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The Influence of Emotional Arousal and Fear of Missing Out (FOMO) on Virtual Gifting Intention

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ABSTRACT

This study aims to examine the effects of Emotional Arousal and Fear of Missing Out (FOMO) on Virtual Gifting Intention among TikTok Live users, with Impulsive Buying as a mediating variable and Islamic Self-Control as a moderating variable based on the Stimulus–Organism–Response (SOR) theory. This study employed a quantitative approach using primary data from 100 Muslim Generation Z TikTok Live users selected through purposive sampling. Data were analyzed using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach through SmartPLS 4. The findings indicate that Emotional Arousal has a positive and significant effect on Impulsive Buying, whereas FOMO has no significant effect on Impulsive Buying. Furthermore, FOMO and Impulsive Buying have positive and significant effects on Virtual Gifting Intention, while Emotional Arousal has no direct effect. Impulsive Buying mediates the relationship between Emotional Arousal and Virtual Gifting Intention, but does not mediate the relationship between FOMO and Virtual Gifting Intention. Meanwhile, Islamic Self-Control does not moderate the relationship between Impulsive Buying and Virtual Gifting Intention. The model demonstrates moderate explanatory power in explaining Virtual Gifting Intention among TikTok Live users.
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1. INTRODUCTION

The rapid development of digital technology has transformed the way people interact, communicate, and engage in economic activities (Ridlwan et al., 2025; Timur et al., 2024). One of the platforms that has experienced significant growth in recent years is TikTok. Initially recognized as a short-video entertainment platform, TikTok has evolved into a digital ecosystem that supports various economic activities through interactive features that facilitate transactions between users and content creators (Gerbaudo, 2026). Data indicate that TikTok had a potential advertising reach of 108 million users aged 18 years and above in Indonesia in early 2025, making Indonesia one of the largest TikTok markets in the world. This large user base demonstrates that TikTok is no longer merely an entertainment platform but has become an integral part of the digital economy that influences consumer behavior (Baumann et al., 2026). Furthermore, the live streaming feature, which enables real-time interaction between creators and viewers, has fostered a new digital economic model that allows users to engage in various forms of virtual transactions directly (Shao, 2026).



Figure 1. TikTok Users in Indonesia, 2025
Source: GoodStats (2025)

One of the emerging forms of transactions within the TikTok Live ecosystem is virtual gifting. Virtual gifting refers to the activity of purchasing virtual gifts with real money and sending them to creators during live streaming sessions (Aljarah et al., 2026). In addition to serving as a form of financial support for creators, virtual gifting functions as a means of self-expression, appreciation, and social connection between viewers and creators (Li et al., 2026). Interestingly, users are willing to spend real money on virtual gifts despite receiving no direct economic benefits in return. This phenomenon suggests that the decision to send virtual gifts is not always based on rational considerations but may instead be influenced by emotional and psychological factors that arise during live-streaming interactions (Qiu & Klug, 2021; Zhang & Liu, 2024).

To explain this behavior, the present study adopts the Stimulus–Organism–Response (SOR) framework as discussed by Donovan and Rossiter (1982). This framework posits that environmental stimuli influence an individual's internal state (organism), which subsequently leads to a behavioral response (Susilowati et al., 2025). In the context of TikTok Live, various elements, such as real-time interactions with creators, engaging live-streaming

environments, social recognition, and the activities of other users, may serve as stimuli that trigger users' emotional and cognitive responses. These internal responses may subsequently be reflected in users' intentions to send virtual gifts to creators during live-streaming sessions (Russell & Mehrabian, 1977).

One psychological factor that may influence virtual gifting intention is emotional arousal. Emotional arousal refers to the level of emotional activation experienced by individuals when exposed to a particular stimulus. Within the live-streaming environment, users may experience excitement, enthusiasm, emotional engagement, and strong feelings of enjoyment while interacting with creators. Such emotional states may increase individuals' tendency to engage in spontaneous consumption as an expression of their emotions. Previous studies have shown that heightened emotional arousal can increase impulsive buying tendencies in digital environments (Li et al., 2022; Russell & Mehrabian, 1977).

In addition to emotional arousal, Fear of Missing Out (FOMO) has become an increasingly relevant factor in explaining social media users' behavior. FOMO refers to individuals' concerns about missing valuable experiences, information, or opportunities that others are enjoying. In the context of TikTok Live, users may feel encouraged to participate immediately in live-streaming activities when they observe other users actively interacting, sending virtual gifts, or receiving attention from creators. This fear of missing out may prompt individuals to make rapid consumption decisions without careful consideration (Przybylski et al., 2013; Zhang & Liu, 2024).

The relationship between emotional arousal, FOMO, and virtual gifting intention is expected to occur indirectly through specific psychological mechanisms. One such mechanism is impulsive buying. Impulsive buying refers to the tendency to make spontaneous purchases without prior planning, often driven by emotional states experienced at the moment. The interactive, dynamic, and real-time nature of live streaming enables users to purchase virtual gifts impulsively before eventually developing an intention to continue sending virtual gifts in the future. Therefore, impulsive buying is positioned as a mediating variable that explains how emotional arousal and FOMO influence virtual gifting intention (Li et al., 2022; Verplanken & Herabadi, 2001).

Although research on consumer behavior in live-streaming platforms has grown considerably in recent years, most previous studies have primarily focused on product purchasing behavior within the context of live commerce. In contrast, studies specifically examining virtual gifting behavior on TikTok Live remain relatively limited. Moreover, research investigating the effects of emotional arousal and Fear of Missing Out (FOMO) on virtual gifting intention through the mechanism of impulsive buying is still scarce, particularly among TikTok Live users in developing countries. Therefore, a significant research gap remains in understanding the psychological factors that drive users' intentions to send virtual gifts on live-streaming platforms (Li et al., 2022; Qiu & Klug, 2021; Zhang & Liu, 2024).

