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The Role of Trust Mediation in Influencing Purchase Decisions: A Case study of the Influence of Augmented Reality, Customer Ratings, and Customer Reviews on E-Commerce Platforms

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Abstract

The research investigates Trust mediation effects which link Augmented Reality to Customer Rating and Customer Review and their combined impact on e-commerce purchase decisions. This study analyzes the gap between physical and digital products in e-commerce, which causes significant order cancellations due to mismatched representations. Zhang et al. (2023) found that 45% of cancellations among e-commerce users in Southeast Asia were caused by product appearance discrepancies such as color, texture, or dimensions, while Forrester (2023) found that 55% of global consumers doubt the credibility of online reviews due to suspected manipulated feedback. The novelty of this research lies in the integration of AR technology and social signals with trust as mediates in the specific context of the e-commerce market in Indonesia. Utilizing PLS-SEM on 246 purposively sampled respondents, all primary paths proved statistically significant. Key findings show positive impacts of AR, customer ratings, and reviews on purchase decisions, with trust as empirical mediator. Practically, e-commerce practitioners must integrate AR and ensure feedback transparency to strengthen consumer trust.

KEYWORDS

augmented reality; customer rating; customer review; e-commerce; purchase decision; trust.

Introduction

Advances in information technology have drastically increased the complexity of purchase decisions in e-commerce, mainly due to the cognitive uncertainty caused by digital representations (Hoffman et al., 2022; Kotler & Armstrong, 2023). The discrepancy between expectations and digital reality often disrupts purchase decisions. Uhm et al. (2022) Explaining that augmented reality based shopping experiences effectively reduce the psychological distance and perceived risk often felt by online shoppers. A global study by Zhang et al. (2023) shows that digital physical mismatches trigger 45% of transaction cancellations. In line with this, Forrester (2023) research on thousands of global respondents reveals that 55% of consumers doubt the accuracy of ratings due to fabricated reviews. Systemically, these two international findings confirm that information distortion is an obstacle to product validation in the global market, and only 30% consider augmented reality to be accurate (Statista 2024).

One of the key innovations is augmented reality, which provides an engaging customer experience and strengthens trust through pre-purchase virtual interactions, creating deep engagement (Taub et al., 2024). Furthermore (Ngo et al., 2025) and Putra et al. (2021) show that augmented reality elements such as interactivity, clarity, innovation, novelty, information, and real-time integration of virtual three-dimensional

objects improve customer perception, trust, and purchase intent. (Taub et al., 2024) Interactive product demonstrations on-line can increase consumer confidence in the claims made for a product compared to static images of the product alone. In the context of e-commerce, augmented reality can improve user interaction and participation, potentially increasing trust in products or services through visual evidence and realistic simulations, which reduce uncertainty and the risks of online transactions (Pratama et al., 2024). Venkatesh et al. (2021) The adoption of new technology in the digital world is dependent on its ability to facilitate consumer evaluation. Research has shown that interactive augmented reality technology enhances a customer's decision to purchase a product by giving a realistic visualisation of the product (Yoo, 2023; Khabibah & Pramesti, 2021). Consumer trust plays a vital part in bridging the gap between dependable information and consumers' willingness to buy (Alwafi & Hayu, 2025; Arni & Nuraini, 2022).

In the e-commerce business, augmented reality interacts dynamically with customer ratings and customer reviews that influence purchase decisions (Saxena & Thakur, 2024). Several previous studies, such as Pratama et al. (2019) the research confirms that augmented reality creates positive effects which lead to significant purchase decisions, because it enables digital-physical interactions which help customers understand products better while reducing their uncertainty and building trust. Research studies about how customer ratings affect purchase decisions have been conducted Arbaini et al. (2020); Ardianti & Widiartanto, (2019); Fahrozi et al., (2022); Hariyanto & Trisunarno, (2020); Julianti & Aini, (2019); Putra et al. (2021) and regularly discovered that customer ratings had a favorable and significant impact. The research shows that customer feedback through ratings and sentiment affects buying choices because positive ratings build customer trust which leads to more purchases. Customer ratings serve as a vital element which helps customers choose their products. Research by Arbaini et al. (2020); Ardianti & Widiartanto, (2019); Hariyanto & Trisunarno, (2020); Julianti & Aini, (2019); Pratama et al. (2019); Putra et al. (2021); and Ramadhani & Prastiwi, (2021), confirms that customer reviews create a major positive impact which leads customers to make their buying choices. The reviews which customers post online create new impressions about products which affect how potential buyers think about these items (Arbaini et al., 2020). Ismagilova et al. (2020) The impact on consumers of the quantity of customer reviews is significantly outweighed by the quality of those reviews. Positive reviews help customers trust the product which leads to buying decisions but negative reviews reduce trust by showing what the product lacks (Amellia et al., 2024).

