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AI Advertising Personalization, Content Quality, Trust, and Gen Z Impulsive Buying Behavior

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AI Advertising Personalization, Content Quality, Trust, and Gen Z Impulsive Buying Behavior

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Abstract: The development of Artificial Intelligence (AI) has transformed the way companies deliver advertisements through algorithm-based personalization systems. This study aims to analyze the effect of AI-based advertising personalization and content quality on Generation Z's impulsive buying behavior in Bekasi City, with consumer trust serving both as a moderating variable and an independent variable. The research employs a quantitative approach using a survey method involving 234 Generation Z respondents who actively engage in online shopping. The data were analyzed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS). The findings indicate that AI-based advertising personalization has a positive and significant effect on impulsive buying behavior. In contrast, advertising content quality does not have a significant impact on impulsive behavior. Consumer trust does not function as a moderating variable; however, it has a direct and positive influence on impulsive buying. The research model explains 35% of the variance in impulsive buying behavior. These findings highlight that in the context of urban Generation Z consumers with high social media usage intensity, algorithm-driven personal relevance plays a more decisive role in spontaneous purchase decisions than the quality of advertising messages. This study provides theoretical implications for the development of digital consumer behavior models and practical implications for designing more effective and contextual AI-based marketing strategies.

Keywords: AI; consumer trust; content quality; generation Z; personalization advertising

Introduction

The rapid development of Artificial Intelligence (AI) in recent years has significantly transformed the way companies interact with consumers in the digital environment. In the past, advertising personalization was largely based on simple segmentation variables such as age, gender, or geographic location. Today, however, AI algorithms enable companies to analyze consumer behavior patterns in a far more complex and dynamic manner.

Recommendation systems are now capable of learning from search histories, social media interactions, and online transaction patterns to deliver advertisements that feel personally relevant to each individual. Wang et al., (2025) describe this phenomenon as a shift toward hyper-personalization, where marketing experiences are no longer mass-oriented but instead driven by continuously updated individual data in real time. A growing body of recent research indicates that digital personalization is indeed effective in enhancing consumer responses. Lina et al., (2022) in their meta-analysis, found that personalized advertisements significantly improve brand attitudes and purchase intentions compared to generic advertisements. Similarly research result from Soni, (2024), emphasizes that personalization reduces consumers' cognitive load, as the information presented has already been filtered by algorithmic systems.

In the context of AI, personalization becomes even more adaptive, as systems are capable of predicting consumer preferences before consumers are consciously aware of them (Patil, 2025; Suryawan & Assagaf, 2025). This condition increasingly blurs the boundary between actual needs and marketing stimuli. In this context, a more fundamental question arises: does AI-based personalization merely influence planned purchasing decisions, or does it also contribute to impulsive buying behavior? Recent studies increasingly point toward the latter possibility. Misra,

(2024) demonstrate that AI-driven recommendation algorithms can accelerate purchase decisions by enhancing perceptions of relevance and urgency.

Furthermore, (Aishwariya & Vidya, 2025), along with Misra, (2024), employing the Stimulus–Organism–Response (S-O-R) framework, found that AI-based personalization can trigger emotional responses that lead to impulsive purchases, particularly within the context of fashion e-commerce. This suggests that personalization not only makes advertisements more targeted but may also shorten consumers' rational evaluation processes. Generation Z represents a particularly relevant group for understanding this dynamic. As a generation that has grown up alongside social media and digital platforms, they are accustomed to interacting with algorithm-curated content. Djafarova & Bowes, (2021) found that Generation Z tends to engage in impulsive purchases after being exposed to social media content that quickly captures their attention.

More recent studies further emphasize that this generation is highly influenced by viral trends and the Fear of Missing Out (FOMO) in their decision-making processes (Barbu Kleitsch & Drămnescu, 2025; Eva Sofiana & Rina Suthia Hayu, 2025) in an environment dominated by platforms such as TikTok, Instagram, and short-form video applications, speed and perceived relevance appear to play a more decisive role than in-depth rational considerations. In an environment dominated by platforms such as TikTok, Instagram, and other short-form video applications, speed and perceived relevance appear to play a more decisive role than in-depth rational considerations.

However, the effectiveness of personalization cannot be separated from the quality of the content delivered. Content quality encompasses message clarity, visual appeal, information credibility, and consistency in brand narrative. Hussain et al., (2024) demonstrate that high-quality visual content marketing can enhance consumer trust and encourage purchase decisions. Similarly, (Karpenka et al., 2021) emphasize that the quality of visual content within social media communities contributes to the development of brand trust. In the context of Generation Z, who are known to be critical and selective consumers, Putra et al., (2025) find that authentic and informative content plays a significant role in building loyalty. Therefore, from a theoretical perspective, content quality should influence purchasing behavior, including impulsive buying.

On the other hand, consumer trust remains a central variable in the digital marketing literature. In online transactions, consumers do not physically interact with sellers; therefore, purchase decisions are strongly influenced by perceptions of security, integrity, and data protection. Hochstein et al., (2025), in their meta-analysis, conclude that digital trust is a key factor in the effectiveness of marketing strategies based on user-generated content. Similarly, Singh et al., (2024) demonstrate that trust in e-commerce platforms significantly influences consumers' confidence in transaction security.