From the perspective of Islamic economics, consumer behavior is influenced not only by emotional and social factors but also by individuals' ability to regulate themselves in accordance with Islamic values. Islam emphasizes the principles of moderation (wasathiyah), self-control, and the prohibition of excessive consumption (Timur et al., 2025). Accordingly, individuals with higher levels of Islamic self-control are expected to be better able to regulate impulsive consumption than those with lower levels of self-control. Nevertheless, studies integrating modern psychological factors, such as emotional arousal, FOMO, and impulsive

buying, with the concept of Islamic self-control in the context of virtual gifting remain very limited. Such integration is essential to provide a more comprehensive understanding of digital consumption behavior among Muslim consumers by combining perspectives from modern consumer behavior and Islamic economics (Habib et al., 2020; Hoetoro & Hannaf, 2019; Sudana et al., 2025; Tangney et al., 2004).

Based on these considerations, this study is expected to contribute both theoretically and empirically to the literature on digital consumer behavior and Islamic economics. First, it integrates the Stimulus–Organism–Response (SOR) theory with the Islamic consumption perspective to explain virtual gifting behavior on TikTok Live. Second, it examines the mediating role of impulsive buying in the relationships between emotional arousal, Fear of Missing Out (FOMO), and virtual gifting intention. Third, it extends the Islamic economics literature by investigating Islamic self-control as a moderating variable in the relationship between impulsive buying and virtual gifting intention. Overall, this study is expected to provide a more comprehensive understanding of the digital consumption behavior of Muslim Generation Z within the live-streaming ecosystem in the digital economy era.

2. Literature Review

2.1 Stimulus-Organism-Response (SOR) Theory

This study adopts the Stimulus–Organism–Response (SOR) framework as discussed by Donovan and Rossiter (1982) as its primary theoretical foundation. The framework explains that individual behavior is formed through three main components: stimulus, organism, and response. Within the SOR framework, environmental stimuli do not directly generate behavioral responses; instead, they first influence individuals' internal psychological states, which subsequently determine their behavioral responses (Donovan & Rossiter, 1982). In digital environments, particularly on live-streaming platforms, various interactive features, such as real-time communication, the activities of other users, virtual reward systems, and interactions with creators, can serve as stimuli that influence users' psychological states. Li et al. (2022) demonstrated that stimuli in live-streaming environments enhance affective states, such as pleasure and emotional arousal, which subsequently encourage impulsive buying behavior. Therefore, the SOR framework provides an appropriate theoretical foundation for explaining how emotional arousal and Fear of Missing Out (FOMO) influence impulsive buying and virtual gifting intention among TikTok Live users (Li et al., 2022).

2.2 Virtual Gifting Intention

The rapid growth of live streaming has created new forms of digital interaction, one of which is virtual gifting. A virtual gift is a digital gift purchased using a platform's virtual currency, which is acquired with real money and sent to creators during live-streaming sessions as a form of support, appreciation, and social connection. According to Qiu and Klug (2021), virtual gifts on Douyin and TikTok serve not only as a monetization mechanism but also as a means of fostering social relationships between users and creators. Virtual gifting is often driven by social motivations, the need for recognition, and the desire to gain attention from creators (Qiu & Klug, 2021). Furthermore, Zhang and Liu (2024) argued that the intention to send virtual gifts is influenced by various psychological and social factors that emerge during live-streaming sessions. Intensive interactions between creators and viewers can

enhance emotional engagement, which in turn increases virtual gifting intention. Therefore, in this study, virtual gifting intention is defined as an individual's tendency to send virtual gifts to creators during TikTok Live sessions (Zhang & Liu, 2024).

2.3 Emotional Arousal

Emotional arousal refers to the level of emotional activation experienced by individuals after being exposed to a particular stimulus. This concept represents one of the core dimensions of the Stimulus–Organism–Response (SOR) framework, which explains how environmental stimuli influence individuals' affective states (Donovan & Rossiter, 1982). In the context of live streaming, emotional arousal may arise when users experience excitement, enthusiasm, emotional engagement, or interest in the content presented by creators. Real-time interactions enable users to have a more immersive experience than conventional digital media. Consequently, a higher level of emotional engagement may increase individuals' tendency to make spontaneous consumption decisions. Li et al. (2022) found that a high level of emotional arousal plays an important role in promoting online impulsive buying behavior in live-streaming environments. These findings suggest that the higher the level of emotional activation experienced by users, the greater their likelihood of engaging in spontaneous consumption behavior (Li et al., 2022).

2.4 Fear of Missing Out (FOMO)

Fear of Missing Out (FOMO) is a psychological condition characterized by the concern that individuals may miss out on valuable experiences enjoyed by others. Przybylski et al. (2013) defined FOMO as the anxiety that arises when individuals feel excluded from activities perceived as important or enjoyable within their social environment. This condition encourages individuals to remain continuously connected to ongoing online social activities (Przybylski et al., 2013). In the context of TikTok Live, FOMO may arise when users observe other users sending virtual gifts, receive information about exclusive rewards or interactions available only during live-streaming sessions, or witness creators giving special recognition to gift senders. Such situations may create psychological pressure that motivates individuals to participate in virtual gifting activities to avoid feeling left behind compared with other users. Qiu and Klug (2021) found that virtual gifting on live-streaming platforms is also influenced by social factors and interactions among users. Observing other users sending virtual gifts may encourage individuals to engage in similar behavior, thereby strengthening the tendency to participate in virtual gifting within live-streaming communities (Qiu & Klug, 2021).

