

THE ROLE OF ARTIFICIAL INTELLIGENCE - DRIVEN PERSONALIZED ADVERTISING ON ONLINE PURCHASE INTENTION: A CASE STUDY OF STUDENTS AT HO CHI MINH CITY UNIVERSITY OF INDUSTRY AND TRADE ON THE SHOPEE PLATFORM

Thi Le Hoa Pham*, Thi Hoang Lan Nguyen

Ho Chi Minh City University of Industry and Trade

*Email: hoaptl@huit.edu.vn

Received: 23 March 2026; Revised: 19 April 2026; Accepted: 8 May 2026

ABSTRACT

The study aims to identify which factors of artificial intelligence in personalized advertising affect students' online purchasing intentions at Ho Chi Minh City University of Industry and Trade on the Shopee platform. Utilizing a mixed-methods approach that combines qualitative (focus groups and expert interviews) and quantitative methods (Cronbach's alpha, EFA, regression analysis, etc.) to assess the impact of each factor: Perceived personalized advertising, Perceived Intrusiveness of advertising, Privacy concern, Perceived brand trust, and Perceived Benefits on Online purchasing intentions on the Shopee platform. The results reveal several interesting findings. Given the lack of statistical significance, we removed the variable Privacy concern from the model. All remaining factors demonstrate high statistical significance; among these, three factors exert effects in the expected direction, fully aligning with the initial hypotheses, with Perceived Benefits emerging as the strongest positive predictor of online purchase intention. Notably, an unexpected result concerns the variable Perceived Intrusiveness of advertising, which shows an effect in the opposite direction of the hypothesized relationship. Consequently, the hypothesis fails to support the direction, yet it remains statistically significant. Such a counterintuitive pattern warrants further research to uncover the underlying mechanisms. These results provide valuable insights for strategic planners developing effective artificial intelligence strategies for personalized advertising on online platforms.

Keywords: Artificial Intelligence, Personalized Advertising, Online Purchase Intention, Students, Ho Chi Minh City University of Industry and Trade, Shopee.

1. INTRODUCTION

We live in a digital era characterized by rapid technological transformation, profoundly reshaping economic, technological, and political landscapes. The integration of Artificial Intelligence (AI) into marketing has become a cornerstone of contemporary practice. Far from being a mere buzzword, AI has permeated every facet of marketing activities, transforming processes, redefining professional roles, and requiring new competencies from marketing leaders, particularly Chief Marketing Officers (CMOs) [1]. However, AI itself is not a complete strategy but a powerful enabling tool. Its greatest value emerges through synergistic collaboration with human creativity, judgment, and strategic oversight, thereby enhancing efficiency and precision [2]. In the domain of AI-driven personalized advertising, which is experiencing explosive growth and serving as a critical engine of the global digital economy,

a nuanced understanding of its influence on consumers' online purchase intentions is essential for the sustainable advancement of digital marketing. According to Research and Markets [3], the global digital advertising market is projected to expand from USD 414.52 billion in 2025 to USD 819.51 billion by 2031, at a CAGR of 12.03%. Within this market, the AI advertising segment is expected to grow from approximately USD 11 billion in 2025 to over USD 36 billion by 2030, at an annual growth rate of 26–27%.

In emerging markets such as Vietnam, where the digital economy and e-commerce sectors are expanding rapidly, AI-powered, personalized advertising plays a pivotal role in improving targeting efficiency and reshaping the customer journey. Yet, insufficient understanding of these mechanisms carries significant risks: inefficient budget allocation, consumer advertising fatigue, perceptions of manipulation, and erosion of trust in digital platforms — challenges further amplified by increasingly stringent personal data protection regulations. Moreover, most existing studies have focused primarily on developed markets, largely overlooking the distinct cultural contexts, digital maturity levels, and risk perceptions prevalent in developing countries such as Vietnam. This creates a notable theoretical and contextual gap.

Addressing this research gap is therefore essential. A comprehensive investigation into the impact of AI-driven personalized advertising will enable Vietnamese enterprises to develop more effective competitive strategies, enhance conversion rates, and foster long-term customer loyalty. At the same time, it will help establish balanced legal and ethical frameworks that reconcile economic gains with consumer protection in the digital economy.

Accordingly, this study aims to examine the following key issues: (i) To what extent does AI-driven personalized advertising influence consumers' online purchase intentions in the Vietnamese market? (ii) How do perceived factors—including Perceived personalized advertising, Perceived Intrusiveness of advertising, Privacy concern, Perceived brand trust, and Perceived Benefits -affect consumers' acceptance and behavioral responses toward AI-powered personalized advertising in Vietnam? (iii) How can businesses effectively balance the benefits of hyper-personalization with consumers' privacy concerns to optimize both advertising effectiveness and consumer trust in the Vietnamese e-commerce environment?

2. LITERATURE REVIEW

2.1. Literature Review and Related Concepts

Online Shopping

Online shopping is the process by which consumers purchase goods or services directly from sellers via the Internet, without intermediaries. It involves displaying products and services with accompanying images on electronic platforms, with transactions completed via online payment or cash on delivery [4].

E-commerce Platform

According to Clause 9, Article 3 of Decree No. 52/2013/ND-CP dated June 12, 2013 [5], an e-commerce platform is an e-commerce website that allows merchants, organizations, and individuals who are not the website owners to conduct all or part of the buying and selling process. In Vietnam, prominent e-commerce platforms include Shopee, Tiki, and Lazada.

Shopee is an e-commerce platform headquartered in Singapore, founded in 2015 and officially launched in Vietnam in the same year. To date, Shopee has expanded its presence across many Southeast Asian countries.

AI-Powered Personalized Advertising (PPA)

AI-powered personalized advertising is the dynamic, real-time customization of digital content, recommendations, and promotional messages using techniques such as machine learning, deep learning, and natural language processing [6].

On the Shopee platform, this is implemented through AI-driven tools, including Automatic Keyword Optimization, Smart Bidding, Autotargeting, and Automated Campaign Suggestions [7]. These systems analyze users' search history, browsing behavior, video views, and purchase records to deliver personalized advertisements that match individual preferences, rather than displaying uniform content to all users.

Previous studies have primarily examined perceived personalization in advertising on social media platforms such as TikTok and Facebook, often focusing on its effects via mediators such as attitude or entertainment [8, 9]. However, limited research has examined AI-powered personalized advertising on e-commerce platforms such as Shopee, particularly among Vietnamese university students, using an integrated theoretical framework that combines S-O-R, TPB, and UTAUT2.

Perceived Intrusiveness of Advertising (PIA)

According to Hai Ho Nguyen et al. [10], intrusiveness or irritation is consumers' feelings of discomfort, offense, or excessive manipulation caused by advertising tactics and techniques. Both the advertising content and its presentation format can provoke discomfort. In the social media context, users perceive advertising as intrusive when it interferes with their goal-oriented tasks. Most studies have viewed the perceived intrusiveness of advertising as a negative factor that indirectly influences online purchase intention through attitude toward the advertisement or have only documented its general negative impact on social media and mobile advertising [9, 10, 11]. Some international studies have highlighted the invasive nature of advertising, but have not yet clearly explained the mechanism of psychological reactance in the case of personalized advertising.

