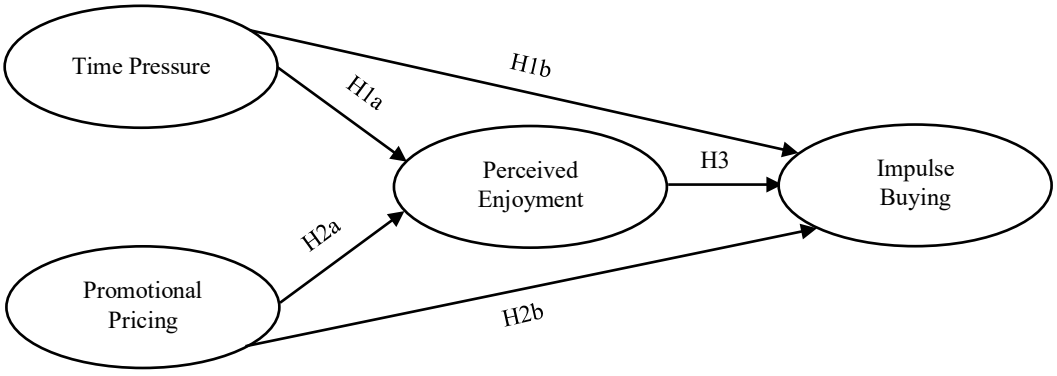

Figure 1: Research Model

3. METHODOLOGY

3.1 Research Design

This study was conducted using a quantitative research method. Quantitative research involves the collection of numerical data and analytical techniques to test hypotheses, draw conclusions, and understand the relationships between the studied variables (Susanto et al., 2024). Through the quantitative method, researchers are able to understand the connections between variables in a structured and reliable manner (Amruddin et al., 2022). Previous studies using the quantitative approach have formulated hypotheses to experimentally test whether the proposed theory is supported, either by accepting or rejecting the hypothesis (Omar & Dewar, 2024). Therefore, the quantitative approach is used in this research to explain the relationships between the variables being studied.

3.2 Research Instrument

Data for this study were collected through an online questionnaire distributed via Google Forms using purposive sampling to respondents who met the sampling criteria. Once the data were collected, validity and reliability tests were conducted to ensure that the data were valid and suitable for addressing the research problem. Next, classical assumption tests, including residual normality and linearity tests, were carried out to ensure that the regression model met statistical

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requirements. Finally, path analysis was performed using statistical software such as SPSS version 26 to examine the influence of each variable.

To measure the variables in this study, a structured questionnaire was developed based on established indicators from previous research. The questionnaire items were based on the variables of time pressure, promotional pricing, perceived enjoyment, and impulse buying.

Table 1
Operational Variable

No	Variabel	Definition	Indicator	Resource
1	Time Pressure (X_1)	Time pressure is a subjective perception of the limited or scarce time available to facilitate the decision-making process (Sun et al., 2023).	[TW1] I feel that the promotion time determined by the host is usually short. [TW2] I feel that promotional items purchased through live streaming have already run out of time. [TW3] I feel that the promotional items are very good, and I regret not buying them because others took them. [TW4] I feel that the quantity of promotional items is very limited; if I don't buy them, others will. [TW5] I feel that the opportunity to buy items in the live room quickly passes and it would be a pity if I don't buy them.	(Sun et al., 2023)
2	Promotional Pricing (X_2)	Promotional pricing is a temporary price change offered by the seller (Sanjaya et al., 2023).	[HP1] I am easily attracted to promotional prices. [HP2] I buy products from TikTok live streaming due to the promotional prices. [HP3] I buy products from TikTok live streaming because they are cheap and of good quality. [HP4] I buy products from TikTok live streaming at prices that match the quality. [HP5] Promotional prices offered by streamers on TikTok live streaming are more profitable than other platforms. [HP6] Discounts on the TikTok live streaming platform are more appealing than on others.	Liu (2016); Wongsunopparat & Deng (2021) on (Sanjaya et al., 2023)
3	Perceived Enjoyment (M)	Perceived enjoyment is the intrinsic motivation that determines how much enjoyment can be obtained from using information technology or service (Herlina, 2023).	[PE1] The influencer grabs my attention. [PE2] The influencer is knowledgeable. [PE3] The influencer gives me a good feeling. [PE4] The influencer is experienced. [PE5] The influencer is engaged with the audience.	Chao & Chen, 2021; on (Herlina, 2023)