2.5 Impulsive Buying

Impulsive buying refers to purchasing behavior that occurs spontaneously without prior planning (Hair et al., 2019). According to Verplanken and Herabadi (2001), impulsive buying is influenced not only by limited cognitive evaluation during the decision-making process but also by strong affective impulses that drive individuals to make rapid purchasing decisions without considering their long-term consequences. In the live-streaming environment, impulsive buying is more likely to occur because users are simultaneously exposed to various emotional and social stimuli. The real-time nature of TikTok Live enables users to complete transactions with only a few clicks, thereby limiting rational evaluation during the purchasing process. Li et al. (2022) demonstrated that emotional states, such as

emotional arousal, can increase the tendency toward online impulsive buying in live-streaming environments. From the perspective of the Stimulus–Organism–Response (SOR) theory, impulsive buying is conceptualized as the internal state (organism) that mediates the effects of emotional arousal and Fear of Missing Out (FOMO) on virtual gifting intention (Li et al., 2022).

2.6 Islamic Self-Control

From the perspective of Islamic economics, consumption activities are not solely intended to satisfy material needs but should also adhere to spiritual and ethical values. argued that the consumption behavior of Muslims should be guided by the principle of moderation and avoid excessive consumption (israf) and wastefulness (waste) (Putri et al., 2023). Balanced consumption is believed to promote greater well-being and happiness than excessive consumption . The concept of self-control refers to an individual's ability to regulate thoughts, emotions, and behaviors in accordance with long-term goals. Tangney et al. (2004) explained that individuals with higher levels of self-control are generally better able to regulate impulses, delay gratification, and avoid behaviors that may be harmful to themselves (Tangney et al., 2004). Within the context of Islamic economics, self-control is reflected in adherence to Islamic values in consumption activities. Hoetoro and Hannaf (2019) found that religiosity and self-control play important roles in reducing impulsive buying tendencies in online shopping (Hoetoro & Hannaf, 2019). Furthermore, Habib et al. (2020) reported that individuals with higher levels of religiosity tend to exhibit lower levels of impulsive buying (Habib et al., 2020).

These findings are further supported by Sudana et al. (2025), who demonstrated that Islamic values, such as qana'ah, the prohibition of israf, maslahah, zuhud, hisbah, and tawakal, play important roles in regulating Muslim consumer behavior in the digital era (Sudana et al., 2025). Therefore, Islamic self-control is conceptualized in this study as an individual's ability to regulate impulses, desires, and consumption behavior based on Islamic values, thereby limiting the influence of impulsive buying on virtual gifting intention among TikTok Live users.

2.7 Conceptual framework and hypothesis development

This study employs the Stimulus–Organism–Response (SOR) framework as discussed by Donovan and Rossiter (1982) as the theoretical foundation for explaining virtual gifting behavior on TikTok Live. The SOR framework posits that environmental stimuli influence an individual's internal psychological state (organism), which subsequently shapes specific behavioral responses (Donovan & Rossiter, 1982). In the context of live streaming, users are continuously exposed to various emotional and social stimuli, such as real-time interactions with creators, participation from other users, and virtual gifting activities, all of which may influence users' consumption behavior (Li et al., 2022)

Based on the SOR theory, this study positions Emotional Arousal and Fear of Missing Out (FOMO) as the stimulus variables. Emotional Arousal represents the level of emotional activation experienced when users engage in live-streaming activities, whereas FOMO reflects individuals' concerns about missing valuable experiences, opportunities, or social interactions (Przybylski et al., 2013). In the context of live-streaming commerce, FOMO has been identified

as one of the key psychological factors that encourages impulsive buying, as users are motivated to act immediately to avoid missing ongoing opportunities.

Furthermore, Impulsive Buying is positioned as the organism variable because it represents users' internal psychological responses to the emotional and social stimuli encountered while watching TikTok Live. Previous studies have shown that Emotional Arousal and FOMO can increase the tendency toward impulsive buying in digital and live-streaming environments (Li et al., 2022; Widodo, 2024). Meanwhile, Virtual Gifting Intention is positioned as the response variable, representing users' willingness to send virtual gifts to creators as a form of appreciation, support, and social engagement (Qiu & Klug, 2021; Zhang & Liu, 2024).

This study also incorporates Islamic Self-Control as a moderating variable. From an Islamic perspective, self-control functions as an internal mechanism that enables individuals to regulate consumption impulses and avoid excessive consumption. Individuals with higher levels of religiosity and spirituality tend to possess stronger self-regulation abilities, thereby reducing impulsive behavioral tendencies. However, recent studies suggest that Islamic self-control may not always be sufficient to weaken the influence of digital consumption stimuli, particularly in environments specifically designed to encourage rapid consumption decisions. Therefore, Islamic Self-Control is proposed in this study as a moderating variable that is expected to weaken the influence of Impulsive Buying on Virtual Gifting.