Meanwhile, trust plays a crucial mediating role that significantly influences online product purchase decisions Azis et al., (2025); Istiqomah & Usman, (2021); Pasaribu & Purba, (2020); Putra et al., (2021); Pratama et al., (2019). Suryadi et al. (2024) trust is critical in persuading people who have read reviews to buy the product. Customers with high trust are more motivated to buy, making trust a crucial element in transactions. Empirical studies consistently show that trust acts as a mediator in digital transactions (Bahtiar & Firmansyah, 2024; Indra et al., 2022). Highlighting trust as a mediator in digital transactions, trust effectively connects augmented reality, customer ratings, and customer reviews with purchase decisions (Helfiyana et al., 2024), where ratings and reviews indirectly influence purchase decisions through trust. This study analyzes indicators such as augmented reality interactivity (Ngo et al., 2025) and review credibility (Hanaysha, 2022) to evaluate their impact on sales. Customer ratings are a vital indicator of reliability for potential customers (Hariyanto & Trisunarno, 2020). Purnama et al., (2024) Therefore, if a product receives good and high ratings, the level of buyer trust will usually increase. High ratings correlate positively and significantly with increased customer trust and purchase decisions on e-commerce platforms (Hariyanto & Trisunarno, 2020). Therefore, if there are more positive reviews about a product, customer trust will increase. Istiqomah & Usman, (2021) explain that positive customer reviews are proven to be effective in increasing customer trust and motivating purchase decisions.

Previous studies often separate augmented reality from social factors such as ratings and reviews and ignore the mediating role of trust (Hapshoh et al., 2025; Mulyati & Gesitera, 2020). Therefore, In order to comprehend how e-commerce purchase decisions are formed, this study attempts to incorporate the variables of augmented reality, customer ratings, customer reviews, and trust. The primary discrepancy is between social aspects and augmented reality interactions in terms of building trust and impacting purchasing decisions (Lee et al., 2021; Zhang et al., 2023), even though high ratings and reviews have been proven to be essential for increasing trust and purchase decisions (Hanaysha, 2022; Saxena & Thakur, 2024). These findings are expected to enrich the theory of augmented reality interactions with social signals in trust formation and provide practical guidance for e-commerce platforms on digital transparency and insights for sellers (Fahrozi et al., 2022).

This study uses a combined theoretical framework of Grand, Middle-Range, and Applied Theories to analyze e-commerce behavior. The investigation concentrates on how confidence acts as an intermediary in clarifying the influence of Augmented Reality, evaluations from customers, and customer feedback on choices related to buying, including:

1. Grand Theory: The Uncertainty Reduction Theory (URT) (Berger & Calabrese, 1975) Augmented Reality technology and online reviews play a role in reducing cognitive and behavioral uncertainty. This mechanism mitigates information asymmetry, builds trust, and facilitates purchasing decisions through risk management.
2. Middle-Range Theory: The Theory of Reasoned Action (TRA) is seen as a theory that's not too broad and not too specific, and it explains how personal feelings and what people around you think affect your choices when buying (Fishbein & Ajzen, 1975). In this study, augmented reality, customer ratings, and customer reviews shape customer beliefs that influence trust and purchase decisions, making TRA a framework for understanding how visual and social information is transferred into attitudes and purchase decisions.
3. Applied Theories: Based on Signaling Theory (Spence, 1973) and the concept of Presence (Witmer & Singer, 1998), customer ratings and customer reviews serve as quality signals that reduce information asymmetry. The integration of Augmented Reality creates a sense of virtual presence to mitigate the physical-digital gap as a source of mistrust. This synergy effectively validates product representation, minimizes perception risk, and strengthens consumer confidence before purchasing decisions are made.

Conceptual framework

Research Hypothesis

The hypotheses in this study, as outlined in the framework above, include:

H1 = The impact of Augmented Reality on Purchase Decision
H2 = The impact of Customer Rating on Purchase Decision
H3 = The impact of Customer Review on Purchase Decision
H4 = The impact of Trust on Purchase Decision
H5 = The impact of Augmented Reality on Trust

