

What Makes Gen-Z Buy Without Thinking? The Impact of Arousal and Pleasure in TikTok Shop Live Streaming

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ABSTRACT

This study aims to analyze the influence of environmental stimuli in TikTok Shop Live Streaming on online impulsive buying behavior among Generation Z consumers, with arousal and pleasure as mediating emotional responses. The environmental stimuli examined include time pressure, quantity pressure, economic benefit, social influence, visual, and sound. Data were collected through an online questionnaire distributed to Generation Z users who have experience shopping via TikTok shop live streaming. A total of 300 valid responses were analyzed using SPSS for descriptive analysis and AMOS for Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The results indicate that time pressure, quantity pressure, economic benefit, social influence, and sound have a positive effect on arousal, while visual does not significantly affect arousal. Economic benefit, social influence, and visual have a positive effect on pleasure, whereas time pressure, quantity pressure, and sound do not significantly affect pleasure. Furthermore, arousal has a positive effect on online impulsive buying. These findings confirm the role of emotional responses in mediating the relationship between live streaming stimuli and impulsive buying behavior. The study provides insight for live streaming commerce platforms to design strategies that enhance emotional engagement while maintaining consumer comfort

Keywords: Online Impulsive Buying, Arousal, Pleasure

1. INTRODUCTION

The advancement of digital technologies and the widespread adoption of social media have substantially reshaped consumer purchasing behaviors, particularly within the online shopping environment. Among the emerging trends, online impulsive buying has attracted considerable attention, referring to unplanned purchase decisions that are triggered by immediate emotional responses rather than deliberate evaluation (Dittmar et al., 1995; Goel et al., 2024). The growth of this behavior has been further accelerated by the rise of live streaming commerce, a retail format that extends beyond conventional transactions by combining entertainment, social engagement, and immersive sensory experiences into the shopping process (Ngo et al., 2024; Shin, 2013). TikTok Shop Live Streaming has become one of the most prominent examples of live streaming commerce. Through this feature, consumers are exposed to various real-time marketing stimuli, such as time pressure, quantity pressure, economic benefits, social influence, and sensory elements including visual and auditory cues. These stimuli create an immersive shopping environment that can influence consumers' emotional responses and purchasing decisions.

These stimuli are strategically designed to create a sense of urgency, attract consumer attention, and foster a high level of emotional engagement throughout the shopping experience (Chen et al., 2023; Ngo et al., 2024). For Generation Z consumers, who are often characterized as digital natives, interactive, fast-paced, and entertaining shopping experiences are particularly appealing and may increase their propensity to engage in impulsive purchasing behavior (Goel et al., 2024; Lamis et al., 2022). This phenomenon can be explained through the Stimulus–Organism–Response (S-O-R) framework, which posits that environmental stimuli influence an individual's internal state (organism), such as emotional responses, before ultimately leading to a behavioral outcome (Dittmar et al., 1995; Mehrabian & Russell, 1974). Within the context of live streaming commerce, marketing stimuli serve as external triggers that evoke arousal (emotional activation) and pleasure (feelings of enjoyment), which subsequently increase the likelihood of online

impulsive buying (Liu et al., 2020; Ngo et al., 2024). Accordingly, arousal and pleasure are regarded as key psychological mechanisms that mediate the relationship between external stimuli and impulsive purchasing behavior.

Previous studies have investigated the effects of various digital shopping stimuli on consumers' emotional responses and impulsive purchasing behavior; however, the findings remain inconclusive. Ngo et al. (2024) and Chen et al. (2023) reported that stimuli such as time pressure, social influence, visual cues, and sound can enhance consumers' levels of arousal and pleasure, thereby encouraging impulsive buying behavior. In contrast, Lamis et al. (2022) found that certain stimuli do not significantly influence pleasure in specific contexts, as consumers tend to prioritize utilitarian considerations over hedonic experiences. Furthermore, DeVoe and Pfeffer (2011) and Maule et al. (n.d.) argued that while time pressure and rapid decision-making situations may increase arousal, they can simultaneously diminish the quality of consumers' emotional experiences. These inconsistent findings indicate a research gap regarding the extent to which live-streaming-related stimuli influence arousal, pleasure, and impulsive buying behavior among Generation Z consumers.

The hypotheses were:

H1: Time Pressure positively affects arousal among Generation Z consumers.

H2: Time Pressure negatively affects pleasure among Generation Z consumers.