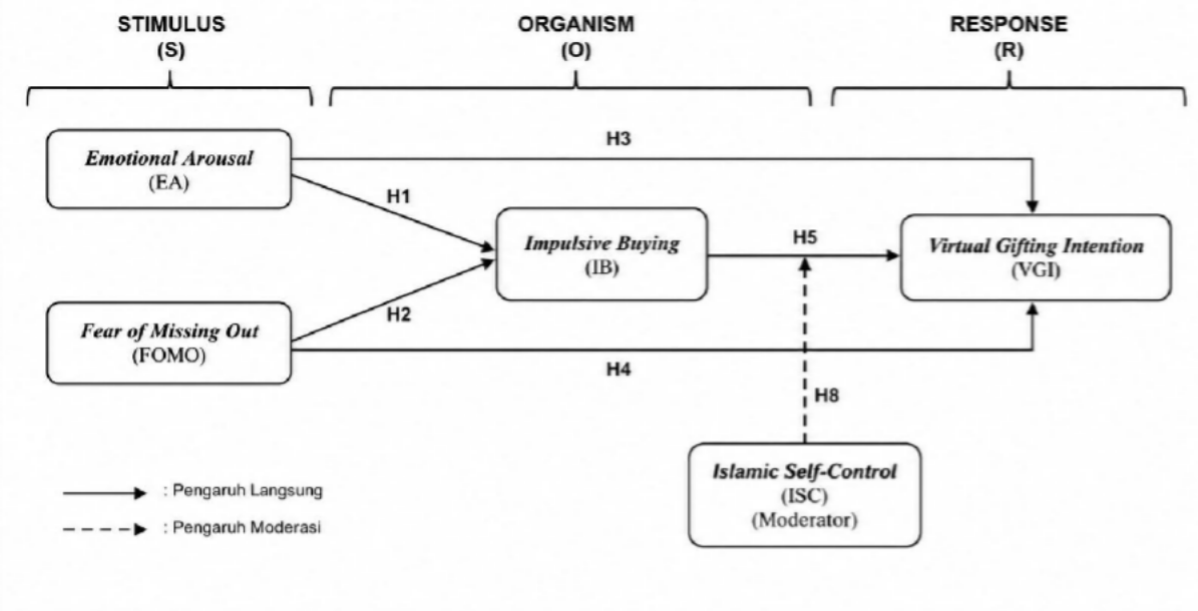


Figure 2. Conceptual framework
Source: Author's own

3. Methods

This study employed a quantitative approach with an explanatory research design to examine the effects of Emotional Arousal and Fear of Missing Out (FOMO) on Virtual Gifting Intention, with Impulsive Buying serving as the mediating variable and Islamic Self-Control as the moderating variable among TikTok Live users. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. The PLS-SEM approach was selected because it is capable of examining complex relationships among latent

constructs, including direct, mediating, and moderating effects within a single research model (Hair et al., 2019).

The research procedure is presented in Figure 3.

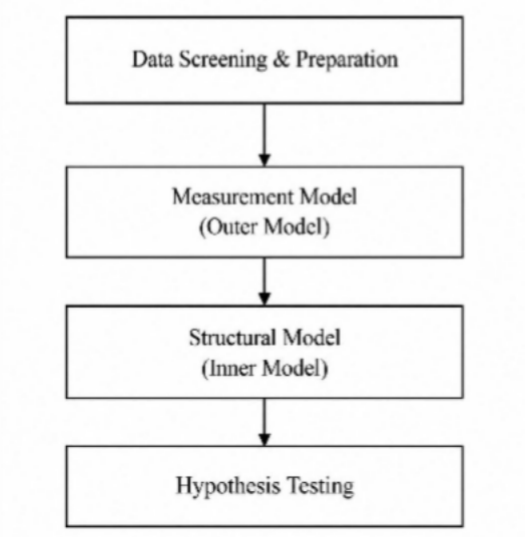


Figure 3. Research Method Procedure
Source: Author's own

The population of this study consisted of Muslim Generation Z TikTok Live users in Indonesia. A purposive sampling technique was employed based on the following criteria: (1) Muslim, (2) belonging to Generation Z, (3) having watched TikTok Live, and (4) being familiar with the virtual gift feature on TikTok Live. Data were collected through an online questionnaire distributed via Google Forms. A total of 109 responses were obtained. After the screening process, nine responses were excluded because the respondents had either never watched TikTok Live or were unfamiliar with the virtual gift feature. Consequently, the final sample comprised 100 valid respondents.

The research instrument was developed by adapting measurement indicators from previous studies. Emotional Arousal was measured using three indicators adapted from Li et al. (2022). Fear of Missing Out (FOMO) was measured using four indicators adapted from Przybylski et al. (2013). Impulsive Buying was measured using four indicators adapted from Verplanken and Herabadi (2001). Virtual Gifting Intention was measured using four indicators adapted from Qiu and Klug (2021) and Zhang and Liu (2024). Meanwhile, Islamic Self-Control was measured using four indicators developed based on the concepts of self-control and Islamic consumption, referring to Hoetoro and Hannaf (2019) and Tangney et al. (2004).

All indicators were measured using a five-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Data analysis was conducted in two stages: measurement model (outer model) evaluation and structural model (inner model) evaluation. The outer model was assessed by examining convergent validity through outer loadings and the Average Variance Extracted (AVE), discriminant validity using the Heterotrait–Monotrait Ratio (HTMT), and construct reliability using Cronbach's Alpha and Composite Reliability. Subsequently, the inner model was evaluated by examining the path coefficients, coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and hypothesis testing through the bootstrapping procedure (Hair et al., 2019).

4. RESULTS

4.1 Respondents' Profile and Descriptive Statistics

This study involved 100 valid respondents who met the research criteria, namely Muslim TikTok Live users belonging to Generation Z (aged 17–27 years), who were familiar with the virtual gift feature and had watched TikTok Live within the past three months. The respondents' characteristics included gender, age, educational level, domicile or activity in Surabaya, and experience of sending virtual gifts on TikTok Live, as presented in Table 1.

Table 1. Respondents' Profile and Descriptive Statistics

Variable	Category	Frequency	Percentage (%)
Gender	Male	37	37.0
	Female	63	63.0
Age	17–21 years	47	47.0
	22–27 years	53	53.0
Education Level	Senior High School	69	69.0
	Diploma (D3/D4)	2	2.0
	Bachelor's Degree (S1)	27	27.0
	Postgraduate (S2/S3)	2	2.0
Domicile/Activity in Surabaya	Yes	91	91.0
	No	9	9.0
Experience in Giving Virtual Gifts	Ever Given	77	77.0
	Never Given	23	23.0

Source: Author’s own work

As shown in Table 1, the majority of respondents were female, accounting for 63 respondents (63%), while 37 respondents (37%) were male. These findings indicate that female participation in this study on TikTok Live user behavior was relatively higher than that of male participants. In terms of age, most respondents were 22–27 years old, comprising 53 respondents (53%), whereas 47 respondents (47%) were 17–21 years old. This distribution indicates that the study was dominated by young adult Generation Z TikTok Live users.

Regarding educational attainment, the majority of respondents had completed senior high school or its equivalent, accounting for 69 respondents (69%), followed by those holding a bachelor's degree (S1) with 27 respondents (27%). Meanwhile, respondents with diploma (D3/D4) and postgraduate (S2/S3) qualifications each accounted for 2 respondents (2%). These results suggest that most TikTok Live users included in this study were students or university students. Based on respondents' domicile or place of study/work, 91 respondents (91%) were residing in or conducting their educational or work activities in Surabaya, while 9 respondents (9%) were located outside Surabaya. Although the study was not specifically restricted to the Surabaya area, these findings indicate that the majority of respondents originated from Surabaya and its surrounding areas.

