The 2nd ASEAN School of Business Network International Conference 2025
www.aseansbn.org August 7-8, 2025 Negeri Sembilan, Malaysia

Enhancing E-Commerce Experience with Augmented Reality: The Impact on Purchase Intentions in Indonesia

RR. Siti Muslikhah [1*]
[1]Universitas Islam Indonesia, Indonesia
*Corresponding Author: siti.muslikhah@uii.ac.id

ABSTRACT

This study uses perceived usefulness and trust as mediating variables to investigate how Augmented Reality (AR) affects purchase intention in the setting of Indonesian e-commerce. An online survey is employed to employ the quantitative technique, and it is given to Indonesian e-commerce users who have previously used augmented reality features. Purposive sampling approaches were employed to pick respondents who met the following requirements: they had to be at least eighteen years old, had utilized augmented reality in e-commerce, and actively engaged with platforms that offer these capabilities. Using SmartPLS software, the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach was used to analyze the data. This study combines the Stimulus-Organism-Response (S-O-R) and Technology Acceptance Model (TAM) frameworks to describe how AR influences consumer behavior through affective and cognitive pathways.

The results showed that AR significantly positively affected perceived usefulness and trust, which then positively impacted purchase intent. However, the effect of perceived usefulness on intention to visit is not supported. The mediating effect of perceived usefulness is also not supported, while trust is proven to mediate the influence of AR on purchase intention. These findings emphasize the importance of improving the AR experience to build consumer trust and demonstrate use value, thereby driving purchasing behavior. This research provides an empirical contribution to the digital marketing literature and practical implications for e-commerce players in optimizing AR technology.

Keywords: Augmented Reality, Perceived Usefulness, Trust, Purchase Intention, E-Commerce

DOI: https://doi.org/10.64458/asbnic.v2.76

INTRODUCTION

The advancement of digital technology has propelled change in the business landscape, particularly within the e-commerce industry. Today, shoppers are relying more on online platforms for purchasing, attributed to the convenience, quick service, and the diverse range of product options available. E-commerce businesses need to keep innovating to deliver an appealing and enjoyable shopping experience in competitive market environments. A technological advancement that is gaining popularity and could enhance consumer interaction is Augmented Reality (AR). AR technology enables users to engage with products through three-dimensional visual representations that are fused with the real environment (Ryas Hakim & Dijaya, 2023). This capability enables customers to virtually experience "try-before-you-buy," like testing glasses, furniture, or apparel, without visiting a physical store (Damen, 2024).

The use of AR technology in Indonesia's e-commerce sector is demonstrating a favorable trend. A report by the Indonesian E-Commerce Association states that the use of AR technology has boosted sales conversion rates by as much as 30% on e-commerce platforms that incorporate this feature (Ivansyah, 2024). Moreover, a survey carried out by Google indicates that 66% of shoppers feel aided by the availability of AR technology on online retail websites (IPTEK.co.id, 2023). Nonetheless, the implementation of innovative technologies like AR doesn't always lead to favorable effects on consumer behavior. A factor that influences the effectiveness of this technology is its perceived usefulness. Perceived usefulness describes how much consumers think that AR technology aids them in their purchasing decision-making. The greater the perceived usefulness of AR, the more likely consumers are to feel confident and effective in assessing products (Wilson et al., 2021). Trust plays a vital role in digital engagement. Consumers are likely to demonstrate greater willingness to buy when they trust that an e-commerce service provider is reliable concerning data protection, product legitimacy, and clarity of information (Wang et al., 2022). Augmented reality interactive experiences showcasing lifelike product representations also help foster that trust.

Numerous earlier studies have demonstrated a favorable connection between AR technology and purchasing intention. Yim et al. (2017) discovered that AR enhances consumers' interactive experiences, resulting in a higher purchase intent during online shopping. Poushneh and Vasquez-Parraga (2017) indicated that utilizing AR in e-commerce can enhance the perceived value and consumer confidence in products and brands. Moreover, Dacko (2017) highlighted that combining AR with digital marketing strategies holds significant promise for fostering a more engaging and fulfilling consumer experience. Most of these studies take place in developed nations, with few emphasizing the use of AR technology for e-commerce in Indonesia. Moreover, the connection among AR, perceived usefulness, trust, and purchase intention remains infrequently examined together as a comprehensive conceptual framework. The majority of research concentrates on just one or two factors. This study presents originality from three perspectives. This study simultaneously incorporated three key variables: augmented reality, perceived usefulness, and trust, to assess their impact on purchase intention, a method that had been infrequently utilized in earlier research. Secondly, this study was carried out within Indonesia, which features distinct consumer traits and an e-commerce environment compared to other nations. Consequently, the findings of this research aim to offer a fresh empirical addition to the literature on digital marketing and deliver strategic perspectives for those in e-commerce. Third, this research combines two theories: the Technology Acceptance Model (TAM) and the Stimulus Organism Response (S.O.R) Model.

Purchase intention is a preliminary sign of a real purchasing choice (Peña-García et al., 2020). Thus, it is crucial to comprehend the elements that can affect consumer buying intention within the realm of technology-driven e-commerce. This study aims to provide both theoretical and practical insights into the creation of technology-driven digital marketing strategies by exploring the connections among AR, perceived usefulness, and trust. Grounded in this context, this research will empirically analyze the effect of AR on purchase intention, either directly or through the mediation of perceived usefulness and trust.