H3: Quantity Pressure positively affects arousal among Generation Z consumers.

H4: Quantity Pressure negatively affects pleasure among Generation Z consumers.

H5: Economic Benefit positively affects arousal among Generation Z consumers.

H6: Economic Benefit positively affects pleasure among Generation Z consumers.

H7: Social Influence positively affects arousal among Generation Z consumers.

H8: Social Influence positively affects pleasure among Generation Z consumers.

H9: Visual Stimulus positively affects arousal among Generation Z consumers.

H10: Visual Stimulus positively affects pleasure among Generation Z consumers.

H11: Sound Stimulus positively affects arousal among Generation Z consumers.

H12: Sound Stimulus positively affects pleasure among Generation Z consumers.

H13: Arousal positively affects pleasure among Generation Z consumers.

H14: Arousal positively affects online impulsive buying behavior among Generation Z consumers.

H15: Pleasure positively affects online impulsive buying behavior among Generation Z consumers.

2. RESEARCH METHODS

This study employs a basic causal research design to examine the cause-and-effect relationships between marketing stimuli in TikTok Shop live streaming and consumers' emotional responses, and their subsequent impact on online impulse buying behavior. Grounded in the Stimulus–Organism–Response (S-O-R) framework, the study incorporates six exogenous variables—time pressure, quantity pressure, economic benefit, social influence, visual cues, and sound cues—and three endogenous variables: arousal, pleasure, and online impulse buying. A quantitative approach was adopted, with data collected through an online survey using a structured questionnaire. The measurement items were adapted from Ngo et al. (2024) and assessed using a five-point numeric scale.

The target population consists of Generation Z consumers in Indonesia who have previously purchased products through TikTok Shop live streaming, possess at least a high school education (or equivalent), and have engaged in impulse buying at least once while shopping via TikTok Shop live streaming. A purposive sampling technique was employed to select eligible participants, resulting in a final sample of 300 respondents.

3. RESULT AND DISCUSSIONS

At the preliminary stage of the study, validity and reliability tests were conducted using data from 30 respondents. Validity was assessed using the Pearson correlation method. An indicator was considered valid if it achieved a Pearson correlation coefficient of at least 0.50 and a significance value of no more than 0.05. The results indicated that all indicators across the constructs—time pressure, quantity pressure, economic benefit, social influence, visual, sound, arousal, pleasure, and online impulsive buying—met these criteria and were therefore deemed valid. Reliability testing further demonstrated that all constructs were reliable, with Cronbach's alpha values exceeding the recommended threshold of 0.70. After establishing the validity and reliability of the measurement instrument, the questionnaire was distributed on a larger scale to collect the main dataset. A total of 300 valid responses were obtained, all of which satisfied the study's predetermined criteria.

The measurement model was evaluated using Confirmatory Factor Analysis (CFA) with the assistance of AMOS Graphics 23. Model fit was assessed using several Goodness-of-Fit (GoF) indices. The criteria applied were: (1) $CMIN/DF \leq 3.00$, (2) $RMSEA \leq 0.08$, and (3) GFI, CFI, and TLI values between 0.80 and 0.90, indicating marginal fit, while values of 0.90 or above indicate good fit. Overall, the measurement model demonstrated an acceptable level of fit. The CMIN/DF, RMSEA, CFI, and TLI values satisfied the criteria for good fit, whereas the GFI value fell within the marginal fit range. These findings were further supported by the standardized factor loadings, all of which exceeded 0.50, with the majority surpassing 0.80. This indicates that all measurement items possessed satisfactory validity and reliability.

After the measurement model was deemed satisfactory, the analysis proceeded to structural model testing to evaluate the proposed hypotheses. Of the fifteen hypotheses tested, eleven were supported and found to be significant at the 90% confidence level ($\alpha = 10\%$). The positive and significant relationships identified were: the effects of time pressure on arousal, quantity pressure on arousal, economic benefit on arousal, economic benefit on pleasure, social influence on arousal, social influence on pleasure, visual stimulus on pleasure, sound stimulus on arousal, arousal on pleasure, arousal on online impulsive buying, and pleasure on online impulsive buying. In contrast, the relationships between visual stimulus and arousal, and between sound stimulus and pleasure, were positive but not statistically significant. Furthermore, the effects of time pressure on pleasure and quantity pressure on pleasure were negative; however, neither relationship was statistically significant.