In the context of AI, privacy issues have become increasingly complex. Teepapal, (2025) finds that consumers' perceptions of AI-based personalization largely depend on their level of trust in how their personal data are used. Orcun Sarioguz & Evin Miser, (2024) further highlight that the sustainability of AI-driven marketing strategies is strongly determined by how companies manage data ethics and transparency. Although the literature on personalization, content quality, and trust has developed rapidly, certain conceptual gaps remain unresolved. Most existing studies position trust either as a direct predictor of purchase intention or as a mediating variable in the relationship between marketing stimuli and consumer responses (John et al., 2024; Putri & Astuti, 2024).

However, relatively few studies have explicitly examined whether trust functions as a moderating variable in the relationship between AI-based personalization and impulsive buying behavior. Within the Stimulus–Organism–Response (S-O-R) framework, external stimuli such as personalization and content quality are expected to influence the organism's internal state (trust), which subsequently generates a behavioral response in the form of purchasing decisions. Nevertheless, in a hyper-personalized environment where algorithms directly reduce uncertainty, the moderating role of trust may not be as strong as traditionally assumed in conventional models. In addition, most AI marketing studies have been conducted in developed countries with well-

established digital infrastructures. In contrast, emerging markets such as Indonesia present equally compelling dynamics. Weryani et al., (2024) note that e-commerce growth in Indonesia has accelerated significantly over the past five years.

Bekasi City, as part of the Greater Jakarta metropolitan area, has a digitally active Generation Z population with high exposure to e-commerce platforms and social media. At the same time, awareness of privacy and data security issues has begun to increase among young consumers. This combination makes the Indonesian context particularly urban areas such as Bekasi a relevant empirical setting for re-examining the relationship between AI based personalization, content quality, trust, and impulsive buying behavior.

Based on this background, this study aims to examine the effect of AI-based advertising personalization and content quality on the impulsive buying behavior of Generation Z in Bekasi City, with consumer trust positioned as a moderating variable. The study seeks to make a theoretical contribution by re-evaluating the role of trust within the Stimulus–Organism–Response (S-O-R) framework in the context of highly personalized and fast-paced AI-driven marketing. Specifically, it addresses whether trust truly strengthens the influence of personalization and content quality on impulsive buying, or whether it instead functions as a fundamental prerequisite that operates directly. Through this approach, the research is expected not only to enrich the literature on AI-driven marketing but also to provide a more contextualized understanding of Generation Z's consumption behavior in emerging markets.

This study does not merely replicate the established relationship between digital personalization and impulsive buying; rather, it repositions consumer trust within the context of AI-based hyper-personalization. Unlike previous studies that generally identified trust as a significant mediator or moderator, the findings of this research indicate that, in the context of Generation Z, trust does not function as a moderating variable. This result offers an important conceptual contribution: within an algorithmic ecosystem that is already perceived as the default environment by Generation Z, AI-based personalization can operate directly as an impulsive stimulus without depending on the intensity of trust. Accordingly, this study proposes a reinterpretation of the S–O–R model in the context of AI-driven personalization.

Concept and Hypothesis

AI-Based Advertising Personalization

AI-based advertising personalization refers to algorithmic systems (e.g., machine learning, recommendation engines) that tailor ads based on user data such as behavior, preferences, and interactions. Research consistently shows that personalization powered by AI enhances consumer engagement and drives positive consumer responses in digital environments. Teepapal, (2025) finds that AI personalization increases perceived relevance and engagement in social media advertising.

Similarly, Emini et al., (2025) demonstrate that personalized recommendations significantly increase user engagement and conversion behaviors in mobile commerce, which supports the idea that personalization can trigger stronger action responses. Moreover, Mohammadkhani et al., (2026) show that AI personalization not only improves purchase intention but also strengthens emotional involvement, an antecedent of impulsive buying.

Based on these insights, this study proposes that AI-based advertising personalization will positively influence impulsive buying behavior.

H1: AI-based advertising personalization positively influences impulsive buying behavior.

Content Quality

Content quality encompasses clarity of message, visual attractiveness, informativeness, and narrative consistency. High-quality content has been linked with more favorable consumer responses and higher engagement, which can extend to spontaneous purchasing. Dabbous &

Barakat, (2020) find that quality content in social commerce enhances consumers' perceived usefulness and purchase intentions.

Additionally, Zhang & Shi, (2022) report that visually rich and informative content strengthens emotional engagement, increasing the likelihood of impulse purchases. Liu et al., (2024) further show that content quality plays a significant role in shaping consumer attitudes and trust in the brand, indirectly contributing to purchase actions—including impulsive ones.

Hence: H2: Content quality positively influences impulsive buying behavior.

Consumer Trust

Consumer trust reflects confidence in the integrity, security, and reliability of digital platforms and marketing communications. Trust is widely recognized as a key psychological mechanism in online marketing; it reduces perceived risk and enhances openness toward marketing stimuli. Teepapal, (2025) finds that trust significantly mediates the effect of AI personalization on engagement outcomes.

C. Wang et al., (2023) demonstrate that trust in e-commerce platforms significantly improves consumers' willingness to transact and make quick purchase decisions. Furthermore, Markou et al., (2025) highlight that trust moderates the impact of personalized content on consumer responses, indicating its importance in shaping outcomes in AI-driven environments.

Thus: H3: Consumer trust positively influences impulsive buying behavior.

Moderating Role of Consumer Trust

Within the Stimulus–Organism–Response (S–O–R) framework, trust may act as a moderating organismic variable that affects how external stimuli (AI personalization and content quality) translate into behavioral responses (impulsive buying). Prior research highlights that trust strengthens the effect of personalized marketing on consumer outcomes by reducing resistance and increasing receptivity (Markou et al., 2025)

However, the moderating role of trust in impulsive buying remains less explored, especially in AI-driven contexts where personalization may directly drive spontaneous behavior. Therefore, this study tests whether trust amplifies the relationship between AI personalization, content quality, and impulsive buying.