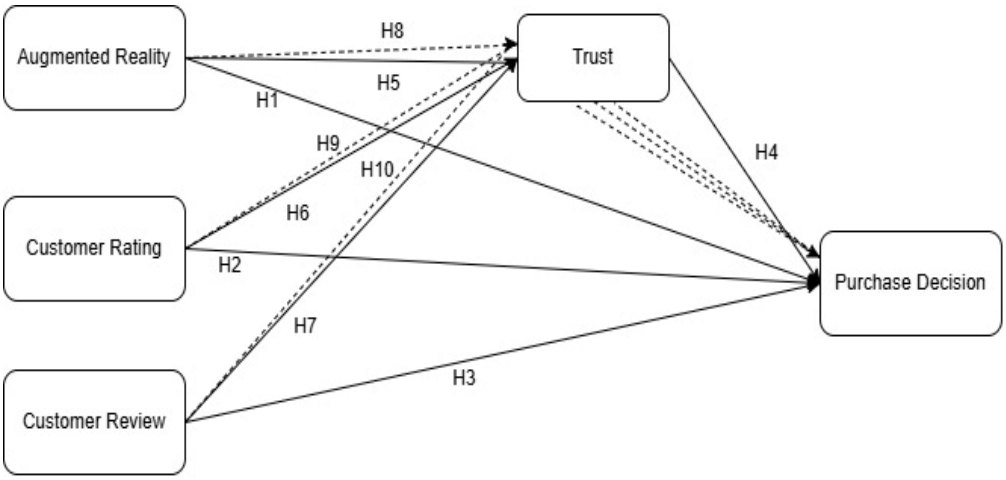

Figure 1. Research Framework

H6 = The impact of Customer Rating on Trust
H7 = The impact of Customer Review on Trust
H8 = The impact of Augmented Reality on Purchase Decision through Trust
H9 = The impact of Customer Rating on Purchase Decision through Trust
H10 = The impact of Customer Review on Purchase Decision through Trust

The integration of Uncertainty Reduction Theory and Signaling Theory positions augmented reality and social signals as instruments for reducing uncertainty. AR technology creates presence to mitigate sensory barriers, while social validation builds credibility. Based on TRA, this process forms trust as a psychological foundation and an essential mediator that bridges informative signals to purchasing decisions in digital transactions (see figure 1).

Methods

With trust as a mediating variable, this study uses explanatory quantitative (cross-sectional) methodology to analyze the associative relationship between augmented reality, customer ratings, and customer reviews on purchasing decisions through the PLS-SEM approach (Creswell, 2014). This explanatory quantitative research with a cross-sectional design analyzes the associative relationship between variables using PLS-SEM approach. A purposive sampling method within a non-probability sampling approach was employed, considering that exact population of e-commerce users in Indonesia cannot be clearly determined (Sekaran & Bougie, 2016).

The sample criteria included a minimum age of 17 years, residence in Indonesia, active transactions on the main platforms (Shopee, Tokopedia, Lazada) in the last three months, and specific experience using the Augmented Reality feature Arbaini et al. (2020). The minimum sample size was determined by multiplying the total number of indicators by five to ten times the number of constructs (Hair et al., 2014). With 41 indicators multiplied by 6, the sample consisted of 246 respondents. The researchers acknowledge that the AR experience criteria may have resulted in a more tech-savvy sample, thus limiting the generalization of the results to users with similar characteristics.

Using a 1–5 Likert scale questionnaire, primary data were gathered and subsequently analyzed with SmartPLS 3.0 through Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) Arbaini et al. (2020). SEM-PLS was chosen because of its suitability in handling complex models with limited data and without normality assumptions (Hair et al., 2014). To maintain convergent validity, model purification was performed by eliminating indicators with factor loadings below 0.70 (AR2, AR3, AR7, AR8, AR12, AR13, AR17, AR21, CRTG4, CRTG7, CRVW3, CRVW5, CRVW6, PD4, PD6, PD8, PD11, PD12, TRST5, TRST8, TRST10, and TRST11). Despite the elimination, content validity was maintained because each construct was still represented by reliable core indicators. To mitigate Common Method Bias (CMB), which often appears in single questionnaire data, this study applied a full collinearity test (full collinearity VIF) to ensure that model was free from method bias distortion.

Result and Discussion

The measurement model of this study has been validated and tested for reliability. Validity was evaluated through convergent validity (Factor Loadings) and discriminant validity (Fornell-Larcker Criteria and HTMT Ratio). Reliability was measured using Composite Reliability. Table 1 displays the values for Factor Loadings (LF), Cronbach's Alpha (CA), Composite Reliability (CR), and Average Extracted Variance (AVE).

The initial stage of data processing identifies indicators with factor loadings below the significance threshold of > 0.5. An iterative procedure is then used to remove indicators that do not satisfy the convergent validity requirements. Afterthe elimination process, the indicators that were declared invalid cumulatively were: AR2, AR3, AR7, AR8, AR12, AR13, AR17, AR21, CRTG4, CRTG7, CRVW3, CRVW5, CRVW6, PD4, PD6, PD8, PD11, PD12, TRST5, TRST8, TRST10, and TRST11.

Reliability was evaluated using thresholds of Cronbach's Alpha (CA) > 0.6, Composite Reliability (CR) > 0.7, and Average Variance Extracted (AVE) > 0.5, after convergent validity was established through factor loadings (Sarstedt et al., 2019). Table 2 shows that all constructs meet these requirements, reflecting the strong consistency and reliability of the latent variables. Discriminant validity is demonstrated by the low correlations between the model's constructs, which is vital for ensuring clear distinctions among them. This is satisfied when the square root of the Average Variance Extracted (AVE) is greater than the correlations between constructs.