LITERATURE REVIEW

Integration of Technology Acceptance Model (TAM) and Stimulus Organism Response (S-O-R) Theory

The primary factors influencing the adoption and intention to use of technology are perceived usefulness (PU) and perceived ease of use (PEOU), according to Davis (1989), the Technology Acceptance Model (TAM). The degree to which customers feel that Augmented Reality (AR) aids in product evaluation and comprehension is known as perceived utility, and it might affect their intention to buy in the context of AR-based e-commerce. Meanwhile, S-O-R, introduced by Mehrabian & Russell (1974), explains that

external stimuli (S) affect the internal state of the psychological (organism – O), which then forms a behavioral response (R). In this context, Stimulus (S), i.e., AR technology, functions as an external trigger (3D visualization, interactivity, realism). Organism (O): Affective and cognitive responses of consumers, such as trust and perceived usefulness. Response (R): Purchase intention is the final response of the experience formed by the stimulus and psychological state.

The integration of these two theories explains that AR as a technological stimulus has two paths of influence, namely the cognitive path, explained by TAM, namely the influence of AR on Purchase Intention through Perceived Usefulness; and the emotional or affective pathway, demonstrated by S-O-R, i.e., the influence of AR on Purchase Intention through Trust. The two theories complement each other, namely, TAM explains the rationalization of technology adoption, while S-O-R explains consumers' emotional responses in the context of digital experiences. By integrating TAM and S-O-R, the study not only looked at whether AR technology is useful, but also how it builds trust and how both aspects shape consumer purchase intent. It provides a more comprehensive and in-depth understanding of the psychological dynamics of consumers in the context of AR-based e-commerce.

Augmented Reality (AR)

Augmented Reality (AR) is a tech that merges the physical world with digital components in real-time, providing users with a richer interactive experience. Azuma (1997) described that AR has three primary features: AR merges the real world with the virtual world, thereby offering users distinctive and innovative experiences. AR is real-time interactive, thus offering an engaging experience. AR is mapped in 3D, providing a distinct visual experience. The distinctive features of augmented reality include: 1) Interactivity, which allows users to influence their perception of the real world with elements from the virtual world. Vividness refers to a clear and detailed depiction of images that may exist in a 3-D format, blending both the real and virtual worlds. Novelty is distinctive and user-centered information that merges the physical world with the digital realm when an individual engages with AR functionalities.

A study by Poushneh & Vasquez-Parraga (2017) revealed that employing AR can enhance consumers' emotional involvement, which in turn benefits the shopping experience and purchase intention. Prior study findings indicate that AR technology is thought to enhance consumers' sense of control during the buying process, as it offers more precise and lifelike product details (Huang & Liao, 2015). Multiple studies similarly suggest that AR offers advantages for e-commerce (Yim et al., 2017; Wang et al., 2022; Ngo et al., 2025; Chin et al., 2025).

Augmented Reality and Perceived Usefulness

Studies conducted by Pantano et al. (2017) and Poushneh & Vasquez-Parraga (2017) demonstrate that interactive experiences via AR enhance consumers' views on the accessibility and utility of technology when comprehending products. AR offers more precise, comprehensive, and easily assessable product details in a virtual setting. Augmented Reality (AR) enhances the perception of usability in online shopping by offering a more engaging and immersive experience. Users who believe that AR technology enhances their understanding of the product will consider it more beneficial. Poushneh & Vasquez-Parraga (2017) state that AR enhances the online shopping experience by incorporating more lifelike visual aspects, which offer fuller product information and boost perceived usefulness. A different study by Pantano et al. (2017) indicates that AR technology enhances consumer confidence in virtually assessing products, leading them to view AR as more beneficial in the purchasing process.

H1: Augmented Reality positively influences Perceived Usefulness significantly.

Augmented Reality and Trust

Huang & Liao (2015) state that precise and lifelike portrayals of products through AR enhance consumer trust in the product's authenticity. Moreover, findings from Yim et al. (2017) indicate that AR can enhance emotional bonds and trust with brands by fostering a positive user experience. AR can enhance consumer trust by delivering more precise and lifelike product details. In e-commerce, trust holds significant value since customers cannot physically see or touch the product. AR offers a more detailed view of the product, diminishes ambiguity, and boosts consumer trust in the product. Huang & Liao (2015) found that AR can generate engaging experiences that enhance consumer trust in the reliability of e-commerce products and platforms. Yim et al. (2017) found that employing AR in e-commerce enhances consumer trust in brands, as AR delivers a more immersive experience and diminishes the uncertainties typically associated with online purchases.

H2: Augmented Reality positively influences Trust in a significant way.

Perceived Usefulness and Purchase Intention

Davis (1989) and Venkatesh & Davis (2000) The TAM model explains that the perception of benefits drives intention and adoption of technology. In e-commerce, if consumers feel that AR helps them understand the product better, then they are more confident to make a purchase (Kim & Forsythe, 2008). The Technology Acceptance Model (TAM) theory was developed by Davis (1989) indicates that perceived usefulness is the main factor that influences purchase intent in the use of technology. When consumers feel that technology like AR helps them make better purchasing decisions, they tend to have higher purchase intent. Research by Kim & Forsythe (2008) in the context of fashion e-commerce shows that increased perceived usefulness through interactive technologies such as AR increases consumer purchase intent. In addition, Pantano et al. (2017) also revealed that AR technology provides added value in understanding products, which drives purchase intent. Perceived usefulness is also the most important factor for first-time users of AR applications in America that influences purchase intent (Söderström et al., 2024)

H3: Perceived Usefulness positively and significantly influences Purchase Intention.