H4: Consumer trust moderates the relationship between AI-based advertising personalization and impulsive buying behavior.

H5: Consumer trust moderates the relationship between content quality and impulsive buying behavior.

Method

Research Design

This study employed a quantitative approach using an explanatory research design to examine the causal relationships among variables within the proposed conceptual model. This approach was selected because the primary objective of the research is not merely to describe the phenomenon of AI-based advertising personalization, but to explain how and to what extent personalization and content quality influence impulsive buying behavior, as well as how consumer trust operates within these relationships. In other words, the study focuses on testing a predictive and theory-driven structural model.

Research Context and Unit of Analysis

The unit of analysis in this study is the individual consumer, specifically Generation Z consumers residing in Bekasi City who actively engage in online shopping. Bekasi City was purposively selected as the research setting because it is part of the Greater Jakarta metropolitan area, characterized by high internet penetration and intensive e-commerce activity. Moreover, the city's demographic composition is dominated by young productive-age individuals who are highly

exposed to social media and digital platforms. This context ensures that respondents operate within an environment where AI-driven marketing practices are prevalent.

Generation Z in this study is defined as individuals born between 1997 and 2012. However, to ensure cognitive maturity and relevant online shopping experience, respondents were limited to those aged 17–28 years. The lower age limit was set to ensure that participants had conducted independent online transactions.

Sampling Technique

This study employed purposive sampling based on clearly defined inclusion criteria to maintain data relevance. Respondents were required to meet three criteria:

(1) reside in Bekasi City,

(2) belong to Generation Z within the specified age range, and

(3) have made at least one online purchase within the last six months.

The final criterion ensured that participants had recent and actual experience interacting with AI-based personalization systems on e-commerce or social media platforms.

A total of 234 valid responses were analyzed. This sample size satisfies the minimum requirement for PLS-SEM analysis based on the "10 times rule," which recommends a sample at least ten times the largest number of structural paths directed at a construct in the model. The sample size is also adequate for testing moderation effects in a model with moderate complexity.

The sample characteristics indicate that 68.4% of respondents were female, 62.4% were university students, and 84.2% reported monthly income below Rp500,000. Additionally, 56.8% were active TikTok users, and 40.6% spent approximately 3–4 hours per day on social media. These characteristics reinforce the study's positioning as research on urban Generation Z consumers with high digital exposure.

Research Instrument and Operationalization of Variables

Data were collected using a structured questionnaire measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The five-point scale was chosen to balance measurement sensitivity with ease of response.

AI-based advertising personalization was adapted from established digital marketing scales and contextualized to reflect local usage patterns. The items measured perceived relevance, timeliness, and alignment of advertisements with personal preferences.

Content quality was measured using indicators reflecting visual attractiveness, message clarity, information credibility, and brand communication consistency. This measurement acknowledges that Generation Z consumers are heavily exposed to visual and audiovisual content in social media environments.

Consumer trust was operationalized as confidence in platform integrity, transaction security, and personal data protection. This construct is particularly important in AI-driven marketing contexts where behavioral data processing is central.

Impulsive buying behavior was measured based on the tendency to make spontaneous purchases without prior planning, driven by emotional impulses or external stimuli.

Prior to large-scale distribution, a pilot test was conducted with 30 respondents to ensure clarity of wording and consistency of interpretation. The pilot results indicated no significant ambiguity in the instrument.

Data Collection Procedure

Data were collected online through a digital survey platform. The online method was considered appropriate given Generation Z's high level of digital engagement and allowed efficient respondent reach. To minimize duplicate responses, the system restricted submissions to one response per account. Participants were provided with a brief explanation of the study's purpose and assurance of data confidentiality to encourage honest responses.

Data Analysis Technique

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). This method was selected for several methodological reasons. First, the model is predictive in nature and explores the moderating role of trust within a relatively emerging AI marketing context. Second, PLS-SEM is more robust against non-normal data distributions compared to covariance-based SEM. Third, the moderate sample size makes PLS-SEM an appropriate analytical choice.

The analysis was conducted in two stages. The first stage involved evaluation of the measurement model (outer model), including tests of convergent validity, discriminant validity, and composite reliability. The second stage involved evaluation of the structural model (inner model), including path coefficients, R^2 values, effect sizes (f^2), and predictive relevance (Q^2). Moderation testing was conducted using the two-stage approach to minimize potential bias in the construction of interaction terms.

Mitigation of Potential Bias

To address potential common method bias resulting from the use of self-reported questionnaires, a full collinearity variance inflation factor (VIF) test was performed. VIF values below the threshold of 3.3 indicate that common method bias does not pose a serious threat to model validity. Additionally, respondent anonymity was ensured to reduce social desirability bias.

Although the research design is cross-sectional, the structural relationships are grounded in a strong theoretical framework. Therefore, causal interpretations are made at a theoretical level rather than as claims of absolute causality. The study does not assert definitive causal relationships, but rather predictive relationships supported by established conceptual foundations.