Discriminant validity was evaluated using the Fornell-Larcker criteria by comparing the square root of the Average Variance Extracted (AVE) to the inter-construct correlations. Based on Table 2, the diagonal values (bolded) represent the AVE for each construct: Augmented Reality (AR) 0,904, Customer Rating (CRTG) 0.795, Customer Review (CRVW) 0.866, Trust (TRST) 0.894, and Purchase Decision (PD) 0.954.

Table 1. Outer Loading, Cronbach's Alpha, Composite Reliability and Average Variance Extracted

Variables	Indicators	Loading	CA	CR	AVE
Augmented Reality	AR1	0.941	0.983	0.984	0.818
	AR4	0.865			
	AR5	0.879			
	AR6	0.939			
	AR9	0.942			
	AR10	0.829			
	AR11	0.864			
	AR14	0.920			
	AR15	0.930			
	AR16	0.926			
	AR18	0.936			
	AR19	0.868			
	AR20	0.863			
	AR22	0.948			
Customer Rating	CRTG1	0.794	0.863	0.896	0.632
	CRTG2	0.803			
	CRTG3	0.752			
	CRTG5	0.830			
	CRTG6	0.795			
Customer Review	CRVW1	0.928	0.916	0.937	0.750
	CRVW2	0.849			
	CRVW4	0.857			
	CRVW7	0.914			
	CRVW8	0.774			
Purchase Decision	PD1	0.958	0.988	0.989	0.910
	PD2	0.775			
	PD3	0.970			
	PD5	0.816			
	PD7	0.971			
	PD9	0.976			
	PD10	0.843			
	PD13	0.786			
	PD14	0.904			
Trust	TRST1	0.937	0.964	0.970	0.800
	TRST2	0.859			
	TRST3	0.909			
	TRST4	0.877			
	TRST6	0.918			
	TRST7	0.913			
	TRST9	0.746			
	TRST12	0.891			

Table 2. Discriminant Validity

Variable	Augmented Reality	Customer Rating	Customer Review	Purchase Decision	Trust
AR	**0.904**				
CRTG	0.747	**0.795**			
CRVW	0.802	0.773	**0.866**		
PD	0.718	0.509	0.681	**0.954**	
TRST	0.664	0.474	0.634	0.888	**0.894**

Given that each AVE value is higher than the correlation coefficient of the related construct in the same column and row, the authenticity and discrimination between constructs in this model are empirically fulfilled, as illustrated in Figure 2.

Based on the outer model evaluation, indicators with loading factors below 0.70 were eliminated to meet the convergent validity criteria (Ghozali & Latan, 2015). The final results showed that all retained indicators had values > 0.70, so the model was declared valid and testing continued to the Collinearity Statistics (VIF) stage.

In assessing the inner model, R Square testing plays a crucial role by quantifying the proportion of variance in endogenous constructs explained by exogenous constructs. The model's predictive power is categorized using thresholds of 0.75 (strong), 0.50 (moderate), and 0.25 (weak). Adjustments for variables are accounted for through the Adjusted R Square. The R Square test outcomes for the Purchase Decision and Trust constructs are detailed in Table 3. Table 3 reveals that the R Square value for the Purchase Decision construct is 0.823. This value indicates that the model's independent variables, falling into the strong prediction category, explain 82.3% of the variance in Purchase Decision. Concurrently, the R Square value for the Trust construct is 0.484, The independent variables explain 48.4% of Trust variance which indicates the model has moderate predictive power.

Furthermore, despite the presence of several variables in the analysis, the Adjusted R Square values for Purchase Decision (0.820) and Trust (0.477) are near to their respective R.