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4	Impulse Buying (Y)	Impulse buying is consumer behavior where they spend money on products they do not need. They buy solely because they are attracted to product attributes like brand, packaging, advertising, price, etc. (Herlina, 2023).	[PI1] While watching live streaming shopping, I often buy things spontaneously. [PI2] While watching live streaming shopping, I often buy things without thinking. [PI3] While watching live streaming shopping, I often buy based on how I feel at that moment. [PI4] While watching live streaming shopping, I tend to buy things outside of my initial shopping goals. [PI5] In the end, I spend more than I originally planned.	Li et.al, 2022; on (Herlina, 2023)

4. RESULT

4.1 Demographic Characteristics

This study received responses from 232 respondents, all of whom were Generation Z born between 1995 and 2012 (Fitri et al., 2025), and all of whom had watched and purchased products through TikTok Live. Based on gender, the majority of respondents were female (52%), while male respondents were 48%. The most dominant age group was 17–20 years (31%), followed by the age groups 13–16 years, 21–24 years, and 25–28 years, each of which was 23%. In terms of viewing duration, most respondents watched for 4–5 hours (26%) and less than 1 hour (26%), this number shows two behavioral patterns, namely users who only watch briefly and users who watch for a long time. The highest viewing time is at night (23%) and midnight (23%), this figure shows that users are more active in watching live after productive hours.

Table 2
Demographic Characteristics

Profile	n	%
Were you born between 1995 and 2012?		
Yes	232	100
No	0	0
Total	**232**	**100**
Have you ever watched and purchased products on TikTok Live?		
Yes	232	100
No	0	0
Total	**232**	**100**
Gender		
Man	112	48
Woman	120	52
Total	**232**	**100**
Age		
13-16 years	53	23
17-20 years	73	31
21-24 years	53	23
25-28 years	53	23
Total	**232**	**100**
TikTok Live Watch Duration		
< 1 hour	60	26
2-3 hours	55	24
4-5 hours	61	26
> 5 hours	56	24
Total	**232**	**100**
TikTok Live Watch Time		
Morning	32	14
Afternoon	45	19
Afternoon	48	21
Evening	54	23
Midnight	53	23
Total	**232**	**100**

Source: Data Processing, 2025

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4.2 Validity and Reliability

Validity testing is a method used to obtain information regarding the questionnaire being used that is truly valid so that it can be used to measure the variables to be studied (Al Hakim et al., 2021). The formula for the validity test is df = n - 2, where n is the number of samples. Based on this calculation, the result is 0.128. Meanwhile, the reliability test functions to determine the level of consistency of a questionnaire used by researchers (Al Hakim et al., 2021). In this study, the reliability test was carried out using Cronbach's alpha. Each variable needs to have a Cronbach's alpha value greater than 0.6, to show its reliability in the study.

Table 3
Validity and Reliability Test

#	Variable	Items	Correlation	Cronbach's Alpha
1.	Time Pressure	TW1	.512	.852
		TW2	.484	.853
		TW3	.465	.853
		TW4	.443	.854
		TW5	.465	.853
2.	Promotional Price	HP1	.369	.857
		HP2	.505	.852
		HP3	.499	.852
		HP4	.372	.857
		HP5	.403	.856
		HP5	.462	.854
		HP6	.483	.853
3.	Perceived Enjoyment	PE1	.485	.853
		PE2	.361	.857
		PE3	.358	.857
		PE4	.570	.849
		PE5	.471	.853
4.	Impulse Buying	IB1	.427	.855
		IB2	.318	.859
		IB3	.441	.854
		IB4	.350	.858
		IB5	.512	.852

Source: Data Processing, 2025

4.3 Normality Test

Residual normality is one of the assumptions in regression analysis which states that the residual distribution must follow a normal distribution. One way to test residual normality is with the Kolmogorov-Smirnov Test, which tests whether the residuals are normally distributed. If the p-value is > 0.05, then the residuals are considered normal.