Trust and Purchase Intention

Gefen et al. (2003) and McKnight et al. (2002) asserted that trust plays a crucial role in promoting the intention to make purchases online. Shoppers who have faith in the safety and openness of e-commerce sites will be more inclined to decide to buy. Trust is a crucial element that affects online buying choices. A study conducted by McKnight et al. (2002) indicates that trust significantly influences purchase intention within the realm of e-commerce. Customers who believe that online shopping platforms or product suppliers are trustworthy, regarding both transaction safety and product quality, are more inclined to buy. In the realm of AR, improved accuracy in product depiction and clarity of the information presented can enhance trust, subsequently boosting consumer purchase intention.

H4: Trust positively influences Purchase Intention significantly.

Augmented Reality and Purchase Intention

Poushneh and Vasquez-Parraga (2017) discovered that augmented reality enhances the shopping experience by providing engaging interactions and boosting sales conversions. AR minimizes uncertainty and boosts consumer trust in purchasing products. AR has the potential to significantly improve the shopping experience, increasing the probability that a transaction will be made. Using augmented reality (AR) in e-commerce improves customer satisfaction and raises the possibility that customers will make a purchase. AR offers a more accurate depiction of the product, helping to lessen the uncertainty and hesitation that may impede buying intentions (Poushneh & Vasquez-Parraga, 2017).

Dacko (2017) discovered that incorporating AR into mobile apps can enhance and enrich the shopping experience, motivating consumers to purchase additional products.

H5: Augmented Reality positively influences Purchase Intention significantly.

The Role of Perceived Usefulness and Trust Mediation

The model suggested by Huang & Liao (2015) and Poushneh & Vasquez-Parraga (2017) indicates that AR affects purchase intention by enhancing perceived usefulness and trust. In other words, the advantages of technology and trust act as links that enhance the connection between the technology experience (AR) and consumer buying choices. Perceived usefulness and trust serve as mediating factors in the connection between AR and purchase intention. AR enhances perceived usefulness by delivering clearer and more realistic product details, thus boosting purchase intention. Moreover, AR fosters trust by enhancing transparency and interactivity, which encourages consumers to feel more assured when purchasing products. The study by Huang & Liao (2015) indicates that perceived usefulness and trust significantly mediate the connection between AR and purchase intention.

H6a: The relationship between Augmented Reality and Purchase Intention is mediated by Perceived Usefulness and Trust.

H6b: Trust serves as a mediator in the connection between Augmented Reality and Purchase Intention

Drawing from the conversation and development of the hypothesis, Figure 1 illustrates the research model concerning the influence of augmented reality on consumer purchasing behavior in e-commerce.

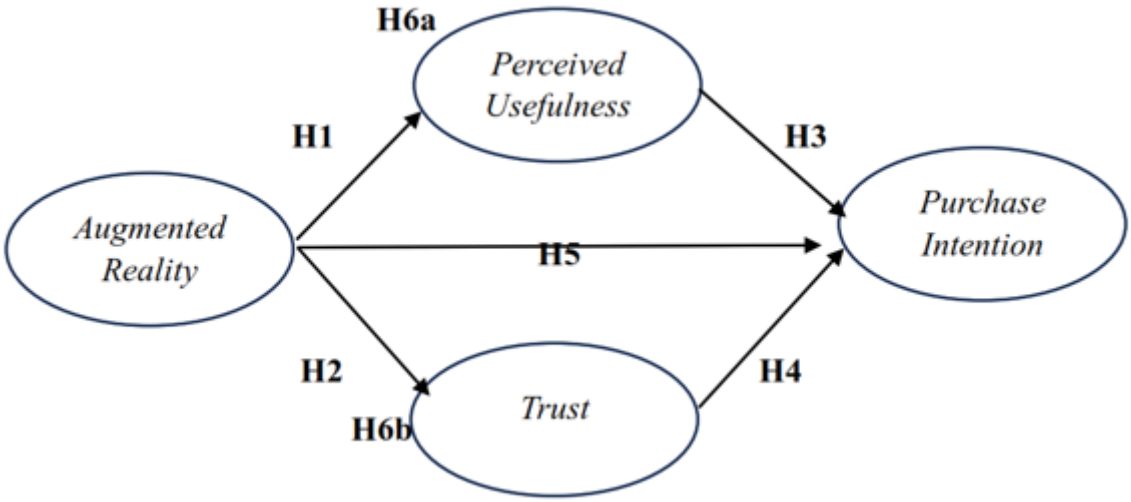

Figure 1 Purchase Behavior Model in E-Commerce

RESEARCH METHOD

This research employs a quantitative methodology utilizing surveys, specifically gathering information and data from participants via questionnaires. Quantitative research is a method of science where the data is numeric or in a form that allows for analysis through mathematical or statistical techniques (Sekaran & Bougie, 2017). The technique employed is Non-Probability Sampling, which refers to a sampling method that does not allow for all elements or members of the population to have a chance of being chosen as a sample. The sampling method utilized in this study is purposive sampling, a non-random sampling approach where the researcher selects samples based on specific characteristics aligned

with the research objectives, aiming to address the research problem (Sekaran & Bougie, 2017). The respondent criteria used in this study are: 1) Consumers who are at least 18 years old. Respondents aged 18 years and older are considered legally and psychologically mature, so they can make purchasing decisions independently. This is important because purchase intention is a variable related to cognitive and emotional processes in making consumption decisions (Ajzen, 1991) 2) Consumers who already have experience using AR in e-commerce. Without such experience, respondents have no basis in evaluating the extent to which AR helps them in understanding the product or building trust in the brand/platform (Poushneh & Vasquez-Parraga, 2017) 3) Actively using e-commerce platforms with AR features. Consumers who actively use e-commerce platforms with AR features indicate that respondents are intensely engaged in the shopping experience using this technology. This allows them to more validly assess the influence of AR on trust and perceived usefulness, as they already feel the interactivity, clarity of information, and realism that AR offers (Yim et al., 2017; Hilken et al., 2017). Without active involvement, respondents' assessment of variables in the research model becomes less accurate. Furthermore, the number of research samples is the same or greater than ten times the number of the most formative indicators (Hair et al., 2019).