Perceived Benefits (PB)

Prior research has often focused on "functional usefulness" or informational/entertainment value as strong positive factors in TikTok and mobile advertising, but largely at a general level or through the mediating role of advertising value [12], [13]. According to Nguyen Thu Thuy [12], perceived usefulness refers to the extent to which consumers perceive advertising as providing useful and valuable information that supports their decision-making. Existing studies have produced inconsistent results, and few have analyzed the gap between expected benefits and actual experiences on specific e-commerce platforms. To date, no research has examined all five variables—perceived personalized advertising, perceived benefits, perceived intrusiveness, privacy concern, and brand trust—on the Shopee platform with a specific student sample, while employing an integrated S-O-R, TPB, and UTAUT2 framework to clarify the non-direct effect phenomenon (privacy paradox) in the context of AI-driven personalized advertising.

Brand Trust (BT)

According to Nguyen Thu Thuy [12], brand trust is defined as the optimistic expectation regarding the outcome of an event or human behavior, or consumers' perception of the honesty and trustworthiness of advertising and advertisers in general. Credibility or brand trust is an important factor that drives purchase intention, often combined with advertising reliability or serving as a mediator in studies on TikTok and social media [10, 11, 12]. However, most studies have not conducted in-depth analyses of the origins of skepticism about the authenticity of AI-generated advertising content relative to traditional advertising.

Privacy Concern (PC)

According to Nguyen Van Nen et al. [11], privacy concern refers to users' level of attention to potential privacy threats. It reflects a customer's perception of the value of disclosing personal information and the trade-off involved in exchanging it. Most research has found that privacy concerns exert a negative, direct or indirect (through attitude), impact on online purchase intention across general platforms and social media [10, 11, 14]. Some international studies have emphasized the privacy paradox, but primarily among millennials or in relation to data literacy, with limited focus on Gen Z consumers in the Vietnamese e-commerce context.

2.2. Theoretical Foundations

Theory of Planned Behavior (TPB)

According to Ajzen's [15] Theory of Planned Behavior (TPB), behavioral intention is influenced by three key factors: attitude toward the behavior, subjective norm, and perceived behavioral control. This theory can effectively explain the relationships involved in AI-supported personalized advertising. Specifically, personalized advertising strongly influences attitudes toward behavior by generating positive attitudes through relevant, useful, and trustworthy content, enabled by the system's ability to understand customer needs. It also indirectly affects subjective norms through social sharing and social proof, while enhancing perceived behavioral control by providing accurate recommendations that make purchasing feel easier. Consequently, personalized advertising strengthens both attitude and perceived ease of purchase through precise suggestions, thereby serving as a strong predictor of purchase intention.

In the context of AI-driven personalization, online purchase intention is shaped through a cognitive restructuring. Advertising not only delivers information but also shapes consumers' attitudes by perceived relevance, reinforces subjective norms through social signals, and enhances perceived behavioral control by simplifying decision-making. However, this process may be interrupted by concerns about invasion of privacy and can be reinforced by trust in the AI system.

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

According to Mehrabian and Russell [16], the S-O-R model posits that an individual's internal emotional states or behaviors are elicited by external environmental stimuli. The internal processing of these stimuli can occur consciously or unconsciously, involving perceptions and interpretations of the environment that, in turn, influence the individual's emotions and decisions. This influence further triggers emotional responses and leads to specific behavioral reactions.

From the S-O-R perspective, AI-powered personalized advertising functions as an adaptive stimulus, tailoring content to each individual. This stimulus simultaneously affects consumers' cognitive and emotional states, generating both positive responses (such as usefulness and interest) and negative responses (such as privacy concerns). As a result, online purchase intention is not a direct response to the advertisement itself, but rather the outcome of a complex internal psychological process within the individual.

Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

UTAUT2 [17] is regarded as an extended model well-suited for explaining technology acceptance behavior in consumer contexts, as it integrates cognitive, social, and emotional factors. Applying UTAUT2 to the context of AI-powered personalized advertising allows for an expanded explanation of consumer behavior — moving beyond mere technology acceptance to the acceptance of personalized experiences. AI acts as a mediating mechanism that enhances performance expectancy, reduces cognitive effort, stimulates hedonic motivation, and optimizes perceived value. However, this impact is not linear; it is

moderated by consumers' perceptions of privacy and the degree of personalization they experience. Therefore, online purchase intention is not solely the result of technology acceptance but also the consequence of the dynamic interaction among technology, data, and personalized user experiences.

The integration is theoretically justified on several grounds. First, S-O-R provides a robust overarching structure by conceptualizing AI-driven personalized advertising as external stimuli that influence consumers' internal organism states (e.g., perceived benefits, perceived personalization of advertising, intrusiveness, and privacy concerns), which, in turn, lead to behavioral responses (e.g., purchase intention). Second, the model incorporates core constructs from UTAUT2, which offers a comprehensive set of technology-specific predictors - particularly performance expectancy (perceived benefits), effort expectancy (ease of use), hedonic motivation (perceived enjoyment), and habit - that are highly relevant to AI-powered advertising systems. Finally, TPB complements the framework by introducing Brand Trust as a proximal determinant of intention and by emphasizing the role of perceived behavioral control, which helps explain the boundary conditions of privacy concern and intrusiveness in a collectivist, emerging-market context.

2.3. Research Model and Hypotheses

The present study develops an interdisciplinary theoretical framework to elucidate the mechanisms through which consumers' perceptions (Perceived Personalized Advertising, Perceived Intrusiveness, Perceived Benefits, Brand Trust, and Privacy Concern) influence online purchase intention on the Shopee platform. This framework is constructed by harmoniously integrating three core theories: Stimulus-Organism-Response (S-O-R), Theory of Planned Behavior (TPB), and the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2).

The study employs an integrated theoretical framework combining S-O-R, TPB, and UTAUT2 to explain the influence of these perceptual factors (personalization, intrusiveness, benefits, brand trust, and privacy concern) on online purchase intention on Shopee. The S-O-R model provides the overarching structure: platform stimuli (personalization and benefits as positive; intrusiveness as negative) affect consumers' internal states (brand trust and privacy concern), which in turn lead to the behavioral response of purchase intention [16]. UTAUT2 complements this by offering a consumer technology acceptance perspective: Perceived Benefits and personalization correspond to performance expectancy and hedonic motivation, while Privacy Concern acts as a barrier [17]. TPB clarifies the intention-formation process, in which internal states shape attitudes toward the behavior and perceived behavioral control, thereby predicting deliberate purchase intention [15].

