

A Study on the impact of Augmented Reality Technology on the Online Purchase Intentions of Gen Z in Vietnam: The Mediating Role of Attitudes and Perceived Values

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Article History	Abstract
Original Research Article	<p><i>This study examines the impact of augmented reality (AR) technological attributes on the online purchase intention of Generation Z consumers in Vietnam, with the mediating roles of attitude and perceived value. Based on the Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT), the study focuses on four key factors: perceived usefulness, perceived ease of use, interactivity, and trialability. Data were collected from 500 Gen Z respondents in Vietnam and analyzed using PLS-SEM. The results show that all four AR attributes positively influence both attitude and perceived value. In addition, attitude and perceived value significantly affect online purchase intention, with perceived value being the strongest predictor. The findings highlight the importance of enhancing AR features to improve consumer experience and increase purchase intention in online shopping environments.</i></p> <p>Keywords: Augmented Reality, Online Purchase Intention, Generation Z, Attitude, Perceived Value, Perceived Usefulness, Perceived Ease of Use, Interactivity, Trialability.</p>
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1. INTRODUCTION

Thanks to the fast-moving development of digital technologies, retailing has undergone a dramatic change, with e-commerce emerging as one of the major sales channels through which consumers buy goods and services in Vietnam and around the world. The same digital evolution has not only broadened the scope of access to online shopping but also changed consumer expectations and consumer behavior, decision making, and purchasing processes. In accordance with these changes, online retailers are increasingly adopting emerging technologies into their business processes to improve customer engagement and deliver personalized shopping experience while ensuring competitive differentiation in an already crowded marketplace. Of these innovations, perhaps one of the biggest and seeking for attention from a long time has been Augmented Reality (AR) as a step in digital metamorphosis allowing consumers to hypothetically see real-life use cases of products by using their AR device. AR, on the other hand, transforms static online shopping experiences with interactive product displays and even

visual information about how to use a product in real life. It helps to bridge the experiential gap between physical and digital retail environments, minimizes perceived uncertainty and purchase risk, and enables a more informed, confident, and satisfactory consumer purchasing decision.

In Vietnam, Generation Z represents a highly digital-savvy consumer group that is actively engaged in online platforms and plays an increasingly important role in the e-commerce market. Characterized by a strong preference for innovation, interactivity, and immersive experiences, Gen Z is considered a key target segment for AR-integrated shopping applications. Despite the growing adoption of AR technology by e-commerce businesses, its actual impact on Gen Z consumers' online purchase intention remains underexplored, particularly in emerging markets such as Vietnam. In addition, limited research has investigated the psychological mechanisms through which AR influences consumer decision-making, especially the roles of attitude and perceived value. Based on consumer behavior and

technology acceptance theories, attitude and perceived value are identified as critical factors that explain how technological innovations influence purchasing decisions. AR technology enhances consumers' ability to evaluate products more effectively, reduces perceived risk, and increases perceived value. When consumers perceive AR technology as useful and engaging, they are more likely to develop positive attitudes toward its use in online shopping, which in turn strengthens their intention to purchase online.

Therefore, the objective of the study is to explore the effect of augmented reality technology on Generation Z consumers' online purchase intention in Vietnam with the mediating function of attitude and perceived value. The findings are expected to contribute to the theoretical literature on consumer behaviour in digital environments by integrating AR technology in established behavioural models, as well as provide practical implications for e-commerce businesses to improve customer experience and marketing effectiveness by using immersive technologies.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical Background

The present study combines the Technology Acceptance Model (TAM) and the Innovation Diffusion Theory (IDT), which increases our understanding of consumers' intention to buy online. Davis (1989) proposed the technology acceptance model, or TAM, which states that technology adoption by users depends largely on both perceived usefulness and perceived ease of use. The two constructs directly influence users' attitudes toward the use of the technology which further influences behavioral intentions. TAM has been extensively employed in e-commerce research for driving the adoption of online shopping platforms and customers' responsiveness towards digital technologies.

