

TAM, Emotional Engagement, and Trust on AR Virtual Try-On Behavioral Intention in Shopee

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ABSTRACT

The rapid development of digital shopping encourages *e-commerce platforms* to continue to innovate through the application of immersive technology, one of which is *the Augmented Reality (AR) Virtual Try-On (VTO)* feature that facilitates consumers in simulating products virtually before purchasing decisions are made. This study was designed to investigate the contribution of *Perceived Ease of Use (PEOU)*, *Perceived Usefulness (PU)*, *Emotional Engagement (EE)*, and *Trust (TR)* to the *Behavioral Intention (BI)* of AR VTO feature users in Shopee, Indonesia. The study adopted a quantitative approach through surveying 500 active Shopee users who had used the feature at least once, with data analysis using *the Structural Equation Modeling-Partial Least Squares (SEM-PLS)* method assisted by SmartPLS 4. All instruments were declared valid and reliable based on the results of the *outer model evaluation*. The four variables were simultaneously proven to have a positive and significant influence on BI. The novelty of this research lies in the simultaneous integration of the cognitive dimensions of TAM, affective, and trust in a single analytical framework applied specifically to the context of Shopee's AR VTO in the Indonesian market, an approach that has not been explored much in the literature before. The research findings have practical implications for Shopee developers in designing a more intuitive, emotionally responsive, and data-secure AR interface, to encourage wider adoption of technology among Indonesian digital consumers.

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1. Introduction

Technology adoption *Augmented Reality (AR)* in the ecosystem *E-commerce* has experienced a significant acceleration as consumer demands for a more informative and interactive digital shopping experience increase. One of the concrete manifestations of this trend is the *Virtual Try-On (VTO)* based on AR, which offers a solution to the fundamental limitations of online shopping in terms of contextual product visualization. Empirically, the implementation of this feature has been proven to be effective in reducing

product return rates while driving increased sales conversions [1], [2]. Shopee, as a platform *E-commerce* which dominates the Southeast Asian market, has integrated AR VTO specifically in its beauty product line as a strategic effort to improve the quality of its user experience [3].

Scientific studies on the acceptance of AR VTO by users so far have relied heavily on the framework *Technology Acceptance Model* (TAM) developed by Davis, where *perceived usefulness* (PU) and *perceived ease of use* (PEOU) identified as the main predictor *Behavioral Intention*. The relevance of these two constructs in the context of AR on digital platforms has been corroborated by a number of empirical studies [4], [5]. However, TAM in its original formulation is considered inadequate to accommodate the complexity of the acceptance of immersive technologies such as AR VTO which involves a much richer dimension of experience.

User interaction with AR VTO naturally evokes a distinctive emotional response, including feelings of pleasure, admiration, and deep involvement, which are collectively known as *emotional engagement* [6], [7]. This affective dimension has been shown to be able to strengthen the user's intrinsic motivation substantially, beyond the scope of explanation that TAM cognitive factors alone can provide. In addition, *Trust* which includes confidence in the accuracy of virtual representations, biometric data protection, and platform credibility, are crucial determinants for the continued adoption of AR VTO [8], [9].

A review of the existing literature reveals that previous studies on the acceptance of AR in *E-commerce* generally test the TAM partially, without integrating *emotional engagement* and *Trust* into one comprehensive model framework. Furthermore, the majority of the sample base in these studies came from the North American and European regions [5], [8], so that the generalization of his findings to the context of the Southeast Asian market, especially Indonesia, is very limited. Studies that specifically examine *Behavioral Intention* The use of AR VTO at Shopee with an integrative approach is still very rare in the existing literature.

Based on the identification of the research gap, the study offers novelty in three main aspects. *First*, simultaneous integration of TAM, *emotional engagement*, and *Trust* into a single analytical framework that has not been widely done in previous studies. *Second*, the application of the integrative framework specifically in the context of Shopee's AR VTO in Indonesia, thus filling in the empirical evidence gap from the perspective of the emerging market of Southeast Asia [6], [9]. *Third*, contribution to the development of literature *Human-Computer Interaction* (HCI) by providing a technology acceptance model that includes cognitive, affective, and trust dimensions simultaneously. Specifically, this study examined four causal pathways, namely the contribution of PEOU, PU, EE, and TR to the BI of Shopee users in Indonesia.