In this study, primary data were gathered via an online questionnaire that was distributed to participants through a survey conducted using Google Forms. Data from 200 respondents were collected through the online survey, but only 185 samples were eligible for analysis. In this research, augmented reality was assessed by utilizing the work of Kowalczuk et al. (2021). The variable of perceived usefulness was evaluated by utilizing the study conducted by Al-Sharafi et al. (2021). Trust variables were assessed by utilizing the study conducted by Wang & Lin (2017). Simultaneously, the variable for purchase intention was assessed using the study conducted by Koay et al. (2023). The assessment was conducted utilizing the Partial Least Squares (PLS) approach with SmartPLS software.

RESULTS

Respondent Profile

According to the data collection results, 200 individuals completed the questionnaire, but only 185 respondents had questionnaires that met the criteria. Analysis of respondents revealed that the total count of participants was 185. Table 1 displays the comprehensive details of the respondent's profile.

Table 1. Demographic Profile of Respondents

Characteristics	Group	Sum	Percentage	Characteristics
Gender	Man	78	42,2	Gender
	Woman	107	57,8	
	Total	**185**	**100**	
Age	< 21	83	44,9	Age
	21-30	91	49,2	
	31-40	1	0,5	
	>40	10	5,3	
	Total	**185**	**100**	
Job	Aparatur Sipil Negara (ASN)	7	3,8	Job
	Privat Employees	9	4,9	
	Student	165	89,2	

Characteristics	Group	Sum	Percentage	Characteristics
	Professional	1	0,5	
	Entrepreneurial	3	1,6	
	Total	**185**	**100**	
Cost of living/expenses per month	< Rp 2.000.000	113	61,1	Cost of living/expenses per month
	Rp 2.000.000-Rp 3.000.000	49	26,5	
	>Rp 3.000.000-Rp 4.000.000	8	4,3	
	>Rp 4.000.000-Rp 5.000.000	5	2,7	
	>Rp 5.000.000	10	5,4	
	Total	**185**	**100**	
Education	SMA	37	20	Education
	Diploma (I, II, III)	7	3,8	
	Sarjana S1/D4	137	74,1	
	Doktor (S3)	1	0,5	
	Magister (S2)	3	1,6	
	Total	**185**	**100**	
Origin of Region (Island)	Jawa	134	72,4	Origin of Region (Island)
	Sumatera	27	14,6	
	Kalimantan	13	7,1	
	Sulawesi	6	3,2	
	Nusatenggara	1	0,5	
	Maluku dan Papua	4	2,2	
	Total	**185**	**100**	

Data Analysis

Measurement Model

In the measurement model (outer model analysis), an assessment was conducted on the measurement model with SmartPLS, which included convergent validity, internal consistency, discriminant validity, and indicator reliability. According to the analysis results, it is evident that every variable item has a loading factor value exceeding 0.5. Consequently, it can be determined that every item for the research variables has successfully undergone the convergent validity assessment. Along with utilizing the loading factor value, the convergent validity test can also be conducted by examining the Average Variance Extracted (AVE) value. Table 2 indicates that each variable has an AVE value exceeding 0.50, thus it can be inferred that the convergent validity of all variables is good.

Table 2 Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)
Informativeness	0.788

	Average Variance Extracted (AVE)
Interactivity	0.758
Novelty	0.738
Perceived_Usefulness	0.818
Purchase_Intention	0.795
System Quality	0.739
Trust	0.815
Vividnes	0.781

Discriminant validity is the next validity test performed on SEM PLS. Table 3 displays the discriminant validity test findings. It is well known that a variable's highest correlation value occurs within its category, indicating that the variable has good discriminant validity.

Table 3 Fornell-Larcker Criterion

	Informative-ness	Interac-tivity	Novelty	Perceived Usefulness	Purchase Intention	System Quality	Trust	Vivid-ness
Informativeness	0.888							
Interactivity	0.673	0.870						
Novelty	0.726	0.668	0.859					
Perceived Usefulness	0.771	0.658	0.690	0.905				
Purchase Intention	0.722	0.587	0.624	0.746	0.892			
System Quality	0.803	0.734	0.778	0.777	0.717	0.860		
Trust	0.714	0.521	0.621	0.744	0.758	0.744	0.903	
Vividnes	0.613	0.558	0.630	0.641	0.687	0.645	0.659	0.884

The reliability test is the next step. The information presented in Table 4 indicates that the Cronbach's alpha and composite reliability values for each variable have been higher than 0.70. This suggests that all of the study variables are very reliable, which qualifies them for use as the subsequent research tool.

Table 4: Internal Consistency Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Augmented_Reality	0,960	0,961	0,963	0,568
Informativeness	0,910	0,910	0,937	0,788
Interactivity	0,893	0,896	0,926	0,758
Novelty	0,881	0,881	0,918	0,738
Perceived_Usefulness	0,889	0,893	0,931	0,818
Purchase_Intention	0,914	0,915	0,940	0,795
System Quality	0,882	0,885	0,919	0,739

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Trust	0,887	0,890	0,930	0,815

Structural Model Testing (Inner Model)

The structural equation model (inner model), which describes how independent latent variables affect dependent latent variables, is then evaluated, and the hypothesis is tested. Figure 2 displays a drawing of the structural model. Table 5 then displays the outcomes of the hypothesis testing.