Moreover, Rogers (2003), as a key figure in the second-category literature stream, also theorizes that innovation attributes encourage or inhibit individuals' decision to adopt. One of these characteristics, called trialability, has been found to be one of the key determinants in customers' evaluation on new products and technology. In addition, the growing development of digital commerce has emphasized the need for interactivity that indicates how likely consumers can interact with online platforms and obtain instantaneous feedback. On these theoretical bases, this study argues that those factors of perceived usefulness and ease of use, interaction and trialability affect consumers on attitude and experiencing on value which consequently influence online purchase intention.

2.2. Perceived Usefulness and Attitude

Perceived usefulness (PU) is the extent to which a user views using a specific system would enhance his or her job performance (Davis, 1989). Perceived Utility, according to the technology acceptance model (TAM) (Venkatesh & Davis, 2000), is one of the most powerful predictors of adoption and user attitude towards technology usage. When shoppers believe online shopping is hassle-free because it cuts back the time spent going to stores and helps them choose what purchase to make while shopping on the web, their positive attitudes of e-commerce are more likely to develop. Based on both past research it has been established that perceived usefulness has a significant positive impact on consumer attitude toward online purchasing and digital platform (Gefen et al. 2003; Hsu & Lin, 2008). Instead, recent studies on the influence factors of Generation Z customers have identified perceived usefulness as a determinant of positive attitudes and online purchase behaviours — even this high-tech generation (Singh, 2024).

H1: Perceived usefulness positively influences consumers' attitude toward online purchase intention

2.3. Perceived Usefulness and Perceived Value

Perceived value refers to consumers' overall assessment of the benefits obtained relative to the costs incurred during a transaction (Oliver, 1999). When consumers perceive online shopping platforms as useful and efficient, they are more likely to recognize greater value from their shopping experiences. Gefen et al. (2003) suggested that usefulness enhances consumers' evaluations of online systems by increasing convenience and reducing transaction effort. Similarly, Wang et al. (2016) found that functional benefits significantly contribute to value perception in e-commerce environments. Recent studies on Generation Z consumers further indicate that perceived usefulness directly improves perceived value, which subsequently enhances online purchase intention (Rahmawati & Widodo, 2024).

H2: Perceived usefulness positively influences perceived value.

2.4. Perceived Ease of Use and Attitude

Perceived ease of use (PEOU) is defined as the degree to which an individual believes that using a system requires little effort (Davis, 1989). A user-friendly online shopping platform can simplify the purchasing process, reduce complexity, and improve the overall shopping experience. Prior studies have demonstrated that ease of use positively affects consumers' attitudes toward technology adoption and online shopping (Moon & Kim, 2001; Venkatesh et al., 2003). Recent evidence also suggests that even among Generation Z consumers, who are highly familiar with digital technologies, ease of use remains an important determinant of positive attitudes toward e-commerce platforms (Singh, 2024).

H3: Perceived ease of use positively influences consumers' attitude toward online shopping.

2.5. Perceived Ease of Use and Perceived Value

Consumers often evaluate the value of online shopping platforms based on the effort required to complete transactions. Easy-to-use platforms reduce cognitive burden and increase shopping efficiency, thereby enhancing perceived value. Henderson and Divett (2003) argued that ease of use contributes to users' evaluations of online services, while Wang et al. (2016) found that usability significantly improves consumers' value perceptions. Recent studies further support the positive relationship between perceived ease of use and perceived value among Generation Z online shoppers (Rahmawati & Widodo, 2024).

H4: Perceived ease of use positively influences perceived value.

2.6. Interactivity and Attitude

Interactivity refers to the degree to which users can actively communicate and exchange information with online platforms. Interactive features such as live chat, personalized recommendations, and real-time feedback enhance consumer engagement and create more enjoyable shopping experiences. Li et al. (2002) found that interactive online environments positively affect consumers' attitudes and behavioral responses. Likewise, Hsu and Lin (2008) reported that interactivity increases user involvement and strengthens favorable attitudes toward digital platforms. In the era of social commerce and livestream shopping, recent studies have confirmed that interactivity significantly enhances Generation Z consumers' attitudes toward online shopping platforms (Nguyen et al., 2024).