Table 1. *Goodness of Fit Model SEM*

No.	Goodness of Fit	Criteria	Result	
1	CMIN/DF	$\leq 3,00$	1,383	<i>Good Fit</i>
2	RMSEA	$\leq 0,08$	0,036	<i>Good Fit</i>
3	GFI	<i>Marginal Fit (0,8 – 0,9)</i> <i>Good Fit ($\geq 0,9$)</i>	0,870	<i>Marginal Fit</i>
4	CFI		0,973	<i>Good Fit</i>
5	TLI		0,970	<i>Good Fit</i>

Based on Table 1, the *Goodness of Fit* (GoF) showed CMIN/DF, RMSEA, CFI, and TLI were a *good fit*, but GFI was a *marginal fit*.

Table 2. *Hypotheses Test*

Hypotheses		Standardized Estimate	C.R.	P-value	Result
H1 (+)	<i>Time Pressure</i> → <i>Arousal</i>	0,176	3,319	***	Accepted
H2 (-)	<i>Time Pressure</i> → <i>Pleasure</i>	-0,087	-1,562	0,118	Not Accepted
H3 (+)	<i>Quantity Pressure</i> → <i>Arousal</i>	0,141	2,632	0,008	Accepted
H4 (-)	<i>Quantity Pressure</i> → <i>Pleasure</i>	0,077	1,380	0,168	Not Accepted
H5 (+)	<i>Economic Benefit</i> →	0,204	5,589	***	Accepted

	<i>Arousal</i>				
H6 (+)	<i>Economic Benefit → Pleasure</i>	0,113	1,894	0,058	Accepted
H7 (+)	<i>Social Influence → Arousal</i>	0,265	4,957	***	Accepted
H8 (+)	<i>Social Influence → Pleasure</i>	0,288	4,788	***	Accepted
H9 (+)	<i>Visual → Arousal</i>	0,053	0,932	0,351	Not Accepted
H10 (+)	<i>Visual → Pleasure</i>	0,203	3,448	***	Accepted
H11 (+)	<i>Sound → Arousal</i>	0,310	5,476	***	Accepted
H12 (+)	<i>Sound → Pleasure</i>	-0,082	-1,320	0,187	Not Accepted
H13 (+)	<i>Arousal → Pleasure</i>	0,431	5,103	***	Accepted
H14 (+)	<i>Arousal → Online Impulsive Buying</i>	0,547	6,921	***	Accepted
H15 (+)	<i>Pleasure → Online Impulsive Buying</i>	0,227	3,001	0,003	Accepted

Based on Table 2, the hypothesis testing results indicate that **time pressure** has a positive and significant effect on **arousal** (standardized estimate = 0.176; C.R. = 3.319; $p < 0.001$), but does not have a significant effect on **pleasure** (standardized estimate = -0.087; C.R. = -1.562; $p = 0.118$). Similarly, quantity pressure has a positive and significant effect on arousal (standardized estimate = 0.141; C.R. = 2.632; $p = 0.008$), but does not significantly affect pleasure (standardized estimate = 0.077; C.R. = 1.380; $p = 0.168$).

Furthermore, economic benefit has a positive and significant effect on both **arousal** (standardized estimate = 0.204; C.R. = 3.589; $p < 0.001$) and **pleasure** (standardized estimate = 0.113; C.R. = 1.894; $p = 0.058$). **Social influence** also demonstrates positive and significant effects on both arousal (standardized estimate = 0.265; C.R. = 4.957; $p < 0.001$) and pleasure (standardized estimate = 0.288; C.R. = 4.788; $p < 0.001$).

Regarding the sensory variables, visual stimuli do not have a significant effect on arousal (standardized estimate = 0.053; C.R. = 0.932; $p = 0.351$), but they exert a positive and significant effect on pleasure (standardized estimate = 0.203; C.R. = 3.448; $p < 0.001$). In contrast, sound stimuli have a positive and significant effect on arousal (standardized estimate = 0.310; C.R. = 5.476; $p < 0.001$), but do not significantly influence **pleasure** (standardized estimate = -0.082; C.R. = -1.320; $p = 0.187$).

Moreover, the findings reveal that **arousal** has a positive and significant effect on **pleasure** (standardized estimate = 0.431; C.R. = 5.103; $p < 0.001$). In addition, arousal positively and significantly influences online impulsive buying (standardized estimate = 0.547; C.R. = 6.921; $p < 0.001$). Likewise, pleasure has a positive and significant effect on online impulsive buying (standardized estimate = 0.227; C.R. = 3.001; $p = 0.003$).