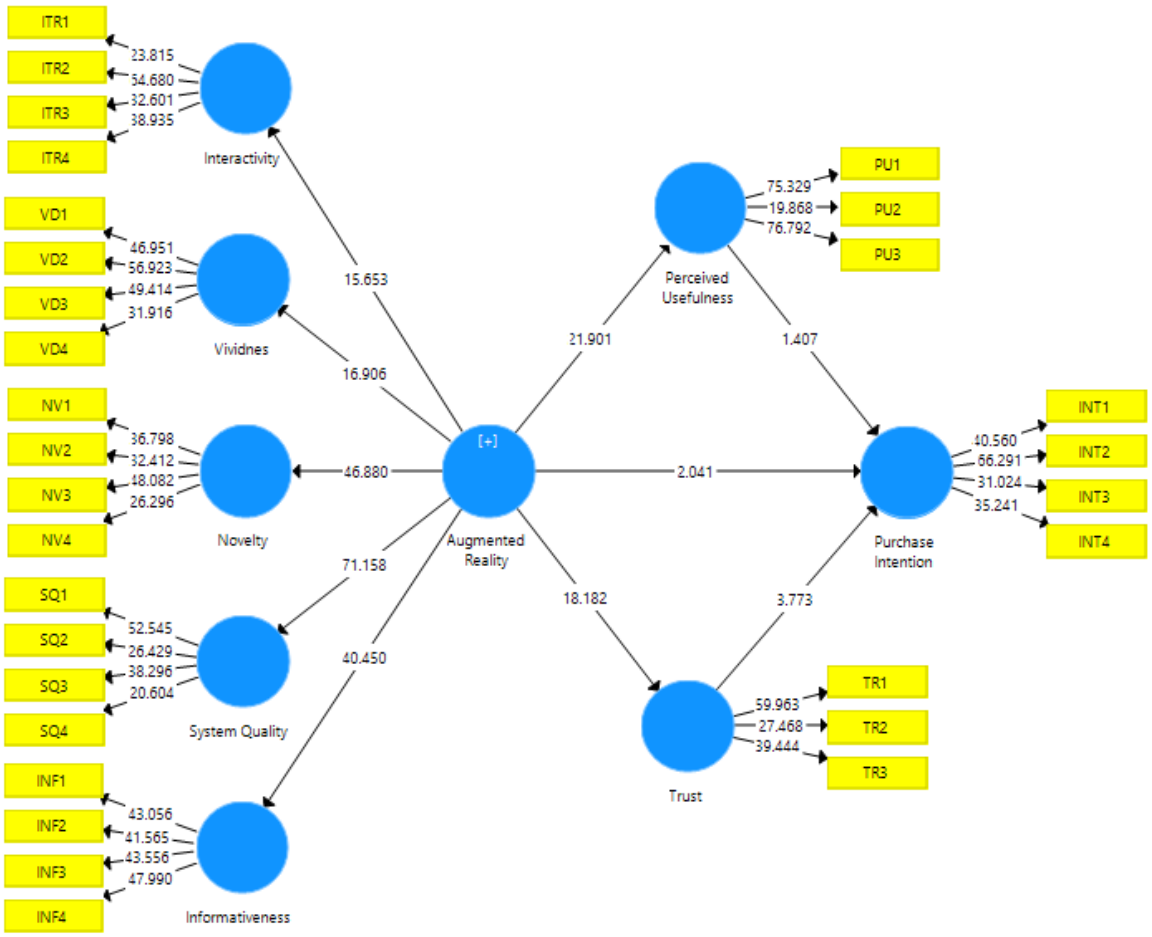

Figure 2 Structural Model

Table 5 Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Augmented Reality →Perceived Usefulness	0.821	0.817	0.037	21.901	0.000
Augmented Reality →Purchase Intention	0.342	0.344	0.167	2.041	0.042
Augmented Reality → Trust	0.758	0.753	0.042	18.182	0.000
Perceived Usefulness → Purchase Intention	0.212	0.212	0.151	1.407	*0.160
Trust → Purchase Intention	0.342	0.339	0.091	3.773	0.000

The results of the test on how augmented reality affects perceived usefulness showed a p-value of 0.000 and a coefficient value of 0.821, as shown in Table 5. The statistics show that Augmented Reality has a substantial and positive impact on Perceived Usefulness, supporting Hypothesis 1 because the p-value is less than 0.05 and the coefficient is positive.

Thus, the coefficient of influence of augmented reality on trust is 0.758, and the p-value is 0.000. The results show that Augmented Reality has a significant and positive impact on Trust, supporting Hypothesis 2 because the p-value is less than 0.05 and the coefficient is positive.

Additionally, the coefficient of influence of perceived usefulness on purchase intention is 0.212, with a p-value of 0.160. Even if the p-value is higher than 0.05 and the coefficient is positive, the results reveal that Perceived Usefulness does not affect Purchase Intention. As a result, Hypothesis 3 is not supported.

Hypothesis 4 is supported by the results, which demonstrate that Trust has a positive and significant effect on Purchase Intention. Similarly, the coefficient of Trust's influence on Purchase Intention is 0.342 with a p value of 0.000, the coefficient is positive, and the p value is less than 0.05.

The test of the relationship between augmented reality and purchase intention yielded a p-value of 0.042 and a coefficient of 0.342. Since the p-value is less than 0.05 and the coefficient result is positive, it can be said that Hypothesis 5 is supported because the data demonstrate that Augmented Reality significantly and favorably influences Purchase Intention.