H5: Interactivity positively influences consumers' attitude toward online shopping.

2.7. Interactivity and Perceived Value

Interactive features provide consumers with timely information, personalized support, and enhanced shopping experiences, thereby increasing the perceived benefits of online shopping. Previous studies have shown that interactivity improves consumers' evaluations of value in digital environments (Li et al., 2002; Sharma & Sharma, 2019). Recent research in livestream commerce and social commerce contexts indicates that interactivity significantly contributes to perceived value among Generation Z consumers by fostering engagement and reducing information uncertainty (Nguyen et al., 2024).

H6: Interactivity positively influences perceived value.

2.8. Trialability and Attitude

Trialability, a key concept in Innovation Diffusion Theory (IDT), refers to the extent to which an innovation can be

experimented with before adoption (Rogers, 2003). In online shopping, trialability may involve product demonstrations, virtual try-on technologies, free trials, and customer reviews. These opportunities reduce uncertainty and increase consumer confidence in purchasing decisions. Previous studies have shown that trialability positively affects consumers' attitudes toward innovation adoption (Rogers, 2003; Kim & Forsythe, 2008). More recent research highlights the growing importance of virtual product experiences in shaping positive attitudes among Generation Z consumers (Zhang et al., 2025).

H7: Trialability positively influences consumers' attitude toward online shopping.

2.9. Trialability and Perceived Value

Trialability enables consumers to evaluate product attributes and expected benefits before making purchase decisions, thereby reducing perceived risk and increasing value perception. Rogers (2003) emphasized that trialability facilitates innovation adoption by enhancing consumer confidence. Similarly, Kim and Forsythe (2008) found that virtual product experiences improve consumers' value perceptions. Recent studies on augmented reality and virtual shopping environments further confirm that trialability significantly enhances perceived value among online consumers (Zhang et al., 2025).

H8: Trialability positively influences perceived value.

2.10. Attitude and Online Purchase Intention

Attitude refers to an individual's overall positive or negative evaluation of a particular behavior (Ajzen, 1991). Both the Technology Acceptance Model and the Theory of Planned Behavior suggest that attitude is a key determinant of behavioral intention. Consumers who hold favorable attitudes toward online shopping are more likely to engage in purchasing behavior. Numerous studies have confirmed the positive relationship between attitude and online purchase intention (Ajzen, 1991; Venkatesh et al., 2003). Recent studies conducted in social commerce environments have further validated attitude as a significant predictor of Generation Z consumers' online purchase intention (Tran & Le, 2024).

H9: Attitude positively influences online purchase intention.

2.11. Perceived Value and Online Purchase Intention

Perceived value is widely recognized as one of the strongest determinants of consumer purchase intention. Consumers are more likely to purchase products online when they believe that the benefits outweigh the costs associated with the transaction. Oliver (1999) argued that value perception plays a central role in shaping consumer decisions and

loyalty. Similarly, Kumar and Anjaly (2017) found that perceived value significantly influences purchase intention across various retail contexts. Recent e-commerce studies also indicate that perceived value is the most influential predictor of online purchase intention among Generation Z consumers (Rahmawati & Widodo, 2024).

H10: Perceived value positively influences online purchase intention

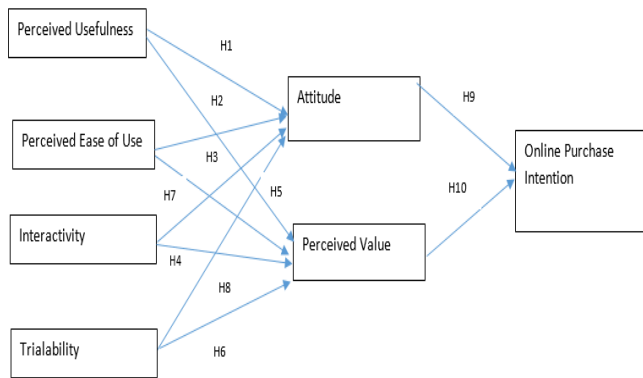


Figure 1. Proposed Research Model

3. METHODOLOGY

This research is a quantitative descriptive study, with the aim to provide an overview of

The influence of augmented reality technology on Gen Z consumer online purchase intention in Vietnam: The mediation of attitudes and perceived values. You will learn that it is quantitative because the data collection, interpretation of the data and moving away from the manifestations of our findings are all represented in numbers.