From a theoretical perspective, this study refines the interactive technology acceptance model by presenting a more holistic framework than the commonly used partial TAM approach. From a practical perspective, the results of this research can be the foundation for Shopee's development team in designing a more intuitive, emotionally responsive, and reliable AR interface. For beauty industry players, these findings provide a scientific basis for formulating AR-based digital marketing strategies geared towards increasing conversions and strengthening long-term consumer loyalty.

2. Literature Review

A. Augmented Reality (AR) in E-Commerce

Augmented Reality (AR) is a technology that integrates layers of digital elements into the physical environment in an interactive and *real-time*, thus creating a much richer and more contextual user experience than conventional digital interactions. In the realm of e-commerce, AR allows consumers to virtually simulate and visualize products before a purchase decision is made, which has a direct impact on reducing perception uncertainty and increasing consumer confidence in online shopping activities. A number of empirical studies confirm that the application of AR in ecosystems *E-commerce* Driving increased user engagement while accelerating sales conversions [1], [2].

B. Virtual Try-On Feature on Shopee

Virtual Try-On (VTO) is one of the most widely adopted AR implementations on the platform *E-commerce* contemporary. This feature makes it easy for users to simulate the use of products virtually, especially in the beauty and *fashion*, without requiring direct physical contact with the product. As one of the platforms *E-commerce* With the largest user base in the Southeast Asian region, Shopee has integrated AR VTO specifically into its beauty product line as part of its strategy to improve its users' shopping experience. The existence of this feature is considered to be able to strengthen consumer purchase intent because it presents product information that is more accurate, in-depth, and contextually relevant [5], [10].

C. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) introduced by Davis is the most extensive theoretical framework used in an effort to understand and predict user acceptance of an information technology system. TAM is based on the assumption that two core constructs, namely *perceived usefulness* (PU) and *perceived ease of use* (PEOU), directly and significantly affects *Behavioral Intention* or the behavioral intent of using technology. Along with the rapid advancement of technology, the TAM framework has undergone various updates and expansions conceptually to accommodate increasingly complex technological contexts, including AR-based technologies in the ecosystem *E-commerce* that continues to grow [4].

D. Perceived Ease of Use (PEOU)

Perceived ease of use (PEOU) is formulated as a person's level of confidence that the use of a certain technological system does not require excessive cognitive or physical effort. In the framework of AR *Virtual Try-On*, PEOU refers specifically to the user's perception of the ease of operating the feature without encountering significant technical obstacles. Empirical evidence suggests that the perception of ease of use makes a real positive contribution to users' intentions to adopt and reuse AR-based technologies, as the intuitive interface effectively reduces the cognitive burden on users in interacting with the system [8]. Based on these theoretical arguments and empirical evidence, the first hypothesis of this study is formulated:

H1: *Perceived Ease of Use* (PEOU) has a positive and significant effect on the *Behavioral Intention* of using the AR *Virtual Try-On* feature on Shopee.

E. Perceived Usefulness (PU)

Perceived usefulness (PU) refers to the user's belief that the application of a certain technology will significantly increase their effectiveness and productivity in completing the task at hand. In the context of AR features *Virtual Try-On*, PU is manifested in users' perception that this feature helps them make more

targeted purchasing decisions, minimizes the risk of product non-conformity, and optimizes the use of time and effort. Consistently, the high benefits perceived by users have been found to be a reliable predictor of the intention to use technology sustainably, especially on platforms that prioritize interactive digital innovation [9]. Based on this theoretical foundation, a second hypothesis is formulated:

H2: *Perceived Usefulness* (PU) has a positive and significant effect on *the Behavioral Intention* of using the AR *Virtual Try-On feature* on Shopee.

F. *Emotional Engagement (EE)*

Emotional engagement or emotional engagement is defined as the totality of affective responses that arise when users interact with a particular technology or digital content. In the context of immersive AR experiences, the emergence of positive emotional responses such as excitement, admiration, and deep interest can amplify the user's intrinsic motivation to continue interacting with the system substantially. Contemporary studies have revealed that the affective dimension plays an increasingly central role in determining the user's behavioral intentions towards interactive technologies, even beyond the explanatory capacity that the cognitive factors covered by classical TAM can offer [6]. Based on this theoretical argument, a third hypothesis is proposed:

H3: *Emotional Engagement* (EE) has a positive and significant effect on *the Behavioral Intention* of using the AR *Virtual Try-On feature* on Shopee.