Moreover, Table 6 displays the findings of an investigation into the mediating function of perceived utility in the relationship between augmented reality and purchase intention, as well as the role of trust mediation in this relationship.

Table 6 Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Augmented Reality → Perceived Usefulness → Purchase Intention	0.174	0.171	0.121	1.441	*0.150
Augmented Reality → Trust → Purchase Intention	0.259	0.256	0.075	3.471	0.001

Table 6 indicates that the influence of Augmented Reality on Purchase Intention through Perceived Usefulness has a p-value of 0.150 and a coefficient of 0.174. It is possible to conclude that Hypothesis 6a is not supported because the p-value is more than 0.05 and the coefficient is positive. It has not been demonstrated that perceived usefulness mediates the impact of augmented reality on purchase intention.

Then, with a p-value of 0.001, the coefficient of Augmented Reality's influence on Purchase Intention through Trust is 0.259. It is possible to conclude that Hypothesis 6b is not supported because the p-value is less than 0.05 and the coefficient is positive. It has been demonstrated that trust acts as a mediator between augmented reality and purchase intention.

DISCUSSION

The results of hypothesis testing revealed that Augmented Reality (AR) positively and significantly impacts perceived usefulness, as this technology improves the user experience by enabling consumers to virtually test products. As AR becomes increasingly interactive, informative, and efficient, users achieve a deeper comprehension of the items they plan to buy. This result reinforces earlier research like that of Oyman et al. (2022), which indicated that the use of AR in mobile apps greatly enhances perceived usefulness, enjoyment, and informativeness. In a similar vein, Marín-Lora et al. (2022) highlighted that the incorporation of AR improves perceived value, encompassing both usefulness and enjoyment, in making product purchase choices. Saleem et al. (2022) noted that AR applications enhance perceived usefulness and perceived ease of use for retail customers. Furthermore, Shyr et al. (2024) discovered that the perceived utility of AR notably affects behavioral intention and attitude regarding AR utilization. This study, however, does not align with the findings of Alimamy & Al-Imamy (2022), who argued that there is no direct link between the quality of AR experience and perceived value (including usefulness), as it is influenced by attitude.

AR significantly affects trust by improving consumer views on system reliability, transparency, and the quality of engagement with digital products or platforms. AR allows customers to "view and test" items in a real-life setting, boosting their trust in the information offered (Hilken et al., 2017; Kowalczuk et al., 2021; Taub et al., 2024). It enhances the quality of interaction by offering interactive features, dependable systems, and engaging, informative product displays. Quality aspects like interactivity, system performance, product informativeness, and alignment with reality greatly improve consumer trust (Shi et al., 2025). Poushneh and Vasquez-Parraga (2017) argue that AR enhances consumer trust as it increases their assurance regarding the quality and suitability of the products.

Some previous studies have shown that perceived usefulness does not always have a significant effect on purchase intention. A study on consumers in Bandung found that although perceived usefulness affects attitudes towards products, this variable does not have a direct and significant effect on purchase intention, in contrast to other factors such as trust and visual information, which have a positive effect (Mulyani et al., 2021). When a person feels that a technology or product is useful, there will be an intention to buy it, but it turns out that in some cases, perceived usefulness does not always encourage purchase intention. Purchase intention is sometimes driven by emotional factors such as enjoyment, trust, or lifestyle (Lee et al., 2014) So even though it feels useful, it is not necessarily what consumers want to buy. Perceived Usefulness (PU) is often considered to be the main factor influencing Purchase Intention (PI) in technology adoption models (TAM). However, some studies have found that PU does not always have a significant effect on purchase intent. The main reason is that other factors are more dominant, or PU only affects indirectly through mediation variables such as customer value, trust, or attitude (Wistedt, 2024; Abidin, 2024). Studies show that perceived ease of use and trust are more significant in encouraging purchase intent than PU (Purba & Setiyaningrum, 2022)

Trust has been proven to have a significant influence on Purchase Intention (PI) because trust increases consumer confidence in a product and strengthens the intention to make a purchase, especially in the online and social commerce environment. The higher the level of consumer confidence, the more likely it is that there will be purchase intent (Qalati et al., 2021) (Wang et al., 2022) Trust can also reduce risk perception when making transactions online, so that consumers feel safer and more confident to buy (Hong & Cha, 2013; Qalati et al., 2021). Various empirical studies show a positive and significant relationship between trust and purchase intention in various contexts, both e-commerce, social commerce, and product purchases through influencers (Wang et al., 2022; Alkan & Ulas, 2023; Khan et al., 2024).

Augmented Reality (AR) has been proven to greatly affect purchase intention. AR offers a more enjoyable, engaging, and immersive shopping experience, boosting both emotional and cognitive involvement. This enhances the intention to buy directly (Ehab et al., 2020; Kowalczuk et al., 2021; Konstantoulaki et al., 2024; Iranmanesh et al., 2024). Characteristics of AR, including interactivity,

vibrancy, and simulated physical manipulation, have been shown to enhance purchase intention, especially in sectors like fashion and cosmetics (Kowalczuk et al., 2021; Barta et al., 2023; Hsu et al., 2024).