Results and Discussion

This study presents an overview based on the distribution of questionnaires completed by Generation Z respondents aged 13–28 years. A total of 234 valid responses were obtained, with the respondent characteristics summarized as follows:

Table 1. Respondece Characteristic

Category	Classification	Total	Prosentance
Gender	Laki-Laki	74	31,6%
	Perempuan	160	68,4%
Work	Karyawan	8	3,4%
	Mahasiswa	146	62,4%
	Wiraswasta	1	0,4%
	Lainnya	79	33,8%
Income	< Rp. 500.000	197	84,2%
	Rp. 500.000 - Rp. 1.000.000	26	11,1%
	Rp. 1.000.000 - 2.000.000	5	2,1%
	> Rp. 2.000.000	6	2,6%
Social Media Platform	Facebook	2	0,9%
	Instagram	78	33,3%
	Twitter/X	3	1,3%
	TikTok	133	56,8%
	YouTube	12	5,1%
	Lainnya	6	2,6%
Time to use Social Media	1-2 Jam	60	25,6%
	3-4 Jam	95	40,6%
	5-6 Jam	50	21,4%
	> 6 Jam	29	12,4%

Source: Researcher, 2025

Based on the table of respondent characteristics by gender, the majority of respondents were female, totaling 160 individuals (68.4%), while male respondents accounted for 74 individuals (31.6%). In terms of occupation, most respondents were university students, totaling 146 individuals (62.4%), followed by other occupational categories with 79 respondents (33.8%).

Regarding monthly income, the majority of respondents fell into the category of less than Rp500,000, totaling 197 individuals (84.2%). This finding is consistent with the demographic profile of adolescents and young adults, many of whom are still students and have not yet entered full-time employment.

In terms of social media platform usage, TikTok emerged as the most dominant platform, with 133 respondents (56.8%), followed by Instagram with 78 respondents (33.3%) and YouTube with 12 respondents (5.1%). This indicates that Generation Z tends to be more active on short-form video and visually interactive platforms such as TikTok.

Regarding daily social media usage duration, most respondents reported spending 3–4 hours per day on social media (40.6%), followed by 1–2 hours (25.6%) and more than 6 hours (12.4%). This duration reflects a high level of exposure to digital content and online advertising across various platforms.

Research Data Analysis Results

After conducting statistical analysis on the collected research data, the first step involved evaluating the measurement model (outer model). This stage was carried out to ensure that each indicator within the respective constructs demonstrated adequate levels of validity and reliability before proceeding to the assessment of the structural model (inner model).

In other words, the measurement model was tested to confirm that the instruments used in this study were both accurate and consistent in measuring the intended variables. Only after meeting these criteria was the analysis continued to examine the relationships among the constructs in the structural model.

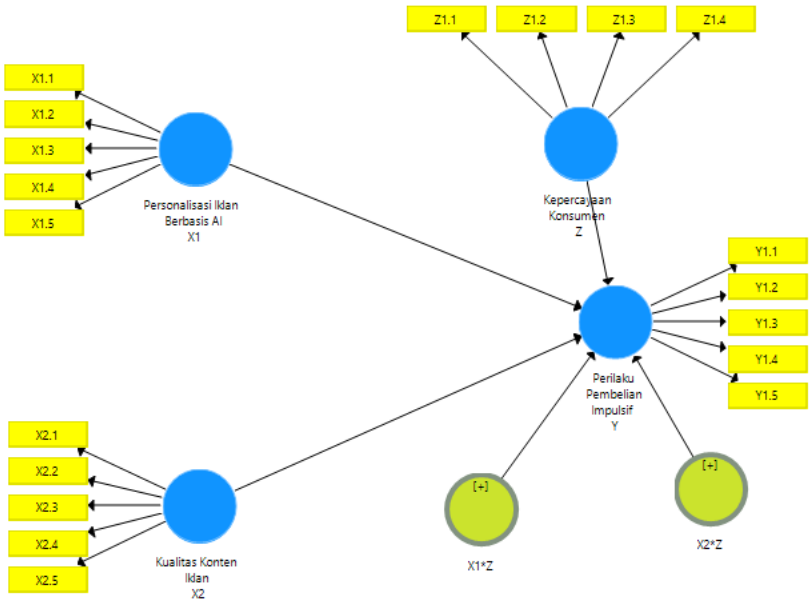

Figure 1. Research Design Concept

The figure above represents the initial construct of the research model before any data processing or statistical analysis was conducted.