Perceived Personalized Advertising (PPA)

Existing research indicates that AI-based personalized advertising enhances perceived relevance and usefulness by analyzing behavioral data to recommend content that aligns with individual preferences, thereby creating a more engaging experience and stimulating purchase intention [13]. Similarly, on the TikTok platform, perceived personalized advertising not only directly increases positive attitudes but also indirectly does so through advertising value, leading to higher purchase intentions [8]. Lee et al. [9] further confirm that personalization exerts a positive effect on purchase intention in social media environments by reducing perceived intrusiveness.

Hypothesis H1: *Perceived personalized advertising has a positive impact on online purchase intention.*

Perceived Intrusiveness of Advertising (PIA)

In the e-commerce environment, traditional generic advertising is frequently perceived as intrusive due to its repetitive, non-targeted nature, often leading to consumer discomfort and lower purchase intent. In contrast, AI-powered personalized advertising leverages real-time behavioral data - including browsing history, preferences, and past purchases - to deliver highly relevant content tailored to individual users. This approach can transform advertising from a generic interruption into a valuable, contextually appropriate recommendation, thereby reducing perceived intrusiveness while enhancing perceived value.

When advertising content closely aligns with personal needs, consumers are less likely to view it as disruptive; instead, they perceive it as timely and useful information. Consequently, lower irritation contributes to a more favorable advertising experience and, ultimately, stronger online purchase intention. This hypothesis draws upon the personalization paradox [18], which posits that at optimal levels, personalization can mitigate intrusiveness and even reverse its effect by increasing relevance and engagement.

Although perceived intrusiveness is typically regarded as a negative stimulus, the present study proposes that a moderate level of intrusiveness in AI-driven personalized advertising on platforms such as Shopee may function as a positive signal. In high-frequency e-commerce settings, completely non-intrusive ads may appear generic and low-effort, whereas moderately intrusive yet highly relevant AI-generated advertisements can convey that the platform is actively responsive to user needs. This signaling effect is expected to enhance perceptions of the platform's care and intelligence, particularly among digitally native Gen Z consumers who are highly tolerant a data-driven interactions. Such moderate disruption may also boost attention and brand recall, thereby positively influencing purchase intention [19].

Hypothesis H2: *Perceived intrusiveness of advertising has a positive impact on online purchase intention.*

Privacy Concern (PC)

Privacy concerns reflect users' anxiety about the potential misuse or unauthorized access to their personal information, prompting them to weigh the risks of data disclosure and thereby influencing their shopping experience [10]. Nguyen Van Nen et al. [11] confirmed that privacy concerns negatively affect purchase intention. Zahirović et al. [14] also emphasized that privacy concerns heighten perceptions of intrusion, though their impact may vary depending on users' data literacy.

Hypothesis H3: *Privacy concern has a positive impact on online purchase intention*

Brand Trust (BT)

Brand trust arises from the expectation that the platform will use personal data appropriately and provide reliable advertising information, thereby reducing perceived risk and encouraging purchase behavior [11, 13]. Nguyen Thu Thuy [12] and Nguyen Huu Pho [20] further affirm that trust is a critical factor that either mediates or directly influences purchase intention in AI advertising environments.

Hypothesis H4: *Brand trust has a positive impact on online purchase intention.*

Perceived Benefits (PB)

Perceived benefits (perceived usefulness) increase when personalized advertising offers convenience, relevant value, and the opportunity to discover new products, thereby enhancing the overall experience and promoting purchase intention [12]. An & Ngo [13] and Pho Hai Dang [21] confirm that perceived usefulness is a key driver of technology acceptance models and purchase intention on digital platforms.

Hypothesis H5: *Perceived benefits have a positive impact on online purchase intention.*

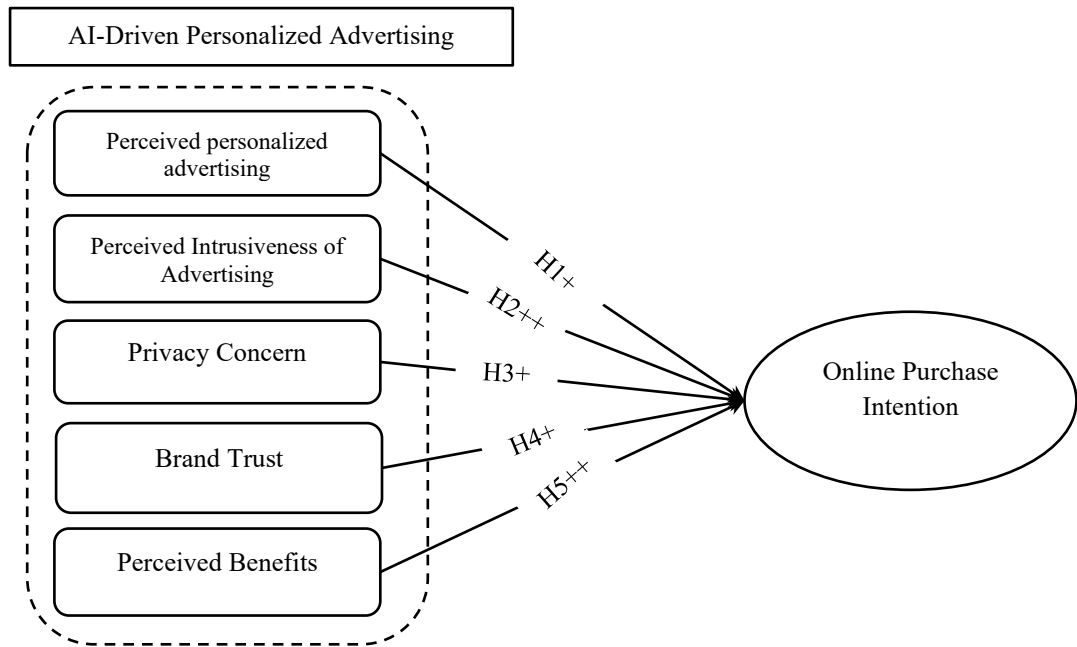


Figure 1. Proposed Research Model.

Source: Developed by the research team

3. RESEARCH METHODOLOGY

3.1. Data Collection Method

The development of the research model and survey instrument began with a comprehensive review of relevant literature and theoretical models proposed by previous scholars. Building upon this foundation, the researchers formulated the conceptual framework and initial questionnaire. To enhance content validity and contextual relevance, a qualitative focus group discussion was subsequently conducted with 10 students currently enrolled at the university. The questionnaire was then refined based on the feedback obtained to better align with the research objectives and the characteristics of the target population. All responses were measured using a five-point Likert scale, anchored as follows: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

The measurement scales for all constructs were adapted from well-established and psychometrically validated instruments within the Technology Acceptance Model (TAM) and its extensions. These scales have been extensively used and repeatedly validated in technology adoption and e-learning research. The primary sources include Davis [22], Venkatesh and Davis [23], and recent applications such as Wang et al. [24].

The target population comprised students at Ho Chi Minh City University of Industry and Trade (HUIT). A non-probability convenience sampling technique was employed, and data were collected via Google Forms.