Several studies show that Perceived Usefulness (PU) does not necessarily mediate the influence of Augmented Reality (AR) on Purchase Intention (PI). The results of several studies show that other factors such as perceived enjoyment, interactivity, or quality of user experience are more dominant in influencing purchase intention than perceived usefulness (Kowalczuk et al., 2021; Chin et al., 2025) AR's influence on purchase intent is often stronger through other pathways, such as hedonistic experiences, emotional engagement, or consumer attitudes, rather than just through PU. Studies have found that AR dimensions such as interactivity, vividness, and immersive experience influence purchase intent more through increased consumer enjoyment, attitude, or confidence, not just through perceived usefulness (Iranmanesh et al., 2024; Chin et al., 2025). The study also explains that AR is often perceived as a technology that provides a pleasant experience (hedonic), so that the utilitarian dimension (usability) becomes less significant than the emotional dimension, such as enjoyment or visual appeal (Chin et al., 2025). Then the effectiveness of PU as a mediator can vary depending on the type of product, consumer characteristics, and context of AR use. For example, in products that prioritize experience (such as fashion or cosmetics), enjoyment and interactivity play a role more than usefulness (Kowalczuk et al., 2021; Chin et al., 2025).

Then, Trust was proven to mediate the influence of Augmented Reality (AR) on purchase intention. This means that AR increases consumer trust in a brand or app, and with that trust, encourages consumers to intend to buy. Consumers who feel satisfied and trust the AR experience tend to have higher trust in the brand (Kang et al., 2023; Nawres et al., 2024). AR can improve the quality of consumer interaction and experience, so it can build trust in a brand or product. This trust then encourages consumers to have higher purchase intentions. In other words, AR not only influences purchase intention directly, but also indirectly through trust (Nawres et al., 2024; Dhianita & Rufaidah, 2024).

CONCLUSION

In addition to evaluating the mediating roles that perceived usefulness and trust play in these relationships, this study aims to explore the impact of augmented reality (AR) on perceived usefulness, trust, and purchase intention. The findings of the investigation show that AR has a favorable and significant impact on perceived usefulness and trust. This suggests that the use of AR can improve consumers' views on product usefulness and foster trust. By providing interactive, realistic, and informative experiences, AR enables consumers to gain a clearer understanding of products and enhances their confidence in the information provided. Nonetheless, Perceived Usefulness does not significantly influence Purchase Intention. This indicates that while consumers view the technology as beneficial, it doesn't automatically result in a willingness to buy. Emotional elements like trust, pleasure, and perceived risk seem to have a stronger impact on shaping purchase intention. On the other hand, Trust has a notable and favorable impact on Purchase Intention, emphasizing its essential role in enhancing consumers' readiness to make purchases, particularly in online environments. The more trust a consumer has in a brand or platform, the greater the chance of making a purchase.

Moreover, AR has a direct and considerable effect on Purchase Intention, suggesting that the immersive and captivating experience offered by AR can directly affect consumers' purchasing decisions, without needing mediation from perceived usefulness or trust. Moreover, Perceived Usefulness does not act as a mediator between AR and Purchase Intention, suggesting that perceived usefulness by itself lacks the strength to connect AR's influence on buying choices. Conversely, Trust serves as an important intermediary in this connection. In other terms, utilizing AR can boost consumer confidence, which subsequently promotes purchase intent. This study determines that Trust is a more critical factor than Perceived Usefulness in understanding how AR affects consumer purchase intention. Thus, in creating

AR-driven marketing strategies, businesses should emphasize both the functional features of the technology and aspects that foster trust, including system dependability, transparency of information, and the caliber of digital engagement with users.

RECOMMENDATIONS

Future research is encouraged to explore additional variables such as perceived enjoyment, attitude, perceived risk, or emotional engagement, which may play significant roles in mediating the influence of Augmented Reality (AR) on Purchase Intention. Moreover, social influence factors such as electronic word of mouth (e-WOM), user reviews, or testimonials delivered through AR can be considered as supporting elements that affect consumer trust and purchasing decisions.

ACKNOWLEDGEMENTS OR NOTES

The author would like to sincerely thank everyone who helped with this study, especially the research funding source, the Center for Development of Management Studies, Department of Management, Faculty of Business and Economics, Universitas Islam Indonesia.

REFERENCES

Abidin, Z. (2024). The effect of perceived usefulness, perceived ease of use, and lifestyle on purchase intention. Journal of Management and Business Insight, 2(1), 62–70. https://doi.org/10.12928/jombi.v2i1.935

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Alkan, Z., & Ulas, S. (2023). Trust in social media influencers and purchase intention: An empirical analysis. Online Journal of Communication and Media Technologies, 13(1), 1–14. https://doi.org/10.30935/ojcmt/12783

Chin, C.-H., Cham, T.-H., Ling, J. P.-W., Jasmine Bao-Tze, C., & Chan, W. C. (2025). Exploring the interplay of enjoyment and practicality's dimensions: youths' purchase intention in augmented reality shopping platforms. Young Consumers: Insight and Ideas for Responsible Marketers, 26(2), 270–295. https://doi.org/10.1108/YC-07-2024-2148

Chin, C. H., Cham, T. H., Ling, J. P. W., Jasmine Bao-Tze, C., & Chan, W. C. (2025). Exploring the interplay of enjoyment and practicality's dimensions: youths' purchase intention in augmented reality shopping platforms. Young Consumers, 26(2), 270–295. https://doi.org/10.1108/YC-07-2024-2148

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly: Management Information Systems, 13(3), 319–339. https://doi.org/10.2307/249008

Dhianita, S., & Rufaidah, P. (2024). The Role of Virtual Try-On Augmented Reality of Cosmetic Products on Purchase Intention Mediated by Brand Trust. Jurnal Manajemen Bisnis, 11(2), 1111–1123. https://doi.org/10.33096/jmb.v11i2.797