In this study, the research team used two sources of data; primary and secondary. These secondary data mainly come from Google scholar and related articles at home and abroad. The main data were collected through an on-line survey, designed to verify the factors in the proposed construct: perceived usefulness, perceived ease of use, interaction (explanatory power), trialability and attitude, that can impact on every online purchase intention. To make the questionnaire, measuring scales developed in prior research were adapted for the environment of internet buying. The study of the questionnaire form is broken into four sections. Scales were constructed in five-point Likert type "1=strongly disagree" and "5 = strongly agree".

An online poll using convenience sampling was used to acquire data. The questionnaire was distributed over social media, university student organisation and online community forums relevant to e-commerce-associated forums frequented by Gen Z shoppers. 500 surveys were collected from respondents that met the screening for

having previous internet purchase experience. These data were screened and cleaned from issues such as missed responses, straight-lining, unfinished questionnaires, and missing values, leaving only the valid answers for further analysis. Sample size of 500 exceeds the critical sample size and has adequate statistical power to test model and hypothesis in PLS-SEM models.

4. RESULTS

4.4.1. Respondents Demographic

Descriptive statistics show that the survey sample is relatively balanced in terms of gender, with males accounting for 52.3% and females 47.7%. All participants are aged 18-25, representing Generation Z – a group of young consumers who are increasingly influential in the retail market. Regarding income, 30.5% of respondents earn over 10 million VND per month, indicating that a significant portion of Gen Z has the ability to spend independently.

4.4.2. Measurement model

To evaluate a measurement model, it is necessary to assess reliability in terms of internal consistency, convergent validity, and discriminant validity. As proposed by Henseler et al. (2015) and Hair et al. (2016), this study applies both criteria, Composite Reliability (CR) and Cronbach Alpha, to assess the consistency of the scales of each variable in the measurement. Accordingly, both criteria need to have a value greater than 0.6 for exploratory studies and will be considered reliable when both values are greater than 0.7.

The results showed that all structures met the requirements. Specifically, Cronbach's Alpha: ranged from 0.83 to 0.91, ensuring high internal reliability (> 0.7); Composite Reliability (CR): ranged from 0.86-0.93, exceeding the recommended threshold (> 0.7); Average Variance Extracted (AVE): all were greater than 0.5, demonstrating that the convergent validity met the standards; HTMT coefficients: all were less than 0.85, confirming the discriminant validity between the structures.

Thus, the measurement model achieved sufficient reliability, convergent validity, and discriminant validity to qualify for structural model analysis (PLS-SEM).

4.4.3. Structural Model Evaluation

Structural model analysis was performed with 5,000 bootstrap samples to determine the statistical significance of the path coefficients (β) and p-values.

The results of the structural model analysis indicate that all hypotheses (H1-H10) are supported. Specifically, perceived usefulness has a weak but significant effect on attitude ($\beta = 0.062$) and a stronger effect on perceived value

($\beta = 0.321$). Perceived ease of use also positively influences attitude ($\beta = 0.147$) and perceived value ($\beta = 0.065$), although the effects are relatively small. Interactivity shows a strong impact on attitude ($\beta = 0.290$) and a weaker but significant effect on perceived value ($\beta = 0.073$). Trialability has a moderate effect on attitude ($\beta = 0.139$) and the strongest effect on perceived value ($\beta = 0.422$). Finally, attitude significantly influences online purchase intention ($\beta = 0.334$), while perceived value has the strongest overall effect on purchase intention ($\beta = 0.413$). Overall, the findings confirm that AR technological attributes shape online purchase intention through both attitude and perceived value, with perceived value being the most dominant predictor among Generation Z consumers.