Table 4
Normality Test

		Unstandardized Residual
N		193
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.54992626
Most Extreme Differences	Absolute	.068
	Positive	.052
	Negative	-.068
Test Statistic		.068
Asymp. Sig. (2-tailed)		.030[c]

Source: Data Processing, 2025

4.4 Multicollinearity Test

Multicollinearity test was conducted to determine the correlation between independent variables. The table below shows the absence of multicollinearity in all variables, as indicated by the VIF value below 10 and the tolerance value above 0.01 (Sugiyono, 2020). This indicates that the variables can be used for the purposes of this study.

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Table 5
Multicollinearity Test

Model		Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)		4.700	.000		
	Time Pressure	.209	2.715	.007	.508	1.968
	Promotional Price	.073	.997	.320	.571	1.750
	Perceived Enjoyment	.343	4.326	.000	.479	2.086

Source: Data Processing, 2025

4.5 Autocorrelation Test

Autocorrelation test is conducted to determine the correlation and similarity between different time points in the sample data (Sugiyono, 2020). The acceptable range for the Durbin-Watson test is 1.5 to 2.5, where the Durbin-Watson value approaching 2 indicates a lower level of autocorrelation (Turner, 2020). The Durbin-Watson value for this study is 2.048, which indicates no autocorrelation. Therefore, the data can be used for this study.

Table 6
Autocorrelation Test

Model	Std. Error of the Estimate	Durbin-Watson
1	.67781	2.048

Source: Data Processing, 2025

4.6 Heteroscedasticity Test

The heteroscedasticity test is conducted to determine whether the sample data shows the same variance or shows high variation. This study uses the Glejser test to measure heteroscedasticity, and uses a threshold of 0.05 to measure the presence of heteroscedasticity (Sugiyono, 2020). All values in the Sig. column are above 0.05, indicating the absence of heteroscedasticity. The absence of heteroscedasticity indicates that the data can be used for this study.

Table 7
Heteroscedasticity Test

Model		Standardized Coefficients Beta	t	Sig.
1	(Constant)		4.831	.000
	Time Pressure	-.230	-2.499	.013
	Promotional Price	.046	.532	.595
	Perceived Enjoyment	.066	.702	.484

Source: Data Processing, 2025

4.7 F-Test

The F test is a statistical test conducted to compare the variance of two samples or the ratio of variance between many samples. The threshold used for the F-test is 0.05, where the Sig. value below 0.05 indicates that all independent variables collectively affect the dependent variable (Sugiyono, 2020). The table below shows that the value for the F- test is 0.000, which indicates that all independent variables in this study collectively affect the dependent variable.

Table 8
F-Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.287	3	15.762	34.308	.000[b]
	Residual	104.749	228	.459		
	Total	152.036	231			

Source: Data Processing, 2025
a. Dependent Variable: Impulse Buying
b. Predictors: (Constant), Perceived Enjoyment, Promotional Price, Time Pressure

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4.8 T-Test

The T-test is a statistical test conducted to compare the average values of two samples to determine whether there is a significant difference, as well as the nature of the relationship between the two. The threshold used for the T-test in this study is 0.05 for the Sig. value. A Sig. value of less than 0.05 indicates that the variable has a significant effect on the dependent variable (Sugiyono, 2020). The table below shows that all variables have an effect on the dependent variable.

Table 9
T-Test

Model		Unstandarized Coefficients B	Std. Error	Standarized Coefficients Beta	t	Sig.
1	(Constant)	1.153	.245		4.700	.000
	Time Pressure	.208	.077	.209	2.715	.007
	Promotional Price	.076	.077	.073	.997	.320
	Perceived Enjoyment	.373	.086	.343	4.326	.000

a. Dependent Variable: Impulse Buying
Source: Data Processing, 2025

4.9 R^2 Test

The R^2 test is a measure for the goodness-of-fit of a model on the training data (Staerk et al., 2024), and then according to (Eduardo & Nelly, 2024), R^2 test is used to determine the degree of how a given independent variable affects dependent variable. The R^2 is based on the squared correlation between predicted and observed values, which is usually ranged between 0 to 1 (Staerk et al., 2024). According to Table 9, the R^2 value is 0.435 and the Adjusted R^2 value is 0.426. This indicates that the independent variables in this study explain 43.5% of the variance in the dependent variable.