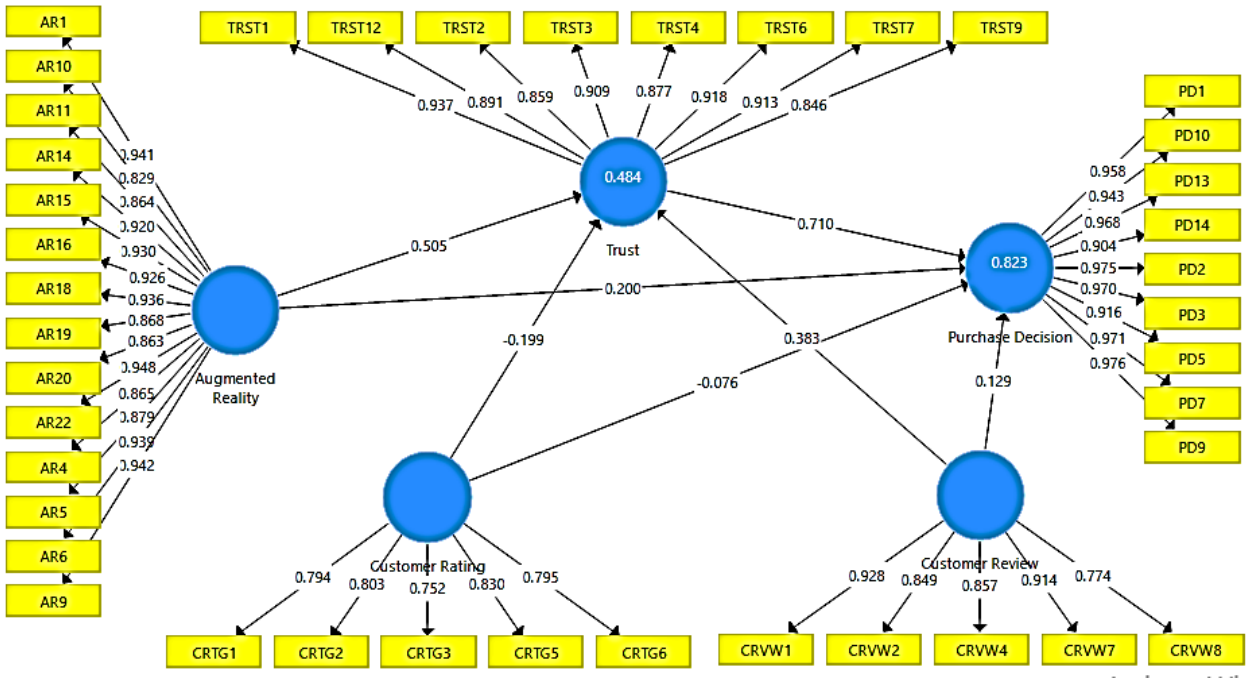

Figure 2. Model Estimation

Table 3. R Square

Variable	R Square	R Square Adjusted
Purchase Decision	0.823	0.820
Trust	0.484	0.477

Square values, suggesting that the model does not suffer from overfitting

Overall, the structural model shows strong predictive power, especially for the Purchase Decision construct. The Trust construct also has significant predictive power, although it is in the moderate category. Therefore, the model is considered to have adequate capability in explaining the relationship between the variables analyzed.

As a key component of the inner model evaluation, hypothesis testing is performed to examine the connections between variables by evaluating the Path Coefficient, which assesses the magnitude and orientation of these relationships. Statistical significance is indicated by a T value exceeding 1.96 at the 5% level and a P value below 0.05. A positive coefficient suggests a direct relationship. Table 4 presents the results of the hypothesis tests.

According to the hypothesis test results in Table 4, all direct path linkages demonstrate a significant impact. The path from augmented reality to purchase decision exhibits a path coefficient of 0,558, a P value of 0.000, and a T statistic of 5.397 (exceeding 1.96). For the path from customer rating to purchase decision, the path coefficient and T statistic are 2.494 with a P value of 0.013, while the path from customer review to purchase decision shows a path coefficient and T statistic of 4.035 and a P value of 0.000. The strongest relationship is observed in the path from trust to purchase decision, with a T statistic of 8.115 and a P value of 0.000. Additionally, the path from augmented reality to trust has a T statistic of 5.056 and a P value of 0.000, customer review to trust yields a P value of 0.000 and a T statistic of 3.769, and customer rating to trust shows a T statistic of 2.054 and a P value of 0.040. Given that the P values for these paths are typically 0.000 or 0.040, the notion of direct influence is statistically supported.

Furthermore, the analysis of the mediation effect hypothesis reveals a significant influence. In this model, trust serves as a mediating variable affecting purchase decisions. The mediation path from augmented reality to purchase decision via trust shows a P value of 0.000 and a T statistic of 4.046. Likewise, the path from customer rating to purchase decision through trust has a T statistic of 1.970 and a P value of 0.049, while the path from customer review to purchase decision through trust exhibits a T statistic of 3.185 and a P value of 0.002. With all T statistics surpassing 1.96 and P values below 0.05, these results statistically substantiate the notion that trust substantially mediates the effects of augmented reality, customer ratings, and customer reviews on purchase decisions.

All of the research model's hypotheses are significant overall, according to the test results. Augmented reality, customer ratings, and customer reviews have a direct and indirect influence on purchase decisions through trust. Trust has the strongest influence with a t-statistic value of 8.115 directly and as the main mediation. The main implication is that increasing purchase decisions requires a focus on technological innovation and information quality, but trust is a key factor that strengthens the positive impact of these variables.