G. *Trust*

Trust or trust in the context of digital technology refers to the user's belief in the reliability, security, and integrity of the system they use. In the context of AR features *Virtual Try-On*, trust includes the dimensions of user confidence in the accuracy of the product's virtual representation, the security of biometric data processing, as well as the overall credibility of the platform. Users who have a high level of trust in a platform and its features tend to show a greater willingness to use the technology repeatedly and recommend it to others around them [7]. Based on these findings, a fourth hypothesis was formulated:

H4: *Trust* (TR) has a positive and significant effect on *the Behavioral Intention* of using the AR *Virtual Try-On feature* on Shopee.

H. *Behavioral Intention (BI)*

Behavioral intention (BI) is a construct that is at the core of technology acceptance research, which reflects the degree of readiness and tendency of users to utilize a technology in the future. In the TAM framework, BI is directly influenced by the perception of usability and ease of use, as well as indirectly by various external factors such as emotional involvement and trust. This construct serves as a key predictor of actual technology use and is widely used as a proxy to measure the success rate of adoption of a digital innovation in the ecosystem *E-commerce* that is increasingly competitive [3].

I. *Hypothesis Framework*

Table 1. Summary of Variables, Operational Definitions, and Research Indicators

Variable	Operational Definition	Instrument Source	Number of Indicators
<i>Perceived Ease of Use</i> (PEOU)	The user's perception that the AR VTO feature is easy to learn and operate without technical barriers	Adapted from Davis [4]; Alam et al. [4]	4 (PEOU1–PEOU4)
<i>Perceived</i>	User perception that the AR VTO feature improves	Adapted from Davis [4];	4 (PU1–PU4)

<i>Usefulness (PU)</i>	the effectiveness of purchasing decisions and reduces the risk of product mismatches	Oyman et al. [11]
<i>Emotional Engagement (EE)</i>	Positive affective responses (excitement, admiration, interest) that users feel when interacting with AR VTO	Adapted from Flavián et al. [6]; Zeng et al. [7]
<i>Trust (TR)</i>	User confidence in visual accuracy, biometric data security, and the credibility of the Shopee platform	Adapted from Shi et al. [8]; Fitem et al. [15]
<i>Behavioral Intention (BI)</i>	Users' tendency and readiness to continue to use and recommend the AR VTO feature on Shopee	Adapted from Zheng et al. [3]; Purwitasari et al. [12]

Based on the theoretical study that has been described in the previous subchapter, the theoretical framework of this study describes the causal relationship between four independent variables, namely Perceived Ease of Use (PEOU), Perceived Usefulness (PU), Emotional Engagement (EE), and Trust (TR), to one dependent variable, namely Behavioral Intention (BI) for the use of the AR Virtual Try-On feature on Shopee. The framework of the research hypothesis is presented in the following figure:

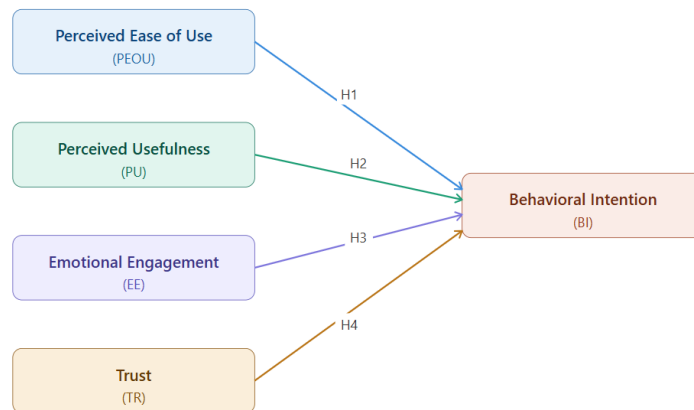


Figure 1. Vehicle Handling Model

3. Methodology

A. Design and Research Approach

This research was designed with a quantitative approach through a questionnaire-based survey method distributed online to active users of the Shopee platform who have used the *Augmented Reality (AR) Virtual Try-On feature*, especially in the beauty product category. This approach was chosen because of its ability to measure the relationships between variables in a structured and systematic manner through statistical processing numerical data.