Hypothesis H2 is not accepted, meaning Time Pressure is not effective in creating a sense of urgency; excessive time pressure may reduce consumers' shopping enjoyment. Hypothesis H4 is not accepted, meaning Quantity Pressure resulting from limited product availability can not create anxiety and diminish the hedonic value of the shopping experience. Hypothesis H9 is not accepted, meaning Visual elements such as lighting, layout design, and product display quality serve as sensory stimuli that do not capture consumers' attention and enhance their level of arousal. Hypothesis H12 is not accepted, meaning Sound that is aligned with the visual context and brand identity can not create an enjoyable shopping atmosphere and enhance consumers' sense of pleasure.

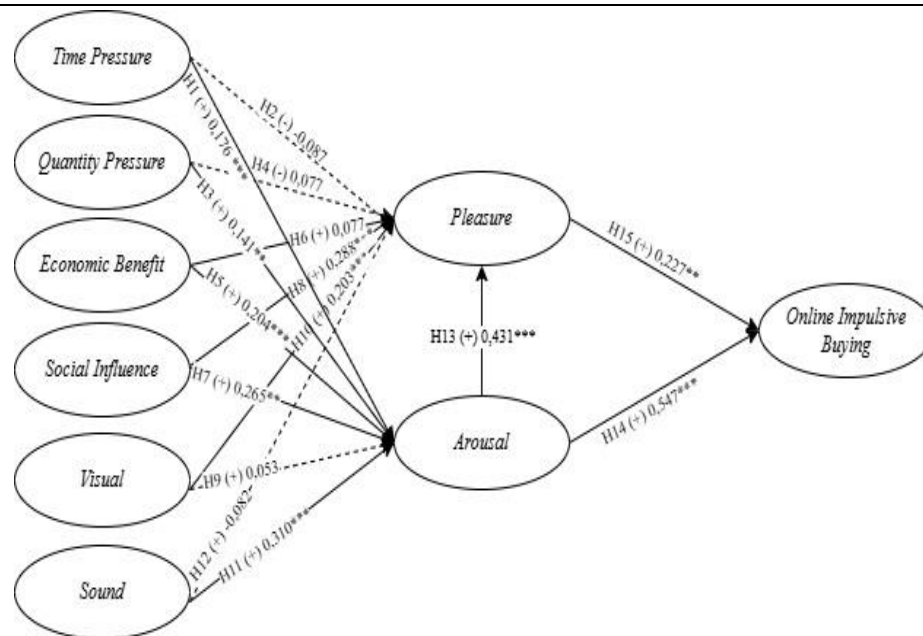


Figure 1. Research Result Model

Source: data processed

4. CONCLUSIONS

Based on the results of the data processing and analysis, several conclusions can be drawn. First, the findings indicate that time pressure and quantity pressure have a significant positive effect on arousal. This suggests that limited-time offers and restricted product availability presented during live streaming can effectively increase consumers' emotional stimulation. However, neither variable was found to significantly enhance pleasure, and quantity pressure even showed a tendency toward a negative effect on pleasure. Second, economic benefit and social influence were found to have significant positive effects on both arousal and pleasure. These findings suggest that economic incentives, such as discounts and promotional offers, as well as social influences, including reviews and recommendations, are capable of generating positive emotional responses and enhancing consumers' enjoyment during the shopping experience. These factors are capable of eliciting positive emotions while simultaneously enhancing consumers' emotional engagement during live streaming sessions.

Third, from the sensory stimulus perspective, visual elements were found to have a significant positive effect on pleasure but not on arousal, whereas sound had a significant positive effect on arousal but not on pleasure. This indicates that visual and auditory stimuli play distinct emotional roles in shaping consumers' shopping experiences.

Fourth, the results reveal that arousal has a significant positive effect on pleasure. Furthermore, both arousal and pleasure were found to have significant positive effects on online impulsive buying. These findings confirm that consumers' emotional states serve as important mechanisms that mediate the relationship between live-streaming stimuli and impulsive purchasing behavior.

Overall, this study demonstrates that online impulsive buying behavior in TikTok Shop Live Streaming is influenced by a combination of environmental stimuli and consumers' emotional states. The findings highlight the importance of both marketing stimuli and emotional responses in driving impulsive purchase decisions within the live-streaming shopping environment.

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