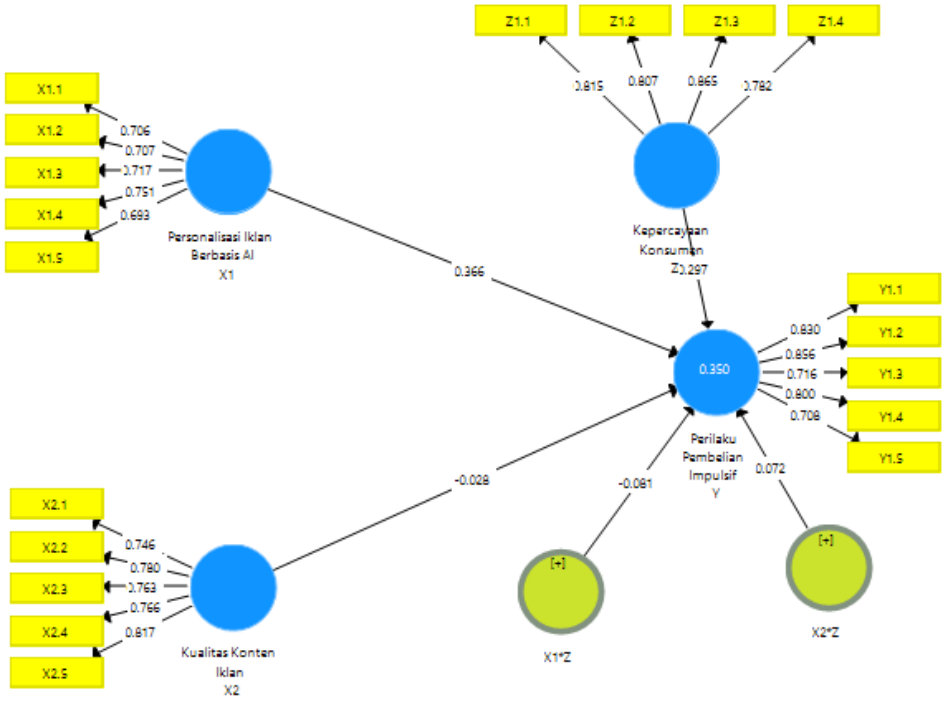

Figure 2. SEM-PLS Calculation Results Using SmartPLS 3

The figure above presents the results of the data analysis. It shows the loading factor values (outer loadings) for each construct in the model.

1. Outer Model Test

Validity Convergent Test

Table 2. Validity Convergen (Factor loadings/Outer Loadings)

	Consumer Trust_Z	Content Quality Advertising_X2	Impulsive Buying Behavior _Y	AI-Based Advertising Personalization AI_X1	X1*Z	X2*Z
X2*Z						1,577
X1*Z					1,611	
X1.1				0,706		
X1.2				0,707		
X1.3				0,717		
X1.4				0,751		
X1.5				0,693		
X2.1		0,746				
X2.2		0,780				
X2.3		0,763				
X2.4		0,766				
X2.5		0,817				
Y1.1			0,830			
Y1.2			0,856			
Y1.3			0,716			
Y1.4			0,800			
Y1.5			0,708			
Z1.1	0,815					
Z1.2	0,807					
Z1.3	0,865					
Z1.4	0,782					

Source: Processed by the Researcher using SmartPLS 3, 2026

The evaluation of the measurement model indicates that all indicators achieved outer loading values of ≥ 0.70, with the exception of one indicator with a loading of 0.693. This value remains within the acceptable tolerance threshold (> 0.50) and was therefore retained, as its removal did not improve the overall construct quality. The Average Variance Extracted (AVE) values for each variable were 0.669 (Consumer Trust), 0.600 (Content Quality), 0.615 (Impulsive Buying), and 0.512 (AI Personalization). All values exceed the recommended threshold of 0.50, indicating that convergent validity has been established.

Reliability testing shows that Cronbach's Alpha values ranged from 0.766 to 0.844, while Composite Reliability values ranged from 0.840 to 0.890. All values are above the recommended cutoff of 0.70, demonstrating good internal consistency. Furthermore, the assessment of discriminant validity using the Heterotrait–Monotrait Ratio (HTMT) indicates that all values are below 0.90, suggesting no significant overlap between constructs. Therefore, the measurement model can be considered both valid and reliable, and suitable for further analysis in the structural model.

Discriminant Validity Test

Table 3. Discriminant Validity Test (Fornell Larcker Criterrion)

	Consumer Trust_Z	**Content Quality Advertising_X2**	**Impulsive Buying Behavior _Y**	**AI-Based Advertising Personalization AI_X1**	**X1*Z**	**X2*Z**
Consumer Trust _Z	0,818					
Content Quality Advertising_X2	0,648	0,775				
Impulsive Buying Behavior _Y	0,515	0,405	0,784			
AI-Based Advertising Personalization AI_X1	0,633	0,664	0,543	0,715		
X1*Z	-0,298	-0,303	-0,235	-0,321	1,000	
X2*Z	-0,304	-0,374	-0,187	-0,310	0,821	1,000

Based on the test results presented in the table, it is evident that the square root of the Average Variance Extracted (AVE) for each construct is greater than its correlations with other constructs. For instance, the Consumer Trust (Z) variable has an AVE value of 0.818, with a square root of AVE of 0.905. This value is higher than its correlations with Advertising Content Quality (X_2) at 0.648, AI-Based Advertising Personalization (X_1) at 0.633, and Impulsive Buying Behavior (Y) at 0.515.

Furthermore, the Advertising Content Quality (X_2) variable, with an AVE of 0.775, yields a square root of AVE of 0.880, which is also greater than its correlations with AI-Based Advertising Personalization (X_1) at 0.664, Consumer Trust (Z) at 0.648, and Impulsive Buying Behavior (Y) at 0.405. The Impulsive Buying Behavior (Y) variable also satisfies the discriminant validity criterion, with an AVE value of 0.784 (square root of AVE = 0.885), exceeding all of its correlations with other constructs. Similarly, the AI-Based Advertising Personalization (X_1) variable has an AVE of 0.715 with a square root of AVE of 0.846, which is higher than its correlations with the other constructs.

Therefore, all latent constructs in this research model are declared to have met the discriminant validity requirement based on the Fornell–Larcker criterion, as each square root of AVE value is greater than the corresponding inter-construct correlation values.

Table 3. Validity Discriminant Test (HTMT)

	Consumer Trust_Z	Content Quality Advertising_ X2	Impulsive Buying Behavior _Y	AI-Based Advertising Personalization AI_X1	X1*Z	X2*Z
Consumer Trust _Z						
Content Quality Advertising_X2	0,762					
Impulsive Buying Behavior _Y	0,595	0,429				
AI-Based Advertising Personalization AI_X1	0,788	0,845	0,629			
X1*Z	0,333	0,336	0,252	0,365		
X2*Z	0,337	0,406	0,196	0,358	0,821	

Source: Processed by the Researcher using SmartPLS 3, 2026

Based on the results of the Heterotrait–Monotrait Ratio of Correlations (HTMT) test presented in the previous table, all inter-construct ratio values are below the threshold of 0.90, as recommended by Henseler et al. (2015). This finding indicates that each construct in the model has met the discriminant validity criterion, meaning that each latent variable empirically represents a distinct concept.