B. Populations, Samples, and Data Collection Procedures

The population of this study includes all Shopee users in Indonesia who have used the AR *Virtual Try-On* feature at least once. The sampling technique used is *purposive sampling*, with the inclusion criteria set as follows: (1) be an active user of the Shopee application, (2) domiciled in Indonesia, (3) be at least 17 years old, and (4) have accessed and used the Shopee AR VTO feature in the beauty product category at least once in the last three months before data collection was carried out.

The questionnaire distribution process was carried out online through the Google Forms platform during the period from January to March 2024. The spread is carried out through several digital channels, including social media (Instagram, WhatsApp, and Telegram), as well as the community *online* Shopee users. To ensure that all respondents have actually used Shopee's AR VTO feature, the screening questions (*Screening question*) placed at the beginning of the questionnaire. Respondents who answered that they had never used the feature were automatically directed out of the survey. From the total questionnaires collected, as many as 500 respondents were declared to meet the inclusion criteria and eligible to be included in the analysis, an amount that was considered adequate for the purpose of *Structural Equation Modeling-Partial Least Squares* (SEM-PLS) [5].

C. Research Instruments

The research instrument was in the form of a questionnaire developed using a *five-point Likert scale*, with a score range from 1 (*strongly disagree*) to 5 (*strongly agree*). The questionnaire consisted of five main constructs: *Perceived Ease of Use* (PEOU) with four indicators (PEOU1–PEOU4), *Perceived Usefulness* (PU) with four indicators (PU1–PU4), *Emotional Engagement* (EE) with four indicators (EE1–EE4), *Trust* (TR) with four indicators (TR1–TR4), and *Behavioral Intention* (BI) with four indicators (BI1–BI4), so that the total instrument amounts to 20 statement items. All items were adapted from instruments that have been validated in previous literature (see Table 0) and contextually adapted to the use of AR technology on Indonesian *e-commerce* platforms.

D. Data Analysis Techniques

Data analysis was carried out using the SEM-PLS method with the help of SmartPLS 4 software. The selection of this method is based on its ability to handle complex structural models with a large number of indicators, while not requiring strict data normality assumptions. The analysis process includes two successive stages, namely evaluation *Outer model* and evaluation *Inner model*. Evaluation *Outer model* Aimed at testing the validity and reliability of the instrument through an examination *Outer Loading*, *Average Variance Extracted* (AVE), *Cronbach's Alpha*, *Composite Reliability* (CR), and *Discriminant validity* Using criteria *Fornell-Larcker*, *Cross Loading*, and ratios *Heterotrait-monotrait* (HTMT). Meanwhile, the evaluation *Inner model* includes collinearity testing through grades *Variance Inflation Factor* (VIF), path coefficient analysis (*Path Coefficient*), coefficient of determination (R^2), *effect size* (f^2), as well as the predictive relevance of the model through $Q^2_{predict}$ and *Standardized Root Mean Square Residual* (SRMR). Hypothesis testing is carried out through a procedure *Bootstrapping* with 5,000 resamples at a significance level of 5%, where a relationship is declared significant if the value of *T-statistics* beyond 1.96 and *p-value* is below 0.05. The SEM-PLS approach has been shown to be effective in testing technology acceptance models involving cognitive, affective, and trust variables simultaneously in the context *E-commerce* [5].

4. Results and Discussion

A. Results

1) Evaluation of Measurement Models (Outer Model)

The initial stage of analysis is focused on evaluating *the external model* to verify that all research instruments meet the required standards of validity and reliability before proceeding to the structural analysis stage. This check includes *indicator reliability*, *internal consistency reliability*, convergent validity, and

discriminant validity. Figure 2 presents the results of the PLS Algorithm Output from SmartPLS 4 which visualizes the overall structure of the measurement model along with the outer loading value of each indicator in its respective construct. Based on Figure 2, all indicators show adequate outer loading values and exceed the required threshold.