Hilken, T., de Ruyter, K., Chylinski, M., Mahr, D., & Keeling, D. I. (2017). Augmenting the eye of the beholder: exploring the strategic potential of augmented reality to enhance online service experiences. Journal of the Academy of Marketing Science, 45(6), 884–905. https://doi.org/10.1007/s11747-017-0541-x

Hong, I. B., & Cha, H. S. (2013). The mediating role of consumer trust in an online merchant in predicting purchase intention. International Journal of Information Management, 33(6), 927–939. https://doi.org/10.1016/j.ijinfomgt.2013.08.007

Iranmanesh, M., Senali, M. G., Foroughi, B., Ghobakhloo, M., Asadi, S., & Babaee Tirkolaee, E. (2024). Effect of augmented reality applications on attitude and behaviours of customers: cognitive and affective perspectives. Asia-Pacific Journal of Business Administration, 16(5), 1067–1092. https://doi.org/10.1108/APJBA-07-2023-0292

Kang, J. Y. M., Kim, J. E., Lee, J. Y., & Lin, S. H. (2023). How mobile augmented reality digitally transforms the retail sector: examining trust in augmented reality apps and online/offline store patronage intention. Journal of Fashion Marketing and Management, 27(1), 161–181. https://doi.org/10.1108/JFMM-12-2020-0273

Khan, A., Khan, Z., & Nabi, M. K. (2024). "I think exactly the same"—trust in SMIs and online purchase intention: a moderation mediation analysis using PLS-SEM. Journal of Advances in Management Research, 21(2), 311–330. https://doi.org/10.1108/JAMR-03-2023-0087

Kim, J., & Forsythe, S. (2008). Adoption of Virtual Try-on Technology for Online Apparel Shopping. Journal of Interactive Marketing, 22(2), 45–59. https://doi.org/http://dx.doi.org/10.1002/dir.20113

Kowalczuk, P., Siepmann (née Scheiben), C., & Adler, J. (2021). Cognitive, affective, and behavioral consumer responses to augmented reality in e-commerce: A comparative study. Journal of Business Research, 124(August 2019), 357–373. https://doi.org/10.1016/j.jbusres.2020.10.050

Lee, H. S. S., Khong, K. W., & Hong, J. L. (2014). Examining the Role of Viral Effect, Shopping Enjoyment and Trust on Purchase Intention of Social Commerce Sites in Malaysia. Australian Journal of Basic and Applied Sciences, 8(S8), 62–67. http://www.ajbasweb.com/old/ajbas/2014/Special 3/62-67-special14.pdf

Mulyani, V. G., Najib, M. F., & Guteres, A. D. (2021). The Effect of Perceived Usefulness, Trust and Visual Information toward Attitude and Purchase Intention. Journal of Marketing Innovation (JMI), 1(01), 78–93. https://doi.org/10.35313/jmi.v1i01.12

Nawres, D., Nedra, B. A., Yousaf, A., & Mishra, A. (2024). The role of augmented reality in shaping purchase intentions and WOM for luxury products. Journal of Business Research, 171(November 2023), 114368. https://doi.org/10.1016/j.jbusres.2023.114368

Pantano, E., Rese, A., & Baier, D. (2017). Enhancing the online decision-making process by using augmented reality: A two country comparison of youth markets. Journal of Retailing and Consumer Services, 38(April), 81–95. https://doi.org/10.1016/j.jretconser.2017.05.011

Poushneh, A., & Vasquez-Parraga, A. Z. (2017). Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy. Journal of Retailing and Consumer Services, 34(September 2016), 229–234. https://doi.org/10.1016/j.jretconser.2016.10.005

Purba, P., & Setiyaningrum, A. (2022). What Drives Consumer Purchase Intention on Products Offered by E- Commerce During the Covid-19 Pandemic? An Empirical Study at Tokopedia. Jurnal Manajemen Indonesia, 22(2), 154–172. https://doi.org/10.25124/jmi.v22i2.3730

Qalati, S. A., Vela, E. G., Li, W., Dakhan, S. A., Hong Thuy, T. T., & Merani, S. H. (2021). Effects of perceived service quality, website quality, and reputation on purchase intention: The mediating and moderating roles of trust and perceived risk in online shopping. Cogent Business and Management, 8(1). https://doi.org/10.1080/23311975.2020.1869363

Söderström, C., Mikalef, P., Dypvik Landmark, A., & Gupta, S. (2024). Augmented reality (AR) marketing and consumer responses: A study of cue-utilization and habituation. Journal of Business Research, 182(September). https://doi.org/10.1016/j.jbusres.2024.114813

Venkatesh, V., & Davis, F. D. (2000). Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. Management Science, 46(2), 186–204. https://doi.org/10.1287/mnsc.46.2.186.11926

Wang, J., Shahzad, F., Ahmad, Z., Abdullah, M., & Hassan, N. M. (2022). Trust and Consumers' Purchase Intention in a Social Commerce Platform: A Meta-Analytic Approach. SAGE Open, 12(2). https://doi.org/10.1177/21582440221091262

Wistedt, U. (2024). Consumer purchase intention toward POI-retailers in cross-border E-commerce: An integration of technology acceptance model and commitment-trust theory. Journal of Retailing and Consumer Services, 81(July). https://doi.org/10.1016/j.jretconser.2024.104015

Yim, M. Y. C., Chu, S. C., & Sauer, P. L. (2017). Is Augmented Reality Technology an Effective Tool for E-commerce? An Interactivity and Vividness Perspective. Journal of Interactive Marketing, 39, 89–103. https://doi.org/10.1016/j.intmar.2017.04.001