Table 10
R^2 Test

R Square	Adjusted R Square
.435	.426

Sumber: Data diolah (2023)

Furthermore, referring to the Baron and Kenny (1986) approach stated in research by (Eduardo & Nelly, 2024), the Sig. value and standardized beta coefficient are used for hypothesis testing, where a Sig. value of less than 0.05 indicates that the hypothesis is supported and the independent variable influences the corresponding dependent variable. In the second image, the t-value for all direct relationships (TP > PE, TP > IB, PP > PE, PP > IB, and PE > IB) has a Sig. value of 0.000, which is less than 0.05. This indicates that all direct relationship hypotheses are supported. Subsequently, the results show that there are mediation effects. For hypotheses H4a (TP > PE > IB) and H4b (PP > PE > IB), the decision indicates that both mediation hypotheses are supported (mediated), this indicates that perceived enjoyment mediates the relationship between time pressure and impulse buying. Similarly, perceived enjoyment also meditates the relationship between promotional pricing and impulse buying. The standardized coefficient beta for TP > PE > IB is 0.383, which means for every time pressure there is 0.383 standard deviation increase in Innovation in impulse buying through perceived enjoyment. Likewise, for PP > PE > IB, the standardized coefficient beta of 0.337 means for every one standard deviation increase in promotional pricing, there is a 0.337 standard deviation increase in impulse buying through perceived enjoyment.

Table 11
Direct and Indirect Relationships Between Variables

#	Relationship	Hypothesis	t	Sig.	Decision
1	TP > PE	$H1^a$	13.010	0.000	
2	TP > IB	$H1^b$	9.353	0.000	
3	PP > PE	$H2^a$	10.974	0.000	
4	PP > IB	$H2^b$	8.931	0.000	
5	PE > IB	H3	10.596	0.000	

Mediation Effect

#	Relationship	Hypothesis	Decision	Standardized Coefficient Beta
1	TP > PE > IB	H_{4a}		0,685 × 0,560 = 0,383
2	PP > PE > IB	H_{4b}		0,622 × 0,543 = 0,337

Source: Data Processing, 2025

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5. DISCUSSION

The results from the F test, with a Sig. value of 0.000, indicate that all independent variables in this study collectively affect the dependent variable. Furthermore, the R^2 value of 0.435, and an Adjusted R^2 value of 0.426, suggests that the independent variables explain 43.5% of the variance in the dependent variable. This indicates that time pressure, promotional pricing, and perceived enjoyment significantly contribute to the variance in impulse buying among Generation Z during TikTok live streaming.

This research chose the S-O-R (Stimulus-Organism-Response) theory to find the influence of time pressure and promotional pricing (stimuli) on perceived enjoyment (organism) and impulse buying (response) among Gen Z in TikTok live streaming. The S-O-R model is considered effective in explaining behavioural differences caused by various marketing stimuli and cognitive factors.

Regarding the individual hypotheses, the T-test results show that several variables have a significant effect on the dependent variable, as indicated by a Sig. value less than 0.05. Specifically, the direct relationships between Time Pressure > Perceived Enjoyment, Time Pressure > Impulse Buying, Promotional Pricing > Perceived Enjoyment, and Perceived Enjoyment > Impulse Buying were found to be significant, with Sig. values below 0.05. However, the relationship between Promotional Pricing > Impulse Buying was not significant, as the Sig. value was 0.320, which is greater than 0.05. This indicates that promotional pricing does not directly influence impulse buying among Gen Z in TikTok live streaming, although it may still have an indirect effect through perceived enjoyment.