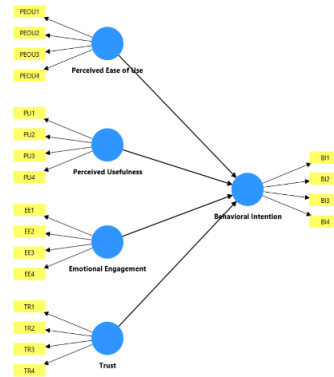


Figure 2. PLS Algorithm Output Results

(Source: SmartPLS 4 Processing Results, 2024)

Based on Figure 1, all indicators display adequate outer loading values. Details of the outer loading value along with the results of the construct reliability test are presented in full in Table 1 below so that they can be read and systematically compared between constructs.

Table 1. Results of Outer Loading and Construct Reliability Test

Construct	Indicator	Outer Loading	Cronbach's Alpha	CR (rho_c)	AVE
Behavioral Intention	BI1–BI4	0,772–0,799	0,791	0,865	0,615
Emotional Engagement	EE1–EE4	0,770–0,781	0,781	0,858	0,603
Perceived Ease of Use	PEOU1–PEOU4	0,747–0,780	0,765	0,850	0,586
Perceived Usefulness	PU1–PU4	0,752–0,784	0,772	0,854	0,594
Trust	TR1–TR4	0,719–0,774	0,733	0,833	0,555

Table 1 confirms that all indicators have an outer loading value that exceeds the minimum limit of 0.70, Cronbach's Alpha and Composite Reliability values are all above 0.70, and the Average Variance Extracted (AVE) value is all over 0.50. This condition confirms that all research instruments have met the requirements of convergent validity and internal reliability. Next, the results of the discriminatory validity test through the Fornell-Larcker criteria are shown in Table 2.

Table 2. Results of the Discriminatory Validity Test — Fornell-Larcker Criteria

Construct	BI	EE	SQUIRT	PUP	TR
Behavioral Intention	0,784				
Emotional Engagement	0,647	0,776			
Perceived Ease of Use	0,594	0,513	0,766		
Perceived Usefulness	0,655	0,419	0,459	0,771	
Trust	0,562	0,404	0,448	0,488	0,745

Note: The diagonal (bold) figure is the square root of AVE

Table 2 proves that the square root value of AVE of each construct on the main diagonal is greater than its correlation value with other constructs. In addition, the overall Heterotrait-Monotrait Ratio (HTMT)

value was below 0.90, with the highest value of 0.836 in the *Perceived Usefulness* and *Behavioral Intention* pairs. These two conditions confirm that the discriminant validity of the entire construct is met, so that the measurement model is declared feasible to proceed to the structural model evaluation stage.

2) *Evaluation of Structural Models (Inner Model)*

After the measurement model is declared valid and reliable, the next stage is the evaluation of the structural model which includes tests of collinearity, coefficient of determination, *effect size*, and predictive relevance.

Table 3. Collinearity Test Results (VIF) and Coefficient of Determination (R²)

Pathway	VIVID	R ²	R ² Adjusted
EE → BI	1,476	0,651	0,649
PEOU → BI	1,575	—	—
PU → BI	1,496	—	—
TR → BI	1,468	—	—

Table 3 shows that the entire value of the *Variance Inflation Factor (VIF)* is in the range of 1.468 to 1.575, well below the tolerance limit of 5.0, so there is no collinearity problem in the model. An R² value of 0.651 indicates that 65.1 percent of the variability of the user's *Behavioral Intention* is able to be explained together by the four independent variables, while the remaining 34.9 percent is influenced by factors beyond the scope of this study model.

3) *Hypothesis Testing*

Hypothesis testing was carried out through a *bootstrapping* procedure with 5,000 resamples at a significance rate of 5%. Figure 3 below shows the results of *Bootstrapping Output* from SmartPLS 4 which visualizes the value of the path coefficient along with the level of significance of each relationship between constructs in this research model.