The research validates an integrative model which shows trust acts as a connecting factor between augmented reality and customer ratings and reviews and their impact on Indonesian platform purchase decisions on Shopee, Tokopedia and Lazada through PLS-SEM analysis (Hair et al., 2014). The research proves trust functions as a mental connection which converts digital information into financial decisions that operate in unbalanced market systems. The research fills an essential knowledge gap through its integration of technological elements with social components which previous studies studied independently (Kotler & Armstrong, 2023); Hapshoh et al., 2025; Mulyati & Gesitera, 2020). The framework provides a complete understanding of how consumers use interface signals to build trust which leads them to complete their transactions (Hoffman et al., 2022).

According to empirical research, augmented reality significantly and favorably influences purchasing decisions. Flavián et al. (2020) found that emotional involvement which occurs due to new technology has a positive impact on

Table 4. Hypothesis Proof

Path Coeff.	Sample	STDEV	T Statistics	P Values	Decision
Augmented Reality → Purchase Decision	0,558	0,103	5,397	0.000	Supported
Customer Rating → Purchase Decision	0,218	0,087	2,494	0.013	Supported
Customer Review → Purchase Decision	0,401	0,099	4,035	0,000	Supported
Trust → Purchase Decision	0,710	0,087	8,115	0,000	Supported
Augmented Reality → Trust	0,505	0,100	5,056	0,000	Supported
Customer Rating → Trust	0,199	0,097	2,054	0,040	Supported
Customer Review → Trust	0,383	0,102	3,769	0,000	Supported
Augmented Reality → Trust → Purchase Decision	0,358	0,089	4,046	0,000	Supported
Customer Rating → Trust → Purchase Decision	0,141	0,072	1,970	0,049	Supported
Customer Review → Trust → Purchase Decision	0,271	0,085	3,185	0,002	Supported

customers as it converts their passive purchasing behaviour into an active purchasing behaviour. Augmented reality improves purchasing decisions through virtual product trials (Herliana et al., 2024). The use of augmented reality is strongly correlated with impulse buying (R & Shrivastava, 2025). 3D visualization and virtual try-on features in Indonesia are 37% more effective at reducing product uncertainty than conventional methods (Wang et al., 2021). In the e-commerce ecosystem, virtual try-on features mitigate sensory barriers in online transactions by bridging digital-physical product gaps,enabling real-time visualization. Theoretically, this immersive technology reduces uncertainty and enhances consumer confidence in product suitability (Statista, 2024), fostering trust as a key driver of digital purchasing decisions. This effectiveness is based on Presence Theory (Witmer & Singer, 1998) and Performance Expectancy (Venkatesh et al., 2021). In e-commerce, augmented reality reduces sensory uncertainty and mitigates cart abandonment Zhang et al. (2023), driving conversions for fashion or furniture without having to rely entirely on trust in the seller (Flavián et al., 2021).

Study indicates that customer ratings have a positive and significantly influence purchase decisions by serving as critical reputation signals on platforms like Tokopedia (Arbaini et al. 2020; Erlyasari et al. 2024). In the case of fashion product sales on Shopee/Tokopedia, sellers offering bags at a slightly higher price of Rp 150,000 with a stable rating of 4.8 (1,000+ reviews) outperform those offering bags at Rp 140,000 with a fluctuating rating of 4.2. because a stable rating is a signal of reliable quality (Hariyanto & Trisunarno, 2020) and social proof Putra et al. (2021), making customers willing to pay a premium of Rp 10,000 to reduce the risk of defects. For low-risk products, ratings as a heuristic encourage purchases High and consistent ratings (4/5 stars) accelerate decisions by reducing risk, and 65% of consumers trust ratings that are stable for 3 months. Indonesian customers are more responsive to consistency than absolute values, unlike Ardianti & Widiartanto, (2019), in line with sustainable quality (Hariyanto & Trisunarno, 2020). Consistent with Julianti & Aini, (2019); Putra et al. (2021); and Ramadhani & Prastiwi, (2021), high ratings as social proof increase purchase interest. This effect confirms the e-commerce reputation system (Hariyanto & Trisunarno, 2020).

Research confirms that customer reviews have a positive and significant drive purchase decisions, with visual content being twice as impactful as text-only feedback Arbaini et al. (2020); Ardianti & Widiartanto, (2019); Erlyasari et al. 2024); Widjaya & Aodi, (2024). In high risk sectors like fashion, authentic photos and videos mitigate sensory uncertainty and double conversion rates (Ardianti & Widiartanto, 2019); Mulyati & Gesitera, 2020). Interestingly, a small margin of authentic negative reviews (10%) on platforms like Bukalapak or Lazada is perceived as more honest than suspiciously perfect ratings, serving as credible electronic word-of-mouth (Hariyanto & Trisunarno, 2020). Detailed, honest reviews reduce uncertainty and build trust more effectively than advertising by providing experiential social proof and validating expectations (Julianti & Aini, 2019; Putra et al. 2021). In the end, genuine reviews offer the qualitative depth required to boost a customer's readiness to finish a purchase, whereas ratings offer quantitative summaries Ramadhani & Prastiwi, (2021)