Table 1. Final Structural Model Results and Hypothesis Testing

Hypothesis	Relationship	Original Sample (O)	P Values	Decision
H1	PU → AT	0.062	0.039	Supported
H2	PU → PV	0.321	0.000	Supported
H3	PE → AT	0.147	0.003	Supported
H4	PE → PV	0.065	0.049	Supported
H5	IT → AT	0.290	0.000	Supported
H6	IN → PV	0.073	0.008	Supported
H7	TR → AT	0.139	0.006	Supported
H8	TR → PV	0.422	0.000	Supported
H9	AT → OPI	0.334	0.000	Supported
H10	PV → OPI	0.413	0.000	Supported

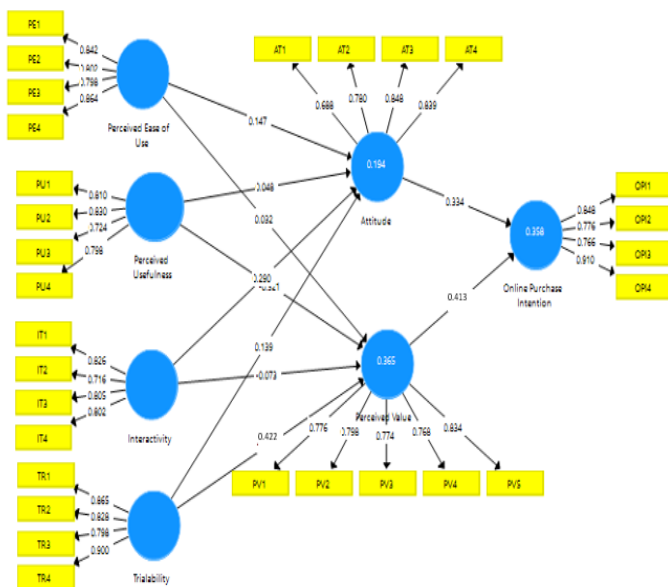


Figure 2. SEM Structural Model

5. CONCLUSIONS

This study investigates the impact of augmented reality (AR) technology on Generation Z consumers' online purchase intention in Vietnam, with the mediating roles of

attitude and perceived value. Based on data collected from 500 Gen Z respondents and analyzed using PLS-SEM, the findings confirm that all proposed hypotheses (H1–H10) are supported, indicating the robustness of the integrated TAM and IDT framework in explaining consumer behavior in AR-based e-commerce contexts. The results show that perceived usefulness, perceived ease of use, interactivity, and trialability all have significant positive effects on both attitude and perceived value. Among these, trialability has the strongest impact on perceived value, while interactivity plays the most important role in shaping attitude. Furthermore, both attitude and perceived value significantly influence online purchase intention, with perceived value emerging as the strongest determinant. Overall, the findings demonstrate that AR technology influences online purchase intention not only directly through perceived value and attitude, but also indirectly through a dual cognitive–emotional mechanism. The study provides meaningful theoretical contributions by extending TAM and IDT in the context of AR-based online shopping, and offers practical implications for e-commerce businesses to enhance user engagement, improve virtual product experience, and increase consumer purchase intention.

Limitations and Future Research Directions: Although this study provides valuable insights into the determinants of Generation Z consumers' online purchase intention, several limitations should be acknowledged. This study has several limitations. First, the use of a cross-sectional design limits the ability to capture changes in consumer behavior over time. Second, the convenience sampling method may reduce the generalizability of the findings. Third, the focus on Generation Z restricts the applicability of the results to other age groups. Finally, the model only includes TAM and IDT variables, while other important factors such as trust, perceived risk, and social influence were not considered. Future research should apply longitudinal designs, use more representative sampling methods, and expand the research model by incorporating additional psychological and social factors. Comparative studies across different generations or e-commerce contexts such as social commerce or livestream shopping are also recommended.

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