Regarding sample size determination, Hair et al. [25] recommend a minimum of 50 observations for Exploratory Factor Analysis (EFA), with 100 or more being preferable. They also suggest an observation-to-variable ratio of at least 5:1, and ideally 10:1. Given 25 observed variables in this study, the minimum required sample size was 125, while the ideal size was 250.

In addition, Green [26] proposed that a minimum sample size for multiple regression analysis is $n \geq 50 + 8m$, where m represents the number of independent variables (predictors). This formula is appropriate when $m < 7$; when $m > 7$, it becomes overly conservative [27]. Since this study includes five independent variables, the minimum sample size required for regression analysis is $n \geq 50 + 8 \times 5 = 90$.

Considering both EFA and regression requirements, the researchers determined that a minimum of 125 valid responses would be sufficient. To account for potential invalid or incomplete responses and to ensure data quality, a total of 419 questionnaires were distributed. After rigorous data screening and cleaning, 362 valid responses were retained for final analysis.

3.2. Data Analysis Method

The study employed both a pilot study and a main survey. The data analysis procedure included descriptive statistics, scale reliability assessment, Exploratory Factor Analysis (EFA), correlation analysis, multiple linear regression, and model validation. Specifically:

(1) Pilot Study

A small-scale pilot survey was conducted to preliminarily assess the reliability of the measurement scales using Cronbach's alpha and to exclude any observed variables that failed to meet the required standards. The results helped refine the questionnaire before the formal survey.

(2) Main Study

The formal survey collected 362 valid responses from students at Ho Chi Minh City University of Industry and Trade. After cleaning, the data were coded and analyzed using SPSS 27 software in the following sequence: assessment of scale reliability via Cronbach's Alpha, Exploratory Factor Analysis (EFA) to determine the underlying structure of the scales, correlation analysis, and multiple linear regression to test the research hypotheses, evaluate model fit, and assess the overall impact of AI-powered personalized advertising on consumers' online purchase intention on the Shopee platform. Quantitative findings serve as the basis for drawing conclusions, providing managerial implications, and suggesting directions for future research.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Of the 362 students from Ho Chi Minh City University of Industry and Trade who participated in the survey, 287 were female (79.3%), and 75 were male (20.7%). This distribution indicates a substantial representation of both genders, although females made up most of the sample.

With respect to monthly expenditure on the Shopee platform, the data revealed the following distribution: 51.7% (187 students) spent less than VND 500,000, 39.5% (143 students) spent between VND 500,000 and VND 1,000,000, 5.5% spent between VND 1,000,000 and VND 2,000,000, and 3.3% spent more than VND 2,000,000. Notably, the majority of respondents (91,2%) reported spending less than VND 1,000,000 on Shopee per month.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PPA1	362	1	5	4.02	0.789
PPA2	362	1	5	4.14	0.823

PPA3	362	1	5	3.62	0.905
PPA4	362	1	5	4.22	0.770
PPA5	362	1	5	4.14	0.771
PIA1	362	1	3	2.06	0.770
PIA2	362	1	3	2.00	0.754
PIA3	362	1	3	1.85	0.740
PIA4	362	1	3	1.96	0.767
PIA5	362	1	3	2.09	0.763
PC1	362	1	3	1.85	0.682
PC2	362	1	3	1.73	0.665
PC3	362	1	3	1.62	0.680
PC4	362	1	3	1.73	0.698
PC5	362	1	3	1.81	0.720
BT1	362	1	5	3.63	0.872
BT2	362	1	5	3.64	0.844
BT3	362	1	5	3.56	0.870
BT4	362	1	5	3.98	0.793
BT5	362	1	5	3.55	0.944
PB1	362	1	5	4.07	0.743
PB2	362	1	5	3.96	0.816
PB3	362	1	5	3.93	0.826
PB4	362	1	5	3.80	0.872
PB5	362	1	5	3.98	0.845
OPI1	362	1	5	3.89	0.786
OPI 2	362	1	5	3.71	0.928
OPI 3	362	1	5	3.73	0.866
OPI 4	362	1	5	3.66	0.827
OPI 5	362	1	5	3.91	0.809
Valid N (listwise)	362				

Source: Developed by the research team

The mean scores demonstrate a distinct divergence across the variable sets. Specifically, 'Perceived Personalized Advertising', 'Perceived Benefits', and 'Online Purchase Intention' each attained means above 3.5, signaling a positive consensus among respondents. In contrast, 'Perceived Intrusiveness of Advertising' and 'Privacy Concern' had lower means (both below 2.1). Given that 'Privacy Concern' functions as an inverse variable, this low score is logically consistent, while the low mean for 'Perceived Intrusiveness' indicates minimal agreement. Standard deviations of 0.65 to 0.94 suggest a stable data distribution and adequate reliability for further empirical testing.

4.2. Cronbach's Alpha

Table 2. Cronbach's Alpha

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Measuring scale "Perceived personalized advertising": Cronbach's Alpha = 0.778				
PPA1	16.11	5.807	0.609	0.717
PPA2	15.99	5.900	0.542	0.740
PPA3	16.52	5.691	0.518	0.751
PPA4	15.92	5.974	0.579	0.728
PPA5	16.00	6.169	0.518	0.747
Measuring scale "Perceived Intrusiveness of Advertising": Cronbach's Alpha = 0.762				
PIA1	7.91	4.814	0.581	0.700
PIA2	7.96	4.794	0.608	0.691
PIA3	8.12	4.978	0.557	0.709
PIA4	8.00	5.172	0.460	0.743
PIA5	7.88	5.223	0.448	0.747
Measuring scale "Privacy Concern": Cronbach's Alpha = 0.813				
PC1	6.89	4.473	0.642	0.764
PC2	7.01	4.451	0.676	0.754
PC3	7.12	4.676	0.562	0.788
PC4	7.02	4.498	0.609	0.774
PC5	6.93	4.646	0.523	0.801
Measuring scale "Brand Trust": Cronbach's Alpha = 0.845				
BT1	14.73	7.501	0.692	0.802
BT2	14.71	7.596	0.701	0.800
BT3	14.79	7.585	0.674	0.807
BT4	14.38	8.313	0.575	0.833
BT5	14.81	7.464	0.623	0.823
Measuring scale "Perceived Benefits": Cronbach's Alpha = 0.821				
PB1	15.67	6.937	0.599	0.791
PB2	15.78	6.461	0.653	0.774
PB3	15.80	6.457	0.642	0.778
PB4	15.94	6.157	0.674	0.767
PB5	15.76	6.865	0.509	0.817
Measuring scale "Online Purchase Intention": Cronbach's Alpha = 0.788				
OPI1	15.01	6.507	0.544	0.729
OPI2	15.20	6.027	0.530	0.735
OPI3	15.17	6.325	0.512	0.740
OPI4	15.24	6.207	0.586	0.714
OPI5	15.00	6.413	0.546	0.728

Source: Developed by the research team

The research team performed a reliability analysis to refine the measurement scales, excluding items that failed to meet established psychometric standards. Scales were retained only if their Cronbach's Alpha coefficients reached at least 0.6 and their corrected item-total correlations exceeded 0.3. Items falling below the 0.3 threshold were deemed unreliable and subsequently removed. While higher Alpha values generally indicate superior internal consistency, coefficients exceeding 0.95 may suggest potential item redundancy.