Furthermore, regarding experience with the virtual gift feature, 77 respondents (77%) had previously sent virtual gifts on TikTok Live, whereas 23 respondents (23%) had never done so. These findings indicate that most respondents had prior experience using the virtual gift feature on TikTok Live. Moreover, all respondents met the study's eligibility criteria by being familiar with the virtual gift feature, indicating that they were capable of providing relevant evaluations of the constructs examined in this study.

4.2 Measurement model results

The measurement model was evaluated to assess the reliability and validity of the constructs employed in this study. The evaluation included internal consistency reliability, convergent validity, and discriminant validity. Construct reliability was assessed using Cronbach's Alpha and Composite Reliability (CR), whereas convergent validity was evaluated using the Average Variance Extracted (AVE) and outer loadings. A construct was considered reliable if both Cronbach's Alpha and Composite Reliability exceeded 0.70, while convergent validity was established when the AVE value was greater than 0.50 (Hair et al., 2019).

Table 2. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Emotional Arousal	0.775	0.870	0.693
Fear of Missing Out (FOMO)	0.840	0.892	0.675
Impulsive Buying	0.887	0.922	0.748
Islamic Self-Control	0.843	0.879	0.649
Virtual Gifting Intention	0.835	0.891	0.675

Source: Author's own work

As presented in Table 2, all constructs exhibited Cronbach's Alpha and Composite Reliability values above 0.70. In addition, all constructs achieved Average Variance Extracted (AVE) values exceeding 0.50. These results indicate that all constructs satisfied the recommended criteria for construct reliability and convergent validity (Hair et al., 2019).

Furthermore, convergent validity was also assessed by examining the outer loadings of each indicator. According to Hair et al. (2021), an indicator is considered to demonstrate adequate convergent validity when its outer loading exceeds 0.70. Nevertheless, outer loading values ranging from 0.60 to 0.70 are still considered acceptable, provided that the construct's Composite Reliability and AVE meet the recommended threshold values.

Table 3. Outer Loadings

Construct	Indicator	Loading
Emotional Arousal	EA1	0.899
	EA2	0.705
	EA3	0.879
Fear of Missing Out (FOMO)	FOMO1	0.809
	FOMO2	0.834
	FOMO3	0.812
	FOMO4	0.830
Impulsive Buying	IB1	0.832
	IB2	0.872
	IB3	0.897
	IB4	0.855
Islamic Self-Control	ISC1	0.745
	ISC2	0.701
	ISC3	0.936
	ISC4	0.820
Virtual Gifting Intention	VGI1	0.885
	VGI2	0.857
	VGI3	0.879
	VGI4	0.640

Source: Author's own work

As shown in Table 3, the outer loading values ranged from 0.640 to 0.936. Most indicators exhibited outer loading values above 0.70, indicating that they adequately reflected their respective constructs. Although VGI4 had an outer loading of 0.640, it was retained because its value remained above the minimum acceptable threshold, and the Virtual Gifting Intention construct satisfied the recommended criteria for construct reliability and convergent validity, with a Composite Reliability value of 0.891 and an Average Variance Extracted (AVE) of 0.675 (Hair et al., 2019). Therefore, all indicators were considered appropriate for inclusion in the subsequent analyses.

Discriminant validity was subsequently assessed using the Heterotrait–Monotrait Ratio (HTMT) approach. According to Hair et al. (2019), HTMT values below 0.90 indicate that the constructs demonstrate adequate discriminant validity.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

Construct Relationship	Construct Relationship
Emotional Arousal - Fear of Missing Out	0.933
Emotional Arousal - Impulsive Buying	0.718
Emotional Arousal - Islamic Self-Control	0.324
Emotional Arousal - Virtual Gifting Intention	0.621
Fear of Missing Out -Impulsive Buying	0.634
Fear of Missing Out - Islamic Self-Control	0.238
Fear of Missing Out - Virtual Gifting Intention	0.687
Impulsive Buying - Islamic Self-Control	0.159
Impulsive Buying - Virtual Gifting Intention	0.608
Islamic Self-Control - V Gifting Intention	0.226

Source: Author's own work

As presented in Table 4, most HTMT values were below the recommended threshold of 0.90. However, the relationship between Emotional Arousal and Fear of Missing Out (FOMO) yielded an HTMT value of 0.933, which slightly exceeded the conservative threshold. Nevertheless, both constructs were retained because they are conceptually distinct and demonstrated adequate construct reliability and convergent validity. Therefore, the measurement model was considered acceptable for subsequent analyses (Hair et al., 2019).

Overall, the results of the measurement model evaluation indicate that all constructs satisfied the recommended criteria for internal consistency reliability and convergent validity. In addition, most relationships among the constructs demonstrated adequate discriminant validity based on the HTMT values. Accordingly, the measurement model was deemed suitable for further analysis, and the study proceeded to the structural model evaluation and hypothesis testing (Hair et al., 2019).

4.3 Results and Structural model results

The structural model evaluation was conducted to assess the model's ability to explain the endogenous constructs examined in this study. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to analyze the effects of Emotional Arousal and Fear of Missing Out (FOMO) on Virtual Gifting Intention, with Impulsive Buying serving as the mediating variable and Islamic Self-Control as the moderating variable. The quality of the structural model was evaluated using the coefficient of determination (R^2) and adjusted R^2, following the recommendations of Hair et al. (2019). Table 5 presents the R^2 and adjusted R^2

values for the endogenous constructs. The R^2 value for Impulsive Buying was 0.386, indicating that Emotional Arousal and FOMO jointly explained 38.6% of the variance in Impulsive Buying, while the remaining 61.4% was explained by other factors outside the research model. This result indicates a moderate explanatory power of the model.