Since all HTMT values are below 0.90, there is no issue of construct overlap. Therefore, the measurement model is considered adequate and appropriate to proceed to the next stage of analysis.

Reliability Construct

Table 4. Reliability Construct Test (Cronbach's Alpha dan AVE)

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Consumer Trust _Z	0,835	0,841	0,890	0,669
Content Quality Advertising_X2	0,839	0,855	0,882	0,600
Impulsive Buying Behavior _Y	0,844	0,870	0,888	0,615
AI-Based Advertising Personalization AI_X1	0,766	0,776	0,840	0,512
X1*Z	1,000	1,000	1,000	1,000
X2*Z	1,000	1,000	1,000	1,000

Source: Processed by the Researcher using SmartPLS 3, 2026

The results of the analysis indicate that all constructs in the research model have Composite Reliability and Cronbach's Alpha values above the recommended threshold of > 0.70. Therefore, all research variables are considered reliable and can be trusted to measure their respective constructs.

In addition, the Average Variance Extracted (AVE) values for all constructs exceed the recommended threshold of > 0.50, indicating adequate convergent validity.

Inner Model

1. Path Coefficient

The Path Coefficient results were obtained after performing bootstrapping, which will subsequently be used to test the research hypotheses. The results are as follows:

Tabel 5. Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Consumer Trust _Z -> Impulsive Buying Behavior _Y	0,297	0,293	0,097	3,055	0,002
Content Quality Advertising _X2 -> Impulsive Buying Behavior _Y	-0,028	-0,019	0,076	0,368	0,713
AI-Based Advertising Personalization AI _X1 -> Impulsive Buying Behavior _Y	0,366	0,362	0,081	4,528	0,000
X1*Z -> Impulsive Buying Behavior _Y	-0,081	-0,078	0,063	1,280	0,201
X2*Z -> Impulsive Buying Behavior _Y	0,072	0,067	0,063	1,136	0,256

Hypothesis 1 (H1): AI-Based Advertising Personalization Positively Influences Impulsive Buying Behavior of Generation Z

The results indicate that AI-based advertising personalization has a positive and significant effect on the impulsive buying behavior of Generation Z ($\beta = 0.366$; $T = 4.528$; $p < 0.001$). This suggests that the higher the perceived level of personalization, the greater the tendency of consumers to make spontaneous purchases. These findings are consistent with Gallin and Portes (2024), who found that algorithm performance expectancy and recommendation system–based personalization significantly influence impulse buying ($\beta = 0.401$; $p < 0.01$).

Additionally, Rai, Shukla, and Pandey (2025) reported that AI-driven personalization cues positively affect impulsive buying behavior ($\beta = 0.417$; $p < 0.001$). This consistency underscores that algorithmic personalization acts as a strong stimulus triggering spontaneous responses among digital consumers, particularly Generation Z, who are highly receptive to AI-based recommendation systems.

Hypothesis 2 (H2): Advertising Content Quality Positively Influences Impulsive Buying Behavior of Generation Z

The results show that advertising content quality does not have a significant effect on impulsive buying behavior ($\beta = -0.028$; $T = 0.368$; $p = 0.713$). Therefore, the quality or aesthetics of the content does not directly drive impulsive purchasing decisions.

This finding aligns with Xu, Gong, and Yan (2024), who found that content informativeness does not significantly influence impulsive buying ($\beta = 0.094$; $p = 0.218$). Similarly, Qi (2025) reported that visual content quality does not have a significant effect on students' impulse buying behavior ($\beta = 0.107$; $p = 0.173$). These results reinforce the argument that, in the context of impulsivity, personal relevance and urgency are more dominant factors than content quality itself.

Hypothesis 3 (H3): Consumer Trust Moderates the Relationship Between AI-Based Advertising Personalization and Impulsive Buying Behavior

The analysis shows that the moderating effect of consumer trust is not significant ($\beta = -0.081$; $T = 1.280$; $p = 0.201$). In other words, trust neither strengthens nor weakens the influence of personalization on impulsive buying statistically.

This finding is consistent with Kim and Park (2023), who found that the interaction between trust and AI customization is not significant for purchase intention ($\beta = 0.052$; $p = 0.247$). Moreover, Srivastava and Gurme (2025) demonstrated that trust primarily acts as a direct determinant ($\beta = 0.298$; $p < 0.01$) rather than as a moderating variable in the relationship between personalization and consumer behavior. Thus, these results align with recent literature indicating that AI personalization operates directly without relying on trust interaction effects.

Hypothesis 4 (H4): Consumer Trust Moderates the Relationship Between Advertising Content Quality and Impulsive Buying Behavior

The results show that consumer trust does not moderate the relationship between content quality and impulsive buying behavior (β = 0.072; T = 1.136; p = 0.256). Although the coefficient is positive, the effect is not statistically significant.

This finding is consistent with Tsai and Ke (2024), who found that trust does not significantly moderate the relationship between content relevance and impulsive buying intention (β = 0.068; p = 0.214). Additionally, Gallin and Portes (2024) reported that trust interaction in the context of content quality does not have a significant effect on impulse buying (β = 0.059; p = 0.231). These results reinforce the understanding that, within digital ecosystems, trust tends to function directly rather than as a variable that strengthens the relationship between content quality and impulsivity.