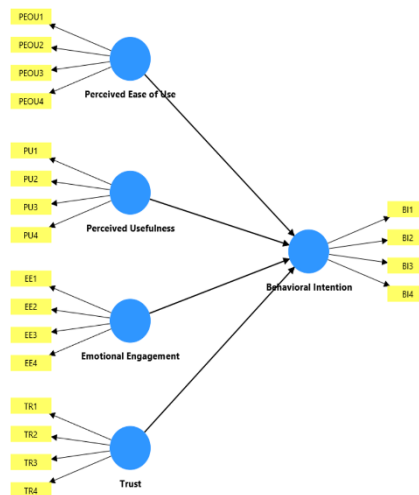


Figure 3. Bootstrapping Output

(Source: SmartPLS 4 Processing Results, 2024)

Figure 2 shows that all paths in the model show significant values. The complete numerical results of the hypothesis test are presented in detail in Table 4 below so that each hypothesis can be evaluated individually based on its coefficient value, test statistics, and *p-value*.

Table 4. Hypothesis Testing Results

Hypothesis	Pathway	Coefficient (β)	<i>T-Statistics</i>	<i>P-Value</i>	Remarks
H1	PEOU \rightarrow BI	0,185	3,762	0,000	Accepted
H2	PU \rightarrow BI	0,343	7,224	0,000	Accepted
H3	EE \rightarrow BI	0,338	7,000	0,000	Accepted
H4	TR \rightarrow BI	0,175	3,851	0,000	Accepted

Table 4 proves that all four research hypotheses are accepted. The *T-value* of each path exceeds 1.96 and the overall *p-value* is below 0.05. *Perceived Usefulness* recorded the highest path coefficient ($\beta = 0.343$), followed by *Emotional Engagement* ($\beta = 0.338$), *Perceived Ease of Use* ($\beta = 0.185$), and *Trust* ($\beta = 0.175$). These findings directly answer the entire formulation of the problem that has been established in the introduction.

4) *Effect Size and Model Fit*

The following table 5 presents the effect size (f^2) and predictive relevance (Q^2) values to measure the contribution of each independent variable as well as the overall predictive ability of the model.

Table 5. Value of Effect Size (f^2) and Predictive Relevance (Q^2)

Variable	f^2	Categories	$Q^2_{predict}$	SRMR
<i>Perceived Usefulness</i>	0,225	Medium	0,636	0,062
<i>Emotional Engagement</i>	0,222	Medium	—	—
<i>Perceived Ease of Use</i>	0,063	Small	—	—
<i>Trust</i>	0,060	Small	—	—

Table 5 shows that *Perceived Usefulness* and *Emotional Engagement* were the main contributors with a moderate effect size, while *Perceived Ease of Use* and *Trust* were small but still statistically significant. A positive $Q^2_{predict}$ value of 0.636 confirms the model's good predictive capabilities. The *Standardized Root Mean Square Residual* (SRMR) value of 0.062 was below the threshold of 0.08, which confirms that the model has a good fit with empirical data from 500 respondents.

B. Discussion

1) *The Effect of Perceived Ease of Use on Behavioral Intention*

The test results prove that *Perceived Ease of Use* has a positive and significant influence on *Behavioral Intention* use of AR features *Virtual Try-On* on Shopee, which is indicated by the path coefficient of 0.185 and the value of *T-statistics* 3,762. These findings indicate that the lower the perceived technical barriers users perceive in operating the feature, the greater their tendency to continue utilizing it. The intuitive and easy-to-operate interface is proving to be a driver of the acceptance of AR technology in the ecosystem *E-commerce*. This is in line with the findings that the attribute of ease of access to AR features directly contributes to increased perceptions of usability, hedonic value, and the quality of information that users receive, which in turn reinforces their behavioral intent towards AR-based applications [11]. On the broader side, the perception of good ease of use also plays a role in lowering technology anxiety (*Technology Anxiety*) users, thereby encouraging the adoption of more inclusive AR features among digital consumers.

2) *The Effect of Perceived Usefulness on Behavioral Intention*

Perceived Usefulness proved to be the variable with the greatest contribution in the constructed model, as indicated by the highest path coefficient of 0.343 accompanied by effect size in the medium category ($f^2 = 0.225$). Users' confidence in the real benefits of AR features *Virtual Try-On* in facilitating more careful purchasing decision-making is a key determinant of their intention to continue using it. AR technology is

basically here to overcome a fundamental limitation in online shopping, namely the inability of consumers to physically evaluate products before purchase. When these functional benefits are perceived by users, usage intentions increase significantly, as evidenced by findings that show that the informative dimension and visual quality of AR are the most powerful aspects that influence consumer perception, leading to an increase in purchase intent [12]. Furthermore, the reduction of perceptual risk generated by AR technology also creates a sense of comfort that strengthens consumer confidence in decision-making and increases overall online shopping satisfaction [13].