Furthermore, the R^2 value for Virtual Gifting Intention was 0.432, indicating that Emotional Arousal, FOMO, Impulsive Buying, Islamic Self-Control, and the moderating interaction effect collectively explained 43.2% of the variance in Virtual Gifting Intention, whereas the remaining 56.8% was attributable to factors not included in the research model. These findings suggest that the proposed model has a moderate explanatory capability in explaining users' intentions to send virtual gifts on TikTok Live. Overall, the coefficients of determination indicate that the research model demonstrates moderate explanatory power for both Impulsive Buying and Virtual Gifting Intention among TikTok Live users.

Table 5. Koefisien Determinasi R^2

konstruk	R-square	R-square adjusted
Impulsive Buying	0.386	0.374
Virtual Gifting Intention	0.432	0.404

Source: Author's own work

4.4 Hypothesis testing and path analysis

Hypothesis testing was conducted to evaluate the direct, mediating, and moderating relationships among the variables in the research model. The analysis was performed using the bootstrapping procedure in SmartPLS 4.0, taking into account the path coefficients, t-statistics, and p-values. A relationship was considered statistically significant if the p-value was less than 0.05 (Hair et al., 2019). The results of the hypothesis testing are presented in Figure 3, Table 6, and Table 7.

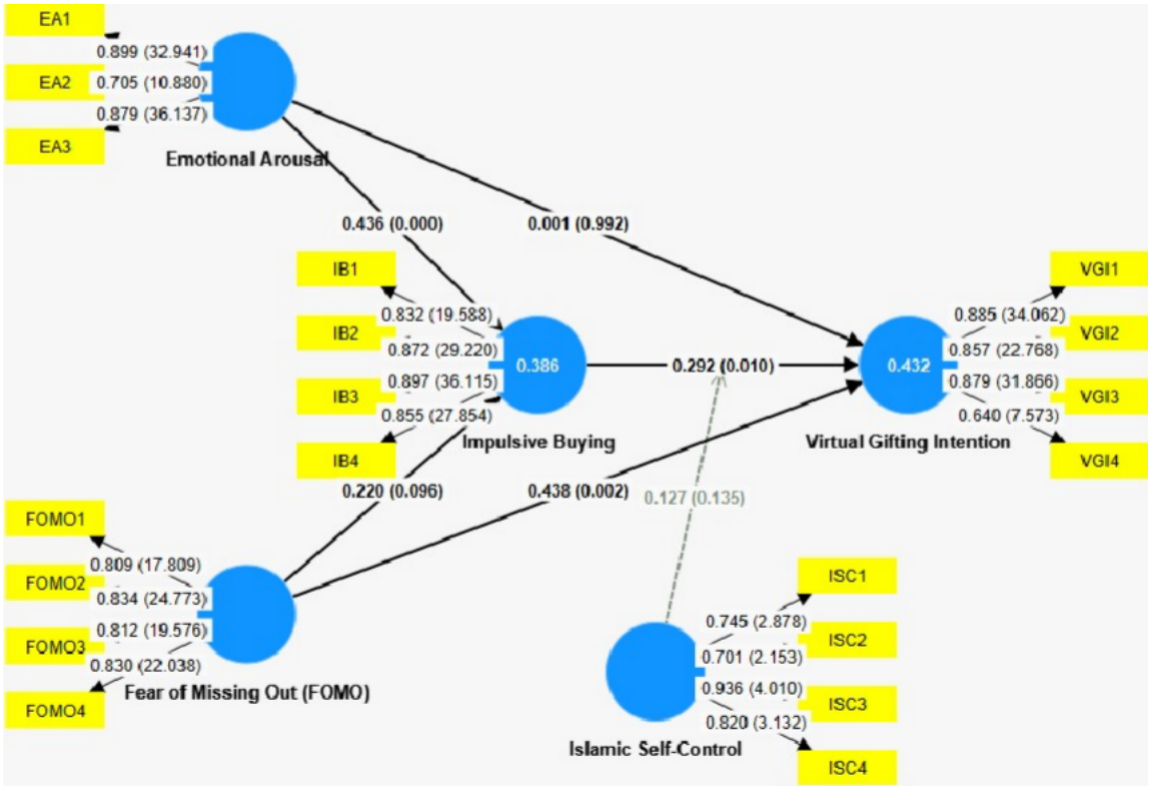


Figure 4. Structural equation model (PLS-SEM output)
Source: Processed primary data (SmartPLS 4.0)

Note: The values displayed on the arrows represent the path coefficients (β) and p-values. The values shown inside the constructs represent the coefficients of determination (R^2), whereas the values displayed next to the indicators represent the outer loadings.

Table 6. Results of Direct and Moderating Hypothesis Testing

Hypothesis	Relationships Among Variables	β	t-statistic	p-value	Results
H1	Emotional Arousal → Impulsive Buying	0,436	3,959	0,000	Accepted
H2	Fear of Missing Out → Impulsive Buying	0,220	1,667	0,096	Rejected
H3	Emotional Arousal → Virtual Gifting Intention	0,001	0,010	0,992	Rejected
H4	Fear of Missing Out → Virtual Gifting Intention	0,438	3,167	0,002	Accepted
H5	Impulsive Buying → Virtual Gifting Intention	0,292	2,564	0,010	Accepted
H8	Islamic Self-Control × Impulsive Buying → Virtual Gifting Intention	0,127	1,496	0,135	Rejected

Source: Primary data processed using SmartPLS 4.0

Table 7. Results of the Mediation Hypothesis Testing

Hypothesis	Relationships Among Variables	β	t-statistic	p-value	Results
H6	Emotional Arousal → Impulsive Buying → Virtual Gifting Intention	0,128	2,266	0,024	Accepted
H7	Fear of Missing Out → Impulsive Buying → Virtual Gifting Intention	0,064	1,316	0,188	Rejected

Source: Primary data processed using SmartPLS 4.0

As presented in Table 6, three direct relationships were found to be statistically significant in the research model. Emotional Arousal had a positive and significant effect on Impulsive Buying (β = 0.436; p < 0.001), Fear of Missing Out (FOMO) had a positive and significant effect on Virtual Gifting Intention (β = 0.438; p = 0.002), and Impulsive Buying had a positive and significant effect on Virtual Gifting Intention (β = 0.292; p = 0.010). In contrast, the effect of FOMO on Impulsive Buying and the direct effect of Emotional Arousal on Virtual Gifting Intention were not statistically significant.