The analysis revealed that all initial items satisfied these criteria, with no variables requiring exclusion. Consequently, the final research model retains 30 observed variables to investigate the impact of AI-driven personalized advertising on students' online purchase intentions at the Ho Chi Minh City University of Industry and Trade (HUIT) regarding the Shopee platform.

4.3. Exploratory Factor Analysis (EFA)

4.3.1. Independent Variables

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.869
Bartlett's Test of Sphericity	Approx. Chi-Square	3372.407
	df	300
	Sig.	< 0.001

Source: Developed by the research team

The Kaiser-Meyer-Olkin (KMO) index reached 0.869 ($0.5 < \text{KMO} < 1.0$), confirming the suitability of the data for factor analysis. Bartlett's Test of Sphericity yielded a significance level of $p < 0.001$, indicating that the variables are sufficiently correlated. All factor loadings exceeded the 0.5 threshold, satisfying the criteria for convergent validity. Using an extraction-and-rotation approach based on Eigenvalues > 1 , five distinct factors were derived from the 25 observed variables. The cumulative variance explained was 57.894%, meeting the research requirements. Consequently, all proposed items were retained for subsequent statistical procedures.

Table 4. Rotated Component Matrix

		Component				
		1	2	3	4	5
1	BT3	0.810				
2	BT1	0.776				
3	BT2	0.763				
4	BT5	0.716				
5	BT4	0.650				
6	PB4		0.787			
7	PB2		0.749			
8	PB3		0.740			
9	PB1		0.637			
10	PB5		0.589			
11	PC2			0.800		
12	PC1			0.740		

		Component				
		1	2	3	4	5
13	PC4			0.738		
14	PC3			0.724		
15	PC5			0.562		
16	PPA1				0.712	
17	PPA5				0.704	
18	PPA4				0.701	
19	PPA2				0.664	
20	PPA3				0.632	
21	PIA1					0.778
22	PIA2					0.762
23	PIA3					0.720
24	PIA4					0.636
25	PIA5					0.584

Source: Developed by the research team

The Exploratory Factor Analysis (EFA) results demonstrated that the observed variables met the requirements for both convergent and discriminant validity. All items exhibited factor loadings greater than 0.5, with no cross-loading or formation of new factor groups. The finalized research model consists of five constructs, each measured by five items: (1) Perceived Personalized Advertising, (2) Perceived Intrusiveness, (3) Privacy Concerns, (4) Brand Trust, and (5) Perceived Benefits.

4.3.2. Dependent variable

Table 5. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.777
Bartlett's Test of Sphericity	Approx. Chi-Square	450.586
	df	10
	Sig.	<0.001

Source: Developed by the research team

Table 6. Component Matrix

	Factor loading coefficient	Eigenvalue	Total variance extracted
OPI1	0.562	2.623	52.465%
OPI2	0.527		
OPI3	0.501		
OPI4	0.568		
OPI5	0.561		

Source: Developed by the research team

Statistical tests further validated the EFA's suitability, yielding a KMO of 0.777 and a significant Bartlett's test ($p < 0.001$). Regarding the 'Purchase Intention' factor, a single component was extracted from five items, explaining 52.465% of the variance with an Eigenvalue of 2.623. Since all factor loadings remained above 0.5, the scale was deemed reliable and retained for subsequent analysis.

4.4. Regression Analysis

Table 7. ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70.563	4	17.641	98.729	<0.001 ^b
	Residual	63.789	357	0.179		
	Total	134.352	361			

Source: Developed by the research team

The ANOVA results yielded an F-statistic of 98.729 with a p-value < 0.001 , indicating a good fit and confirming that the independent variables significantly correlate with the dependent variable (OPI) at the 95% confidence level.

Table 8. Model Summary

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
1	0.725 ^a	0.525	0.520	0.42271	1.916

Source: Developed by the research team

The final test shows that the Durbin–Watson value of 1.916 is close to 2, indicating that the model does not violate the assumption of first-order autocorrelation in the residuals; therefore, the regression estimation results are reliable.

In Table 8, the adjusted R^2 value is 0.520, indicating that the regression model accounts for 52% of the variance in students' online purchase intentions on the Shopee platform at Ho Chi Minh City University of Industry and Trade. Specifically, factors such as Perceived Personalized Advertising, Perceived Intrusiveness, Privacy Concerns, Brand Trust, and Perceived Benefits collectively explain this variation, with the remaining 48% attributable to external factors not included in the model.

Table 9. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	1.321	0.209		6.333	0.000		
	PPA	0.158	0.044	0.153	3.625	0.000	0.742	1.347
	PIA	-0.258	0.042	-0.229	-6.176	0.000	0.964	1.037
	BT	0.219	0.039	0.244	5.658	0.000	0.714	1.401
	PB	0.388	0.044	0.399	8.847	0.000	0.654	1.530

a. Dependent Variable: OPI

Source: Developed by the research team

The standardized regression coefficients show that four independent variables-Perceived Personalized Advertising (PPA), Perceived Intrusiveness of Advertising (PIA), Brand Trust (BT), and Perceived Benefits (PB)-have significance levels (Sig.) less than 0.05. This confirms that these four factors significantly influence students' intention to make online purchases on the Shopee platform at the Ho Chi Minh City University of Industry and Trade. In contrast, the variable Privacy Concern (PC) has a significant level of 0.724 (> 0.05), indicating that privacy concerns do not have a statistically significant impact on purchase intention in this context. Accordingly, the author excludes the independent variable Privacy Concern (PC) and proceeds to a second regression analysis that includes the remaining four variables.

Based on Table 9, the empirical regression equation for predicting purchase intention, ranked in descending order of effect size, is as follows: Perceived Benefits (PB) = 0.388; Perceived Intrusiveness of Advertising (PIA) = -0.258; Brand Trust (BT) = 0.219; Perceived Personalized Advertising (PPA) = 0.158.

Using the dataset collected during the research process, the unstandardized regression equation representing the factors influencing online purchase intention on the Shopee platform among students at Ho Chi Minh City University of Industry and Trade is expressed as:

$$\text{OPI} = 0.388 \cdot \text{PB} - 0.258 \cdot \text{PIA} + 0.219 \cdot \text{BT} + 0.158 \cdot \text{PPA} + 1.321$$

After standardizing the regression equation, a slight change in the ranking of the influencing factors on purchase intention is observed. Specifically, the order is as follows:

$$\text{OPI} = 0.399 \cdot \text{PB} + 0.244 \cdot \text{BT} - 0.229 \cdot \text{PIA} + 0.153 \cdot \text{PPA}$$

The empirical results led to the final validated research model.