Research indicates that trust is a pivotal determinant of purchase decisions. Trust integrity on a platform is only maintained through system transparency and the protection of users against information manipulation as stated by (Trevathan & Read, 2021). With platform credibility influencing 72% of consumer choices. Contributing 52.4% as a critical bridge, trust serves as the primary mediator that transforms augmented reality evaluations, ratings, and reviews into actual transactions (Istiqomah & Usman, 2021); Mulyati & Gesitera, 2020); Putra et al., 2021). Grounded in Commitment Theory, trust is a multifaceted construct encompassing seller reliability, platform security, and risk mitigation that functions as a psychological protection mechanism to eliminate consumer hesitation (Saxena & Thakur, 2024). On platforms like Tokopedia or Shopee, visible security indicators at the checkout stage act as final determining factors that mitigate perceived financial and privacy risks (Saxena & Thakur, 2024). Ultimately, trust is a prerequisite for e-commerce; without it, even high-quality ratings fail to convert cognitive evaluations into final purchase commitments, particularly for innovative products and emerging brands (Putra et al., 2021; Hanaysha, 2022).

Analysis shows that augmented reality significantly and favorably affects trust (Rauschnabel et al, 2019). On platforms such as Zenni Optical or other eyewear e-commerce sites, the virtual try-on feature allows customers to try on eyeglass frames, thereby significantly increasing trust (Rauschnabel et al, 2019), evidence-based cognitive trust (Pratama et al, 2024); reducing information asymmetry (Taub et al., 2024); build transparency and reliability (Ngo et al., 2025). In the sale of expensive furniture on e-commerce sites such as Wayfair/IKEA Place, 360° rotation and 3D models can increase trust by 40% and provide accurate 3D visualization Zhang et al. (2023); overcome the limitations of physical touch and align with Signaling Theory (Ngo et al., 2025); high control and high realism reduce asymmetry. Unique augmented reality findings create immersive experiences and strengthen product reliability. Surpassed Zhang et al. (2023); reinforced by Ngo et al., (2025) on interactivity and clarity. The distinguishing mechanism is cognitive trust via independent visual evidence (Pratama et al, 2024); realism increases transparency and honesty (Ngo et al., 2025). The relationship between augmented reality and trust can reduce asymmetry through transparency and realism control. Augmented reality information is more credible (Taub et al., 2024).

Research findings indicate that customer ratings create trust because they produce both positive and substantial effects on trust development. Visualizing ratings is 30% more effective at building trust than numbers alone. On Tokopedia or Shopee, new skincare sellers with a consistent rating of 4.9 (500 transactions) are more quickly considered reliable than

older sellers with a rating of 4.2, as initial social validators Putra et al. (2021) and solid track records Hariyanto & Trisunarno, (2020); confirm the collective rating system Arbaini et al. (2020); build initial trust. In the case of purchasing generic or commodity products (face masks batteries) on e-commerce platforms, consumers are faced with dozens of sellers offering identical items and choose high visual ratings (gold star icons) over numbers alone Liu et al., (2024); rapid public consensus, verified proof of quality Fahrozi et al., (2022); reduce reading reviews, ensure safe purchases. High ratings are a reliable quality indicator, building consumer trust. In line with Fahrozi et al., (2022) high ratings are proof of quality, Hariyanto & Trisunarno, (2020) consistency strengthens reliability; Liu et al., (2024) visualization increases trust. Consistent e-commerce reputation systems Hariyanto & Trisunarno, (2020); social validators build reliability Putra et al. (2021); public consensus enables rapid validation, institution-based trust via collective assessment (Arbaini et al. 2020). Credibility indicator ratings via mass consensus; consistency forms a solid track record; public approval provides social assurance, building initial trust.

Research shows that customer reviews create a positive impact which leads to significant trust development. Verified reviews are more trustworthy Mulyati & Gesitera, (2020). aligning with Chen & Dhillon (2019) on rigorous verification, where photos or videos provide visual evidence enhancing credibility. On platforms like Tokopedia or Shopee, for high-risk products, reviews with verified labels, photos, and videos reduce risk perception Chen & Dhillon (2019) and build trust through authentic visuals (Helfiyana et al., 2024), For custom products on sites such as Sribulancer or Etsy, detailed reviews with personal narratives surpass expectations, boosting credibility, benevolence, and integrity (Istiqomah & Usman, 2021; Amellia et al., 2024; Fahrozi et al., 2022). Questionnaire data show only 45% trust in review authenticity, requiring strict verification; transparent reviews mitigate risk and foster trust (Istiqomah & Usman, 2021; Fahrozi et al., 2022); Helfiyana et al., 2024), Reviews enhance benevolence and integrity via honest narratives Amellia et al., 2024, with social proof from ratings and augmented reality creating holistic trust (Helfiyana et al., 2024). Trust grows from candid feedback, unhidden details, and genuine interactions, while open platforms promote honesty.