As shown in Table 7, Impulsive Buying significantly mediated the relationship between Emotional Arousal and Virtual Gifting Intention (β = 0.128; p = 0.024). However, the mediating effect of Impulsive Buying on the relationship between FOMO and Virtual Gifting Intention was not significant (β = 0.064; p = 0.188). Furthermore, the results indicated that the moderating effect of Islamic Self-Control on the relationship between Impulsive Buying and Virtual Gifting Intention was not statistically significant (β = 0.127; p = 0.135). Overall, the path analysis revealed that FOMO exerted the strongest direct effect on Virtual Gifting Intention, whereas Emotional Arousal influenced Virtual Gifting Intention indirectly through Impulsive Buying. In addition, the moderating effect of Islamic Self-Control on the relationship between Impulsive Buying and Virtual Gifting Intention was not supported.

5. Discussion

This study found that Emotional Arousal has a positive and significant effect on Impulsive Buying. This finding indicates that the higher the level of emotion experienced by users while watching TikTok Live, the greater their tendency to engage in impulsive buying. This suggests that emotional experiences generated through real-time interactions, entertainment provided by creators, and an engaging live-streaming atmosphere encourage users to make spontaneous purchasing decisions. These findings are consistent with the Stimulus–Organism–Response (SOR) framework, which posits that environmental stimuli influence individuals' psychological states before leading to behavioral responses (Donovan & Rossiter, 1982). In this study, Emotional Arousal functions as the stimulus, whereas Impulsive Buying represents the internal psychological state (organism) resulting from that stimulus. These findings also support the studies by Li et al. (2022) and Yilmazel (2025), which demonstrated that emotional engagement during live streaming increases the tendency toward impulsive buying. In the context of TikTok Live, real-time interactions with creators and engaging viewing experiences enhance users' emotional activation, thereby encouraging spontaneous purchases of virtual gifts.

In contrast, this study found that Fear of Missing Out (FOMO) does not have a significant effect on Impulsive Buying. This result indicates that the fear of missing moments or interactions during TikTok Live does not necessarily encourage users to make impulsive purchases. From the perspective of the SOR framework, FOMO represents a social stimulus originating from the digital environment. However, this stimulus is not sufficiently strong to transform users' psychological states into impulsive buying behavior (Donovan & Rossiter, 1982). This finding differs from those of Widodo (2024) and Zhang and Rosli (2025), who reported that FOMO positively influences Impulsive Buying in the context of live-streaming commerce. This discrepancy may be attributed to differences in the research context. Unlike the purchase of physical products, virtual gifting involves not only consumption activities but also serves as a means of social interaction and appreciation toward creators. Consequently, users experiencing FOMO may prefer to continue watching the live stream or participate through social interactions without necessarily making spontaneous virtual gift purchases.

This study also found that Emotional Arousal does not have a significant direct effect on Virtual Gifting Intention. This finding suggests that higher levels of positive emotions experienced while watching TikTok Live do not directly increase users' intentions to send virtual gifts to creators. From the perspective of the SOR framework, emotional stimuli generally influence behavior through psychological processes occurring within individuals (Donovan & Rossiter, 1982). The results indicate that the effect of Emotional Arousal on Virtual Gifting Intention occurs indirectly through Impulsive Buying, as confirmed by the mediation analysis conducted in this study. Therefore, the emotions experienced while watching TikTok Live are insufficient to directly generate intentions to send virtual gifts unless they are accompanied by an impulsive purchasing tendency. These findings suggest that users' decisions to send virtual gifts are influenced not only by emotional experiences but also by the emergence of a spontaneous tendency to engage in digital purchasing transactions.

This study found that Fear of Missing Out (FOMO) has a positive and significant effect on Virtual Gifting Intention. This finding indicates that the greater users' fear of missing moments, interactions, or experiences during TikTok Live, the stronger their intention to send virtual gifts to creators. According to the Stimulus–Organism–Response (SOR) framework,

FOMO represents a social stimulus capable of eliciting behavioral responses (Donovan & Rossiter, 1982). In the context of TikTok Live, users not only seek to passively watch live streams but also desire to actively engage with creators and the surrounding community. One form of such participation is the sending of virtual gifts as an expression of appreciation and support for creators. This finding is consistent with Qiu and Klug (2021), who argued that virtual gifting is driven by users' needs for social interaction and social recognition. Furthermore, Zhang and Rosli (2025) found that FOMO enhances user engagement in live-streaming commerce activities. Interestingly, although FOMO did not significantly influence Impulsive Buying, it was still able to directly increase Virtual Gifting Intention. This suggests that FOMO functions more as a driver of social participation than as a trigger of impulsive buying.

This study also found that Impulsive Buying has a positive and significant effect on Virtual Gifting Intention. These findings indicate that users who exhibit a stronger tendency toward impulsive buying are more likely to intend to send virtual gifts while watching TikTok Live. From the perspective of the SOR framework, Impulsive Buying represents the internal psychological state (organism) that links environmental stimuli to behavioral responses (Donovan & Rossiter, 1982). These findings support the argument of Verplanken and Herabadi (2001), who explained that impulsive buying occurs spontaneously and is driven more by affective responses than by rational considerations. The results are also consistent with the findings of Nyrhinen et al. (2024), Timur et al. (2023), and Timur et al. (2025), who reported that the ease of transactions on digital platforms increases consumers' tendency toward impulsive buying. On TikTok Live, the rapid purchasing process enabled by the platform's virtual coin system allows users to immediately act on their purchase intentions without engaging in lengthy decision-making processes. Therefore, the stronger the tendency toward Impulsive Buying, the greater the users' Virtual Gifting Intention.