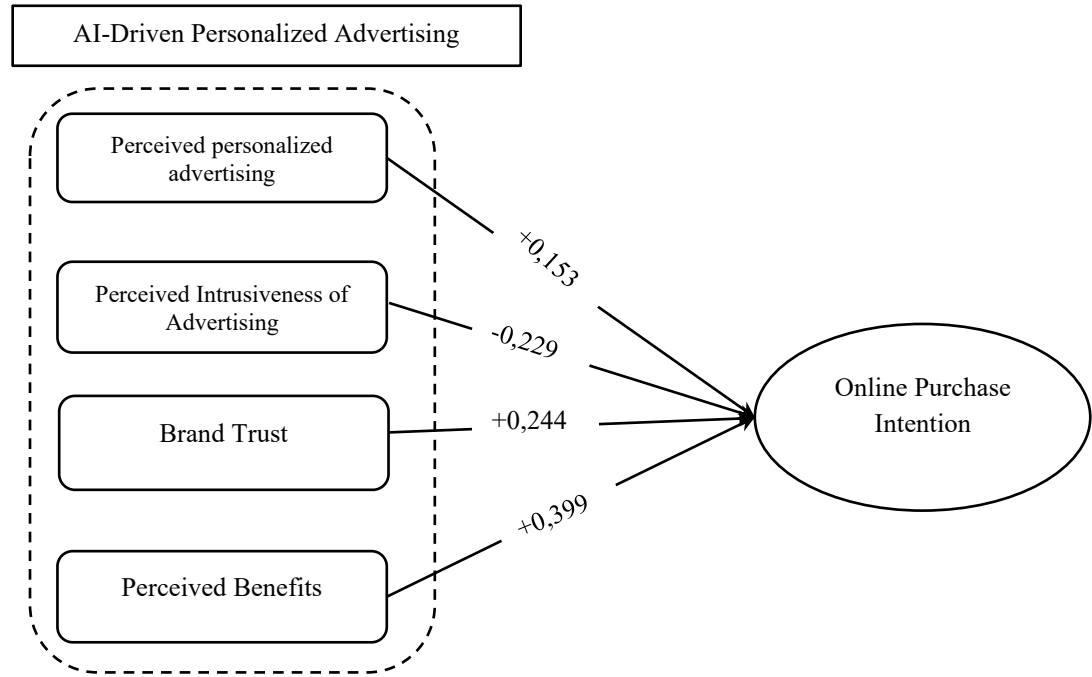


Figure 2. Research Result Model.

Source: Developed by the research team

4.5. Discussion of Research Results

The regression results indicate that Perceived Benefits exerts the strongest influence on students' online purchase intention on Shopee at the Ho Chi Minh City University of Industry and Trade ($\beta = 0.399$, $p < 0.001$). The results are consistent with those of Ahmad [28] and Bahari et al. [29]. This finding suggests that students place substantial emphasis on the utilitarian value generated by personalized advertising. Notably, a discrepancy emerges: although perceived benefits are the most influential factor, they are also the least strongly perceived in practice. This gap may be attributed to several factors, including the limited capability of AI algorithms to fully capture individual preferences, insufficient provision of comparative and evaluative information, an overemphasis on sales-driven content rather than value communication, and the incomplete implementation of deep personalization. In contrast, students highly appreciate the ability to discover new products that align with their preferences, indicating that personalized advertising is currently an effective recommendation mechanism. However, monetary incentives such as discount codes appear to be relatively undervalued.

Brand Trust also demonstrates a positive and statistically significant effect on purchase intention ($\beta = 0.244$, $p < 0.001$). Trust is primarily reinforced by the perceived superiority of personalized advertising compared to traditional formats. Nevertheless, a degree of skepticism persists regarding the accuracy and credibility of advertising information. This concern is largely driven by prior negative experiences with products failing to meet expectations, the absence of robust verification mechanisms on the platform, and inconsistencies between algorithmically optimized content and actual user feedback.

In contrast, Perceived Intrusiveness of advertising shows a significant negative impact on purchase intention ($\beta = -0.229$, $p < 0.001$), contradicting the initial hypothesis. Personalization was originally expected to enhance relevance, thereby reducing the perceived intrusiveness of advertising and improving user experience. However, empirical findings reveal the opposite effect. Students report that advertisements appear too frequently, interrupt browsing, repeat similar content, and ultimately cause irritation, leading to avoidance behaviors such as ignoring or blocking ads. This contradiction can be explained by the "personalization paradox": while AI enhances relevance, excessive exposure, inappropriate timing, and content repetition may exceed users' tolerance thresholds, thereby triggering psychological reactance—a defensive response arising when individuals perceive a threat to their autonomy [30, 31]. Under such conditions, the perceived benefits of personalization are outweighed by discomfort, resulting in a decline in purchase intention. This effect is particularly pronounced among Gen Z students, who are characterized by short attention spans and a strong preference for seamless digital experiences.

Perceived Personalization of advertising has the weakest yet still statistically significant effect on purchase intention ($\beta = 0.153$, $p < 0.001$), consistent with the findings of An and Ngo [13]. The findings confirm its role as a motivational factor, particularly in enhancing relevance and stimulating interest through tailored product suggestions. However, students do not perceive the system's flexibility or its ability to adapt to their evolving shopping habits strongly.

Finally, Privacy Concern is the only factor that does not exhibit a statistically significant impact on purchase intention. Although students express concerns regarding potential misuse of personal data and a desire for greater control over AI-driven data processing, these concerns do not translate into behavioral resistance. This outcome may be explained by limited transparency in data collection and processing practices, exposure to information about data breaches, and a perceived lack of effective control despite the presence of privacy policies. Moreover, Vietnamese Gen Z consumers, who constitute the

primary segment engaging with AI-powered advertising on platforms such as Shopee, Lazada, and TikTok Shop, exhibit relatively high levels of digital literacy and familiarity with data-driven services. Cultural factors specific to Vietnam, including high collectivism, trust in established platforms, and a strong orientation toward utilitarian benefits in consumption, may attenuate the negative influence of privacy concerns. When AI advertising delivers tangible value, such as accurate product recommendations, time savings, and personalized styling suggestions, perceived benefits tend to dominate, rendering privacy concerns less salient in shaping behavioral intentions.

5. CONCLUSION AND MANAGERIAL IMPLICATIONS

The objective of this study is to examine the impact of AI-driven personalized advertising on students' online purchase intention on the Shopee platform at Ho Chi Minh City University of Industry and Trade. Specifically, the research identifies key factors influencing purchase intention, evaluates the direction and statistical significance of their effects, and proposes practical implications. Five factors were examined: Perceived Benefits, Perceived Personalized Advertising, Perceived Intrusiveness of Advertising, Privacy Concern, and Brand Trust.

Empirical results reveal that four factors significantly influence purchase intention: Perceived Benefits, Perceived Personalized Advertising, Perceived Intrusiveness of Advertising, and Brand Trust. Based on these findings, the following managerial implications are proposed to enhance purchase intention among university students in Vietnam.