This study discovered that time pressure has an effect on perceived enjoyment in TikTok live streaming. This aligns with previous studies indicating a positive relationship between time pressure and perceived enjoyment in TikTok live streaming. Consumers often experience time pressure due to limited-time promotions, which can enhance their enjoyment of the shopping experience. This research also find that time pressure has an effect on impulse buying in TikTok live streaming. This finding is consistent with research by (Cui et al., 2022) which found that time pressure directly influences the desire to make impulsive purchases. However, this finding contrasts with (Omar & Dewar, 2024), who found no significant effect of time pressure on impulsive buying during live streaming. The current study's findings suggest that for Gen Z, the perceived scarcity of time in TikTok live streams is a significant driver of unplanned purchases.

Secondly, this study discovered that promotional pricing is recognized as a factor that positively affects perceived enjoyment during live streaming. Additionally, it also discovered that promotional pricing has an effect on impulse buying in TikTok live streaming. This finding is consistent with (Omar & Dewar, 2024), who found that promotional pricing influenced Gen Z's impulsive buying behavior, and (Sanjaya et al., 2023) who stated that promotional pricing and time-limited offers have a positive and significant effect on impulsive buying. The attractiveness of reduced prices clearly stimulates impulsive purchases among Gen Z on TikTok Live.

Thirdly, this study found that perceived enjoyment has an effect on impulse buying in TikTok live streaming. This result aligns with prior research by (Herlina, 2023) and (Lee & Chen, 2021), both of whom indicated a positive impact of perceived enjoyment on impulsive buying behavior. As positive emotions increase when using online platforms, consumers are more likely to make impulsive purchases. This underscores the importance of the live streaming experience itself in driving impulse buying.

Lastly, this study also discovered that perceived enjoyment mediates the relationship between time pressure and impulse buying, and also between promotional pricing and impulse buying. For Time Pressure > Perceived Enjoyment > Impulse Buying (TP > PE > IB), the standardized coefficient beta is 0.383, indicating that for every one standard deviation increase in time pressure, there is a 0.383 standard deviation increase in impulse buying through perceived enjoyment. Similarly, for Promotional Pricing > Perceived Enjoyment > Impulse Buying (PP > PE > IB), the standardized coefficient beta is 0.337, meaning for every one standard deviation increase in promotional pricing, there is a 0.337 standard deviation increase in impulse buying through perceived enjoyment. This supports the notion that perceived enjoyment acts as a crucial internal state (organism) that processes external stimuli (time pressure and promotional pricing) into impulsive buying responses, as theorized by the S-O-R model. While previous research by (Cui et al., 2022) suggested the need to explore mediators like perceived enjoyment for time pressure's influence on impulse buying. (Omar & Dewar, 2024) also found that perceived enjoyment to mediate the relationship between promotional pricing and impulse buying, this study confirms these mediation roles within the context of TikTok live streaming among Gen Z.

6. CONCLUSION

This study conclusively demonstrates that time pressure and promotional pricing significantly influence impulse buying among Generation Z within the TikTok live streaming environment, both directly and indirectly through the mediation of perceived enjoyment. The robust statistical findings, including the F-test, R-squared value, and T-test results, affirm that all hypothesized direct relationships are supported, aligning with the S-O-R model where time pressure and promotional pricing act as stimuli, perceived enjoyment as the organism, and impulse buying as the response. Specifically, perceived enjoyment proves to be a vital mediator, translating the effects of time pressure and promotional pricing into an increased likelihood of impulse purchases. These insights are particularly relevant given the

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high engagement of Gen Z with social media and e-commerce platforms like TikTok Shop, underscoring the effectiveness of these marketing strategies in driving consumer behaviour in the digital era.

This study's findings on impulse buying among Gen Z in TikTok live streaming have several limitations. Firstly, the focus on a specific demographic and platform limits generalizability; future research should include diverse age groups and other e-commerce platforms. Secondly, only perceived enjoyment was explored as a mediator within the S-O-R model; future studies could investigate additional mediating or moderating variables like perceived scarcity, social interaction, or influencer credibility. Thirdly, reliance on self-report questionnaires may introduce bias; experimental designs or observational studies could provide more objective data. Lastly, a significant portion of impulse buying variance remains unexplained; future research should identify and incorporate other contributing factors, such as psychological states or peer influence.

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Conflict of interest
This study has no conflict of interest.

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