Through trust as a mediation, the investigation demonstrates that augmented reality has a favorable and substantial impact on purchasing decisions. This high coefficient confirms that augmented reality increases customer trust, encouraging purchases. Virtual try-on cosmetic applications such as L'Oréal or Sephora build product trust through color matching, but conversion depends on e commerce platform trust, including payment security and seller integrity (Chen & Dhillon, 2019); Javornik et al., 2022; Saxena & Thakur, 2024; Fahrozi et al., 2022). Augmented reality creates product transparency (Taub et al., 2024), while platform trust serves as a psychological mechanism for conversion. Livestream shopping encourages purchases through real-time trust and social proof, reducing information asymmetry and increasing collective validation (Taub et al., 2024); Amellia et al., 2024; Arbaini et al. 2020). Thus, trust converts augmented reality experiences into purchasing actions.

The research shows that customer ratings create a positive effect which leads to significant purchase decisions through the trust mechanism. High ratings build potential buyers' trust in product quality. Their product reviews and ratings have substantial impacts on the business performance of the firms that use them. Liu et al., (2024) found that there are significant revenue dynamics on review platforms due to peer influences. In the sale of technology products such as power banks or wireless earphones in e-commerce, ratings are significant in purchase decisions through trust Liu et al., (2024). For example, power banks with a 4.8-star rating excel in conversion even though they are more expensive than competitors with a 4.6 rating, because ratings as a signal of quality build trust in the reliability of the product and seller (Indra et al., 2022; Hariyanto & Trisunarno, 2020). Trust internalizes transaction risk, converting rating signals into confidence for purchase and these findings are consistent with the mediation of trust, where rating consistency strengthens its effect, and rating visualization increases trust that influences purchase decisions Zhang et al. (2023). E-commerce platforms can increase effectiveness with visual or interactive review formats. The significant mediation pathway shows that ratings as initial signals require comprehensive trust (Indra et al., 2022). which ensures that transaction risks are accepted (Hariyanto & Trisunarno, 2020), explaining the variation in conversion between similar products. Ratings build trust in credibility and reliability, which are the primary proximal variables for purchasing. Thus, ratings are a source of trust, and trust is the link that transforms quality signals into actual transactions.

The research shows that trust functions as a customers to transform eWOM into personal beliefs which then affect their purchase decisions. The research shows that customer reviews create a substantial positive impact which leads customers to make their buying choices (Fahrozi et al., 2022; Istiqomah & Usman, 2021). In diverse e-commerce environments like Zalora, contextual specificity in reviews such as precise details on color and size mitigates consumer uncertainty more effectively than generic ratings (Istiqomah & Usman, 2021) To optimize this impact, platforms must address key factors, utilizing review summaries to combat information overload (Forrester 2023); leveraging credible text when visuals are scarce Chen & Dhillon (2019); implementing verified filters to ensure authenticity Zhang et al. (2023) and integrating in depth validation alongside augmented reality (Ngo et al., 2025). By fostering transparency and providing psychological assurance, these strategic elements including visual optimization and buyer verification transform raw review data into the credible validation necessary to secure transactions (Mulyati & Gesitera, 2020).

Conclusion

This study proves that trust functions as a crucial connecting mechanism that integrates augmented reality, ratings, and customer reviews into purchasing decisions on Indonesian e-commerce platforms. These findings confirm that the influence of technological features and social signals becomes much more significant when mediated by trust, which was found to be the strongest predictor in this model. Theoretically, this study expands Signaling Theory by demonstrating how various technological and social signals require a trust mechanism to achieve optimal results (Liu et al., 2024). Furthermore, this model reinforces Uncertainty Reduction Theory (URT) (Berger & Calabrese, 1975) and Trust by proving that the mediating power of trust exceeds the direct influence of each information source. Based on the Theory of Reasoned Action (TRA), trust becomes a determinant of attitudes that precede purchase behavior intentions.

In practical terms, for e-commerce operators such as Shopee, Tokopedia, and Lazada, these findings offer strategic guidance: (1) Optimizing accurate AR features to build cognitive trust; (2) Strengthening the transparency of the reputation system to prevent fake reviews; and (3) Integrating all visual and social elements synergistically (Saxena & Thakur, 2024). Although it makes an important contribution, this study has limitations in its cross-sectional design (Sekaran & Bougie, 2016). In addition, there is potential for selection bias because the sample only includes users who have experience using AR,

so the generalization of the results may be limited to consumer segments with similar technological literacy. Future research is recommended to test the consistency of this model across a wider range of product categories or demographic characteristics (Hapshoh et al., 2025).

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