Perceived Benefits exert the strongest positive effect ($\beta = 0.399$). However, students appear to underutilize the decision-support benefits offered by AI-driven advertising. To address this gap, Shopee should improve its algorithms to deliver not only product introductions but also relevant decision-support information—such as key specifications aligned with users' search history, clear explanations for recommendations, weighted reviews from similar user profiles, and side-by-side comparisons of competing products. Additionally, financial benefits are currently underperceived, which is particularly critical for price-sensitive students. Shopee should refine its voucher recommendation system by aligning offers with individual purchase cycles, simplifying redemption conditions, and prominently displaying the exact monetary savings in advertisements.

Brand Trust ranks second in influence ($\beta = 0.244$). Trust is primarily driven by the perceived superiority of personalized advertising over traditional formats. To strengthen this, Shopee should focus on enhancing the perceived accuracy and reliability of AI-generated recommendations while reducing consumer skepticism toward advertising claims.

Perceived Intrusiveness of Advertising shows a significant negative effect ($\beta = -0.229$). Students experience discomfort when advertisements feel excessive or disruptive. This suggests that intrusiveness undermines the value of personalization when it exceeds an acceptable threshold, often triggering psychological reactance. Vietnamese Gen Z and Millennial users are generally receptive to personalized advertising if they maintain a sense of control. To mitigate this, Shopee can implement a "Dynamic Consent Ladder" enabling users to adjust personalization levels in real time, along with a "Post-Ad Calibration Loop" featuring brief micro-surveys after ad exposure. Such mechanisms transform user feedback into immediate recalibration of the model, fostering a greater sense of control and reducing feelings of surveillance.

Perceived Personalized Advertising demonstrates a positive but relatively weaker effect ($\beta = 0.153$). While Shopee's current recommendation algorithm performs well in matching user preferences, further improvements in depth and speed of preference analysis are needed.

Additionally, enhancing the feedback loop to rapidly learn from negative engagement will help the system avoid irrelevant content and elevate overall personalization effectiveness.

Limitations

While this study provides valuable insights, it has several notable limitations. The findings are constrained by convenience sampling from a single university (HUIT), limiting generalizability to broader populations. Additionally, the cross-sectional design precludes causal inference and observation of temporal changes. Furthermore, the model explained only 52% of the variance in online purchase intention, indicating the presence of other influencing factors.

These limitations, while common in survey-based research on technology adoption, highlight important avenues for future studies. Subsequent research could employ probability sampling across multiple universities or regions, adopt longitudinal designs, and incorporate additional variables to enhance the model's explanatory power.

REFERENCES

- [1] Serviceplan Group, “CMO Barometer 2026: What global CMOs want in 2026 – Strategic priorities and agency expectations,” *House of Communication*, Nov. 2025. [Online]. Available: <https://www.house-of-communication.com/de/en/newsroom/2025/11/service-plan-group-cmo-barometer-2026.html>
- [2] GWI, “Connecting the Dots 2026: 5 Marketing Trends You Might Be Missing,” 2025. [Online]. Available: <https://www.gwi.com/connecting-the-dots>
- [3] Research and Markets, “Digital Advertising Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2021–2031,” Jan. 2026. [Online]. Available: <https://www.researchandmarkets.com/reports/6022966/digital-advertising-market-global-industry>
- [4] *Industry and Trade Magazine*, “Trends in the Online Purchasing Behavior of Vietnamese Consumers,” 2023. [Online]. Available: <https://tapchicongthuong.vn/xu-huong-hanh-vi-mua-hang-truc-tuyen-cua-nguoi-tieu-dung-viet-nam-104014.htm>
- [5] Government of Vietnam, “Decree No. 52/2013/ND-CP on e-commerce.” May. 16, 2013. [Online]. Available: <https://thuvienphapluat.vn/van-ban/Thuong-mai/Nghi-dinh-52-2013-ND-CP-thuong-mai-dien-tu-187901.aspx>
- [6] D. Sipos, “The effects of AI-powered personalization on consumer trust, satisfaction, and purchase intent,” *European Journal of Applied Science, Engineering and Technology*, vol. 3, no. 2, pp. 14–24, 2025, doi: [https://doi.org/10.59324/EJASET.2025.3\(2\).02](https://doi.org/10.59324/EJASET.2025.3(2).02)
- [7] Shopee, “Optimize Your Shopee Ads Campaign,” *Shopee Seller Centre*, 2023. [Online]. Available: <https://seller.shopee.vn/edu/article/> (or official Seller Centre documentation)
- [8] T. T. C. Nhung and Q. V. Cao, “Personalized advertising on the TikTok platform and consumer purchase intention,” *Science & Technology Development Journal – Economics – Law and Management*, vol. 8, no. 1, pp. 5051–5063, 2024, doi: <https://doi.org/10.32508/stdjelm.v8i1.1324>
- [9] J. Lee, C. Kim, and K. C. Lee, “Exploring the personalization-intrusiveness-intention framework to evaluate the effects of personalization in social media,” *International Journal of Information Management*, vol. 66, Art. no. 102532, Oct. 2022, doi: <https://doi.org/10.1016/j.ijinfomgt.2022.102532>