The results further indicate that Impulsive Buying significantly mediated the relationship between Emotional Arousal and Virtual Gifting Intention but did not mediate the relationship between Fear of Missing Out (FOMO) and Virtual Gifting Intention. These findings reinforce the mechanism proposed by the Stimulus–Organism–Response (SOR) framework, whereby Emotional Arousal, as an environmental stimulus, first influences an individual's internal psychological state before producing a behavioral response (Donovan & Rossiter, 1982). Accordingly, the emotions experienced while watching TikTok Live do not directly increase users' intentions to send virtual gifts; instead, they first stimulate Impulsive Buying, which subsequently leads to Virtual Gifting Intention. This finding is consistent with Li et al. (2022), who reported that emotional arousal in live-streaming environments enhances impulsive buying behavior, which subsequently encourages consumers' purchase-related intentions. In contrast, the absence of a significant mediating effect in the relationship between FOMO and Virtual Gifting Intention suggests that the influence of FOMO is more direct in nature. This indicates that the fear of missing out encourages users to remain engaged in live-streaming activities without necessarily passing through an impulsive buying process. This result differs from Zhang and Liu (2024), who found that psychological factors may indirectly influence virtual gifting intention through consumers' purchasing behavior, indicating that the mediating mechanism may vary across different research contexts. In other words, Emotional Arousal and FOMO operate through different mechanisms in shaping Virtual Gifting Intention.

This study found that Islamic Self-Control does not moderate the relationship between Impulsive Buying and Virtual Gifting Intention. This finding indicates that users' level of Islamic Self-Control was not sufficient to either strengthen or weaken the relationship between

Impulsive Buying and Virtual Gifting Intention. These results differ from the views of Hoetoro and Hannaf (2019) who argued that self-control grounded in Islamic values plays an important role in regulating consumption behavior. One possible explanation is that respondents perceived virtual gifting primarily as a form of support and appreciation for creators rather than as a consumption activity that conflicts with the principles of self-control. Furthermore, because the respondents were predominantly members of Generation Z, their decisions to send virtual gifts may have been influenced more by digital experiences and social interactions than by religious values during the decision-making process (Ridlwan et al., 2025; Timur et al., 2025). Therefore, future studies are encouraged to consider other moderating variables, such as religiosity, parasocial interaction, or financial literacy, which may provide a more comprehensive explanation of the relationship between Impulsive Buying and Virtual Gifting Intention.

6. CONCLUSION

This study aimed to examine the effects of Emotional Arousal and Fear of Missing Out (FOMO) on Virtual Gifting Intention among TikTok Live users, with Impulsive Buying serving as the mediating variable and Islamic Self-Control as the moderating variable, based on the Stimulus–Organism–Response (SOR) theory. The findings indicate that Emotional Arousal has a positive effect on Impulsive Buying, whereas Fear of Missing Out (FOMO) does not significantly affect Impulsive Buying. In addition, Fear of Missing Out (FOMO) and Impulsive Buying have positive effects on Virtual Gifting Intention, while Emotional Arousal does not exert a direct effect. Impulsive Buying significantly mediates the relationship between Emotional Arousal and Virtual Gifting Intention, but does not mediate the relationship between Fear of Missing Out (FOMO) and Virtual Gifting Intention. This study also found that Islamic Self-Control does not moderate the relationship between Impulsive Buying and Virtual Gifting Intention. Overall, Virtual Gifting Intention among TikTok Live users is influenced more by emotional and social factors than by self-control mechanisms grounded in Islamic values.

6.1 Theoretical Implications

This study extends the application of the Stimulus–Organism–Response (SOR) theory in explaining Virtual Gifting Intention on live-streaming platforms. The findings demonstrate that Emotional Arousal influences Virtual Gifting Intention indirectly through Impulsive Buying, whereas Fear of Missing Out (FOMO) exerts a direct effect. These results suggest that different environmental stimuli do not necessarily produce behavioral responses through the same psychological mechanism. Furthermore, this study enriches the literature on digital consumer behavior by integrating Emotional Arousal, Fear of Missing Out (FOMO), Impulsive Buying, and Islamic Self-Control within a single research model, thereby providing a more comprehensive understanding of the factors underlying Virtual Gifting Intention on TikTok Live.

6.2 Practical Implications

The findings indicate that emotional engagement and social interaction are important factors in enhancing Virtual Gifting Intention. Therefore, TikTok Live creators are encouraged to foster authentic and responsive interactions that enhance user engagement. For platform providers, developing features that strengthen interactions between creators and viewers may encourage greater user participation in live-streaming activities. Furthermore, the findings may serve as valuable insights for educational institutions and organizations involved

in Islamic financial literacy, supporting efforts to promote more responsible and informed digital consumption behavior.

6.3. Study Limitation and Future Research Recommendation

This study has several limitations. First, it involved only 100 TikTok Live users, limiting the generalizability of the findings. Second, the study employed a cross-sectional research design, which does not capture changes in user behavior over time. Third, the study examined only Islamic Self-Control as the moderating variable.

Future studies are encouraged to include a larger and more diverse sample and to conduct comparative analyses across different live-streaming platforms. In addition, future research may consider incorporating variables such as Parasocial Interaction, Social Presence, or Financial Literacy to provide a broader understanding of Virtual Gifting Intention. Employing longitudinal or mixed-methods approaches may also offer deeper insights into the dynamics of users' behavioral changes over time.

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8. AUTHORS' NOTE

The authors declare that there are no conflicts of interest regarding the preparation and publication of this article. The authors also declare that this manuscript is an original work, has not been published previously, and is free from plagiarism.

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