Hypothesis 5 (H5): Consumer Trust Positively Influences Impulsive Buying Behavior of Generation Z

The findings indicate that consumer trust has a positive and significant effect on impulsive buying behavior (β = 0.366; T = 4.528; p < 0.001). This suggests that the higher the level of consumer trust in digital platforms and AI systems, the greater their tendency to make spontaneous purchases.

These results are consistent with Chen, Zhi, and Chen (2022), who found that trust in social media platforms significantly affects impulsive buying (β = 0.276; p < 0.01). Similarly, Hussain, Majeed, and Khan (2024) reported that customer trust has a significant positive influence on impulse buying (β = 0.331; p < 0.01). Thus, trust serves as a psychological foundation that reduces perceived risk and accelerates spontaneous purchasing decisions in digital environments.

Determinant Coefficient (R-Square)

Table 6. Determinant Coefficient (R-Square)

	R Square	R Square Adjusted
Impulsive Buying Behavior _Y	0,350	0,336

Source: Processed by the Researcher using SmartPLS 3, 2026

Based on the analysis results, the R Square (R^2) value for Impulsive Buying Behavior (Y) is 0.350, and the Adjusted R Square (R^2 Adjusted) is 0.336. The R^2 value of 0.350 indicates that 35% of the variation in impulsive buying behavior can be explained by the independent variables included in the model. Overall, referring to Chin's (1998) R Square classification, this result suggests that the model has a moderate ability to explain impulsive buying behavior, which is reasonable given the complexity of psychological and situational factors influencing consumer behavior. The remaining 65% of the variability in impulsive buying behavior is influenced by factors outside the scope of this model.

Discussion

1. The Effect of AI-Based Advertising Personalization on Generation Z's Impulsive Buying Behavior

The results indicate that AI-based advertising personalization has a positive and significant effect on the impulsive buying behavior of Generation Z in Bekasi City (β = 0.366; T = 4.528; p < 0.001). This positive coefficient suggests that the higher the perceived level of personalization, the greater the tendency of respondents to make spontaneous purchases on digital platforms.

In the context of Bekasi as an urban area adjacent to Jakarta, characterized by high internet penetration and broad access to e-commerce, Generation Z lives in a highly intensive digital ecosystem. Most respondents use social media for more than three hours per day, with short-video platforms being dominant. High exposure to algorithmic recommendation systems has made personalization not just an additional feature but an integral part of their consumption experience. Therefore, when AI-based advertisements display products aligned with preferences,

search history, and viral trends, these stimuli directly trigger purchasing responses without lengthy evaluation.

These findings are consistent with Gallin and Portes (2024), who found a significant effect of personalization algorithms on impulse buying ($\beta = 0.401$; $p < 0.01$), and Rai et al. (2025), who showed that AI-driven personalization enhances impulsive purchase intention ($\beta = 0.417$; $p < 0.001$). In the context of Gen Z in Bekasi, who are highly adaptive to technology, the influence of AI personalization becomes even more relevant.

This result extends the application of the S–O–R theory in urban Indonesian contexts. AI personalization functions as a primary stimulus that directly triggers impulsive responses among urban Gen Z, indicating that in high-intensity digital environments, algorithmic stimuli have stronger persuasive power than traditional stimuli. For businesses targeting Generation Z in metropolitan areas like Bekasi, optimizing AI-based recommendation systems is a strategic priority. Behavioral targeting and predictive personalization are more effective in promoting impulse buying than merely enhancing content aesthetics.

2. The Effect of Advertising Content Quality on Generation Z's Impulsive Buying Behavior

The results show that advertising content quality does not have a significant effect on impulsive buying behavior ($\beta = -0.028$; $T = 0.368$; $p = 0.713$). For Gen Z in Bekasi, this can be explained by their fast-paced, trend-driven digital consumption patterns. Most respondents have low incomes (< IDR 500,000) and are still students. Under these conditions, impulsive buying decisions are more often triggered by discounts, viral trends, or algorithmic recommendations rather than in-depth evaluation of message quality or visual aesthetics.

This aligns with Xu et al. (2024), who found that content informativeness does not significantly affect impulsive buying ($\beta = 0.094$; $p = 0.218$), and Qi (2025), who reported that visual content quality is not significant ($\beta = 0.107$; $p = 0.173$). These findings suggest that, in the context of urban Gen Z in Indonesia, content quality is not a primary determinant of impulsivity. For brands targeting Gen Z in Bekasi, relying solely on high-quality content is insufficient. Marketing strategies must integrate personalization, local trend momentum, and urgency elements such as flash sales, which better align with their consumption characteristics.

3. The Moderating Role of Consumer Trust on the Relationship Between AI-Based Advertising Personalization and Impulsive Buying Behavior

Consumer trust does not moderate the relationship between AI personalization and impulsive buying behavior ($\beta = -0.081$; $T = 1.280$; $p = 0.201$). For Gen Z in Bekasi, this indicates that even with increased privacy awareness, personalization continues to drive spontaneous purchases independently of trust levels. As digital natives, respondents are accustomed to algorithmic systems and data sharing on digital platforms. Therefore, personalization is considered a normal part of the shopping experience.