3) *The Effect of Emotional Engagement on Behavioral Intention*

Emotional Engagement proven to have a positive and significant influence on *Behavioral Intention* with a path coefficient of 0.338 and *effect size* medium ($f^2 = 0.222$), making it the variable with the second strongest contribution in the model. This reveals that the affective responses evoked when users interact with immersive AR features, such as excitement and deep interest, substantially strengthen their intrinsic motivation to continue utilizing the technology. The dominance of EE with PU indicates that the decision to use AR VTO is not solely driven by functional considerations, but also by the dimension of an emotionally pleasurable experience. This pattern is consistent with the context of the Indonesian market, where young users tend to be more responsive to features that provide an interactive and entertaining experience. Shopping experiences that are not only functional but also emotionally satisfying are proven to create deeper engagement with the platform [14]. The hedonic value and satisfaction generated by AR interactions significantly drives the intention of sustainability of use as well as purchase intention on the platform *E-commerce* [14].

4) *The Influence of Trust on Behavioral Intention*

Trust proven to have a positive and significant effect on *Behavioral Intention* with a path coefficient of 0.175 and a value of *T-statistics* 3.851. Although the coefficient is relatively smaller than other variables, trust remains a fundamental prerequisite for the continued adoption of AR features. The smaller TR coefficient compared to PU and EE is likely to reflect the specific conditions of Shopee Indonesia users, where trust in established platforms tends to have been formed beforehand so that it is no longer a major consideration in the decision to use new features. Nevertheless, its significance still confirms that users who are confident in the accuracy of visual representations, data security, and the credibility of the platform will be more consistent in utilizing the feature. Trust plays a role as *enabler* fundamental that ensures consistent engagement with technology-based services in *E-commerce*, even shown to be able to moderate the relationship between behavioral intent and actual use [15]. Practically, this result provides a foundation for Shopee to continue to improve system transparency and data security to build stronger user trust in AR features *Virtual Try-On* [16].

5. Conclusion

This study empirically confirms that the four variables studied, namely *Perceived Ease of Use*, *Perceived Usefulness*, *Emotional Engagement*, and *Trust*, were each proven to have a positive and significant influence on the *Behavioral Intention* of using the *Augmented Reality Virtual Try-On* feature on the Shopee platform. Among the four variables, *Perceived Usefulness* and *Emotional Engagement* were recorded as the dominant determinants with a *moderate effect size*, which confirms that functional considerations and affective dimensions together play the most important role in shaping user behavioral intentions. The model built through the SEM-PLS approach was able to explain 65.1 percent of user *behavioral intention* variability,

resulting in a comprehensive and relevant technology acceptance framework for the context of Indonesian *e-commerce* AR adoption .

From a theoretical perspective, this research contributes to the development of the *Human-Computer Interaction* (HCI) literature and the acceptance of technology by presenting an integrative model that goes beyond the classic TAM, namely by incorporating the affective dimension and trust simultaneously in one analytical framework. From a practical perspective, these findings imply several concrete recommendations for Shopee developers: (1) improve the accuracy and smoothness of the visual interface of the AR VTO feature to strengthen the perception of ease and usability; (2) designing a more immersive and enjoyable AR interaction experience to maximize users' emotional engagement; (3) increase the transparency of biometric data use policies and strengthen data security features to build more solid trust; and (4) expanding the scope of product categories that can use the AR VTO feature outside the beauty segment.

This research cannot be separated from a number of limitations that need to be acknowledged. *First*, the use of *purposive sampling* based on self-report has the potential to present *biased responses* that cannot be completely eliminated. *Second*, the scope of research that focuses only on the Shopee platform and beauty product categories limits the ability to generalize findings to other platforms or product categories. *Third*, this study did not measure actual *use* as a follow-up variable, so the relationship between behavioral intent and actual use could not be confirmed. *Fourth*, contextual factors such as demographic differences and digital literacy between regions in Indonesia have not been explored in depth. Further research is suggested to address these limitations by expanding the scope of the platform, adding actual usage variables, and considering more diverse demographic and cultural dimensions.

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