- [10] H. H. Nguyen *et al.*, “Understanding online purchase intention: The mediating role of attitude towards advertising,” *Cogent Business & Management*, vol. 9, no. 1, Art. no. 2095950, 2022, doi: <https://doi.org/10.1080/23311975.2022.2095950>
- [11] V. N. Nguyen *et al.*, “Evaluating the impact of personalized advertising on young consumers’ purchase intention in Ho Chi Minh City,” *Journal of Trade Science*. 2022.
- [12] T. T. Nguyen, “The impact of advertising on TikTok applications on consumer purchasing behavior,” *Industry and Trade Magazine*, 2023. [Online]. Available: <https://scholar.dlu.edu.vn/thuvienso/bitstream/DLU123456789/209441/1/CVv146S102023258.pdf>
- [13] G. K. An and T. T. A. Ngo, “AI-powered personalized advertising and purchase intention in Vietnam’s digital landscape: The role of trust, relevance, and usefulness,” *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 11, no. 3, Art. no. 100580, 2025, doi: <https://doi.org/10.1016/j.joitmc.2025.100580>
- [14] M. Zahirović, E. Marić, and M. Husić-Mehmedović, “The role of consumer knowledge in the privacy paradox of personalized advertising,” *Southeast European Journal of Economics and Business*, vol. 19, no. 2, pp. 46–59, 2024, doi: <https://doi.org/10.2478/jeb-2024-0015>
- [15] I. Ajzen, “The theory of planned behavior,” *Organizational Behavior and Human Decision Processes*, vol. 50, no. 2, pp. 179–211, 1991, doi: [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- [16] A. Mehrabian and J. A. Russell, *An Approach to Environmental Psychology*. Cambridge, MA, USA: MIT Press, 1974.
- [17] V. Venkatesh, J. Y. L. Thong, and X. Xu, “Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology,” *MIS Quarterly*, vol. 36, no. 1, pp. 157–178, 2012, doi: <https://doi.org/10.2307/41410412>
- [18] J. I. M. de Groot *et al.*, “The personalization paradox in Facebook advertising: The mediating effect of relevance on the personalization–brand attitude relationship and the moderating effect of intrusiveness,” *Journal of Interactive Advertising*, vol. 22, no.1, pp. 57-74, 2022, doi: <https://doi.org/10.1080/15252019.2022.2032492>
- [19] R. Bell and A. Buchner, “Positive effects of disruptive advertising on consumer preferences,” *Journal of Interactive Marketing*, vol. 41, no. 1, pp. 1–13, 2018, doi: <https://doi.org/10.1016/j.intmar.2017.09.002>
- [20] H. P. Nguyen, “The impact of AI-generated advertising content on purchase intention: A study of Generation Z social media users in Vietnam,” *Journal of Vietnam Economic & Financial Review*, 2025. [Online]. Available: <https://nghienccu.tapchikinhthetachinh.vn/anh-huong-cua-noi-dung-quang-cao-do-ai-tao-ra-doi-voi-y-dinh-mua-hang-nghien-cuu-ve-nguoi-dung-mang-xa-hoi-the-he-z-tai-viet-nam-78906.html>
- [21] H. D. Pho, V. T. Nguyen, and V. D. Nguyen, “The impact of privacy and perceived personalization on customer purchase decisions on social media platforms,” *Journal of Vietnam Economic & Financial Review*, 2025. [Online]. Available: <https://kinhtevadubao.vn/nghien-cuu-su-anh-huong-cua-quyen-rieng-tu-va-cam-nhan-ca-nhan-hoa-den-quyet-dinh-mua-hang-cua-khach-hang-tren-nen-tang-mang-xa-hoi-31437.html>
- [22] F. D. Davis, “Perceived usefulness, perceived ease of use, and user acceptance of information technology,” *MIS Quarterly*, vol. 13, no. 3, pp. 319–340, Sep. 1989, doi: <https://doi.org/10.2307/249008>

[23] V. Venkatesh and F. D. Davis, “A theoretical extension of the technology acceptance model: Four longitudinal field studies,” *Management Science*, vol. 46, no. 2, pp. 186–204, Feb. 2000, doi: <https://doi.org/10.1287/mnsc.46.2.186.11926>

[24] M. Wang *et al.*, “Development and TAM-based validation of a user experience scale for actual system use in online courses,” *Education Sciences*, vol. 15, no. 7, Art. no. 855, 2025, doi: <https://doi.org/10.3390/educsci15070855>

[25] J. F. Hair Jr. *et al.*, *Multivariate Data Analysis*, 7th ed. Upper Saddle River, NJ, USA: Pearson, 2010.

[26] S. B. Green, “How many subjects does it take to do a regression analysis?,” *Multivariate Behavioral Research*, vol. 26, no. 3, pp. 499–510, 1991, doi: https://doi.org/10.1207/s15327906mbr2603_7

[27] D. T. Nguyen, *Scientific Research Methods in Business*. Hanoi, Vietnam: Finance Publishing House, 2026. https://www.ebookbkmt.com/2024/12/sach-giao-trinh-phuong-phap-nghien-cuu_13.html

[28] S. Abdul-Wahid, M. Ahmad and H. Ijaz, “Impact of perceived benefits and perceived risks on online shopping behavior with mediating role of purchase intention,” *Bulletin of Business and Economics*, vol. 13, no. 1, 2024, doi: <https://doi.org/10.61506/01.00226>

[29] K. A. Bahari *et al.*, “The factors influencing a customer’s purchase intention on online shopping website,” in *Proc. European Proceedings of Social and Behavioural Sciences*, 2024, doi: <https://doi.org/10.15405/epsbs.2024.05.12>

[30] J. W. Brehm, *A Theory of Psychological Reactance*. New York, NY, USA: Academic Press, 1966.

[31] A. Sharma *et al.*, “Investigating the effect of advertising irritation on digital advertising effectiveness: A moderated mediation model,” *Technological Forecasting and Social Change*, vol. 180, Art. 121731, 2022, doi: <https://doi.org/10.1016/j.techfore.2022.121731>

[32] A. Chaudhuri and M. B. Holbrook, “The Chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty,” *Journal of Marketing*, vol. 65, no. 2, pp. 81–93, 2001, doi: <http://dx.doi.org/10.1509/jmkg.65.2.81.18255>

APPENDIX 1

Original measurement scale table

Code	Item	Source
Measuring scale “Perceived Personalized Advertising”		
PPA1	Shopee ads often recommend products that match my shopping preferences.	[8]
PPA 2	Shopee ads are usually adjusted according to my shopping habits.	
PPA 3	Shopee ads make me feel as if they are specially made for me.	
PPA 4	Shopee ads often recommend products that I am currently interested in.	
PPA 5	Shopee ads often suggest products similar to those I have previously purchased.	

Measuring scale “Perceived Intrusiveness of Advertising”		
PIA1	I feel annoyed when ads appear continuously on Shopee.	[9]
PIA2	Ads on Shopee interrupt my shopping experience.	
PIA3	I feel irritated when the same ads are repeated many times.	
PIA4	The likelihood that I will turn off / block the ads is very high.	
PIA5	Shopee ads make me lose interest while shopping.	
Measuring scale “Privacy Concern”		
PC1	I am afraid that my personal and shopping information is not kept confidential.	[11]
PC2	I am afraid that my personal information will be used for malicious purposes.	
PC3	I want any personal information processed by AI to require my consent.	
PC4	I am concerned that my personal information may be leaked when using Shopee.	
PC5	I feel uneasy because Shopee does not notify me of unusual activity or strange accounts.	
Measuring scale “Brand Trust”		
BT1	The content of personalized ads is trustworthy.	[32]
BT2	Personalized ads are a reliable reference source when shopping.	
BT3	Personalized ads are more trustworthy than traditional ads.	
BT4	I believe that personalized ads on Shopee are created based on my shopping habits.	
BT5	I believe that personalized ads on Shopee always provide accurate information.	
Measuring scale “Perceived Benefits”		
PB1	Shopee ads help me discover many more new products that match my preferences.	[11]
PB2	Shopee ads make my shopping easier.	
PB3	Shopee ads help me find suitable products faster than manual browsing.	
PB4	Shopee ads help me make better purchase decisions.	
PB5	Shopee ads help me save money by suggesting suitable discount codes.	
Measuring scale “Online Purchase Intention”		
OPI1	Personalized ads that match my preferences make me want to buy more on Shopee.	[8]
OPI2	Ads that appear too frequently make me not want to buy on Shopee.	

OPI3	I hesitate to buy when I feel that personalized ads use too much of my personal information.	
OPI4	I hesitate to buy when I feel that personalized ads use too much of my personal information.	
OPI5	When Shopee ads provide useful information, I tend to purchase more quickly.	

** The scale was adapted and supplemented by the author based on domestic and international reference sources, as presented in the table, to suit the context of shopping on the Shopee platform.*