This finding aligns with Kim and Park (2023), who reported that the interaction between trust and AI customization is not significant ($\beta = 0.052$; $p = 0.247$). In the context of urban Gen Z in Indonesia, trust is more appropriately positioned as a direct determinant rather than a moderator. This clarifies the structure of relationships in the digital consumer behavior model. Companies should maintain data transparency, but the effectiveness of personalization does not fully depend on short-term perceptions of trust.

4. The Moderating Role of Consumer Trust on the Relationship Between Advertising Content Quality and Impulsive Buying Behavior

The results show that trust does not moderate the relationship between content quality and impulsive buying behavior ($\beta = 0.072$; $T = 1.136$; $p = 0.256$). For Gen Z in Bekasi, who are exposed to content extensively every day, evaluating content quality alone is not sufficient to form an interaction with trust that drives impulsivity.

This is consistent with Tsai and Ke (2024), who found that trust does not moderate the relationship between content relevance and impulse buying ($\beta = 0.068$; $p = 0.214$). Impulsive buying among urban Gen Z in Indonesia is more dominated by instant emotional responses than

by trust-based evaluation. Strategies to enhance trust and content quality should focus on long-term loyalty rather than as primary tools to trigger impulse buying.

5. The Effect of Consumer Trust on Generation Z's Impulsive Buying Behavior

Consumer trust has a positive and significant effect on impulsive buying behavior ($\beta = 0.366$; $T = 4.528$; $p < 0.001$). For Gen Z in Bekasi, trust in e-commerce platforms and transaction security is a key factor in reducing perceived risk. As a group with limited purchasing power but active online shopping habits, a sense of security accelerates spontaneous purchase decisions.

This finding is consistent with Chen et al. (2022) ($\beta = 0.276$; $p < 0.01$) and Hussain et al. (2024) ($\beta = 0.331$; $p < 0.01$), who found that trust reduces perceived risk and increases impulse buying. In the context of urban Gen Z in Indonesia, trust functions as a risk-reduction mechanism that accelerates impulsive responses. Digital platforms targeting the Bekasi market should emphasize transaction security, privacy policy transparency, and brand reputation to maintain recurring impulsive purchasing behavior.

Conclusion

This study aims to analyze the effect of AI-based advertising personalization and content quality on the impulsive buying behavior of Generation Z in Bekasi City, with consumer trust serving both as a moderating variable and a direct determinant. Based on the SEM-PLS analysis, AI-based advertising personalization was found to have a positive and significant effect on impulsive buying behavior ($\beta = 0.366$; $p < 0.001$). This finding suggests that, within an urban Generation Z population characterized by high social media usage, algorithm-driven personal relevance acts as the dominant stimulus driving spontaneous purchases. Personalization is no longer merely a technical strategy; it functions as an effective digital persuasion mechanism.

In contrast, advertising content quality was not found to significantly influence impulsive buying behavior ($\beta = -0.028$; $p = 0.713$). This indicates that in a fast-paced, trend-driven digital environment, Generation Z does not consistently engage in in-depth evaluations of message quality or visual aesthetics before making spontaneous purchases. Personal relevance and the timing of stimuli play a greater role than normative content quality. The results also show that consumer trust does not moderate the relationships between AI personalization or content quality and impulsive buying behavior ($p > 0.05$). Therefore, trust does not significantly strengthen or weaken these relationships. However, consumer trust does have a direct, positive, and significant effect on impulsive buying behavior ($\beta = 0.366$; $p < 0.001$). In other words, when trust in a platform or brand is established, perceived risk decreases, making consumers more likely to make spontaneous purchases.

Overall, the research model explains 35% of the variation in impulsive buying behavior ($R^2 = 0.350$), indicating moderate predictive capability. These findings highlight that, in the context of urban Generation Z in Bekasi, AI-based personalization and consumer trust are primary determinants of digital impulsivity, whereas content quality does not directly trigger spontaneous behavior. Despite its empirical and theoretical contributions, this study has several limitations. First, it employs a cross-sectional design, meaning that relationships among variables are interpreted within a theoretical causal-association framework but may not fully capture the dynamics of behavior over time. Impulsive behavior is situational and can change according to temporal, trend-related, or economic conditions.

Second, the study focuses solely on Generation Z in Bekasi, an urban area with high digital penetration. While this context is relevant for understanding urban consumer behavior, generalizing the results to rural areas or cities with different socio-economic characteristics should be done with caution. Third, the study examines only three primary variables (AI personalization, content quality, and consumer trust), while other theoretically relevant factors—such as FOMO, self-control, price promotions, social influence, or emotional arousal—were not included in the model. This may explain why the R^2 value remains moderate. Fourth, variable

measurements were based on respondents' perceptions through self-report questionnaires, which may introduce perceptual or social desirability biases.

Based on these limitations, several avenues for future research are suggested. First, longitudinal or experimental designs are recommended to test causal relationships more robustly, particularly regarding how AI personalization affects impulsivity across different promotional contexts or digital trends. Second, comparative studies across regions (urban vs. rural) or countries could examine whether the effects of AI personalization and trust on impulsive buying vary across cultures and levels of digital literacy.

Third, future research could expand the model by including psychological variables such as Fear of Missing Out (FOMO), perceived scarcity, emotional arousal, or self-control as additional mediators or moderators, thereby increasing explanatory power. Fourth, integrating big data analytics or behavioral tracking based on actual transaction data could complement survey-based approaches, producing more robust results free from self-report bias. Fifth, upcoming studies could explore the ethical and privacy dimensions of AI personalization more deeply, especially in light of increasing data protection regulations and growing privacy awareness among Generation Z.

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